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RICE IMPORT SURGE IN INDONESIA

By

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FOREWORD

The research project "*Impact of Rice Import Surges in Indonesia*" began in October 2007 and was officially completed in March 2007. This project is the first collaboration between the ActionAid International (AAI) and the Indonesian Center for Socio Economics and Policy Studies (ICASEPS).

I am grateful to Dr. M. Husein Sawit, a senior research economist at the Center for his devoted services as the project leader, to Dr. Erna M. Lokollo as the project officer of the study, and to the research collaboration division of the ICASEPS (Ir.Wahida MS and Ir. Helena J. Purba MSi and staffs).

The ICASEPS wishes to thank the AAI, the international project leader (Mr. Syed Qasim Shah) and the donor institution of the project. The issue of rice import surges in Indonesia is timely important due to many assessments and opinions of stakeholders involved in the rice industry in Indonesia. This research is therefore can serve as systematically, scientifically and justifiable proves on the information of the impact of rice import surges on the domestic' rice industry. It is hope of the ICASEPS that the results and assessments contained in this report of the study will increase better understanding of the issues, and will inform policy makers across nations to identify the right and just policies to secure food security of countries in which rice is the main staple.

Tahlim Sudaryanto
Director
ICASEPS

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ABBREVIATIONS

AOA	Agreement on Agriculture
Bulog	National Food Logistic Agency
CBS	Central Bureau Statistics
FAO	Food and Agriculture Organization
GBHN	Garis Besar Haluan Negara (National Guidelines)
GDP	Gross Domestic Product
IFPRI	International Food and Policy Research Institute
IMF	International Monetary Fund
IP	Importir Produsen (Producer Importer)
IT	Importir Terdaftar (Registered Importer)
KKN	Korupsi, Kolusi dan Nepotisme (Collusion and Corruption)
LOI	Letter of Intend
MMT	Million Metric Ton
MNCs	Multi National Corporations
MP	Musim Paceklik (Lean Season)
MPG	Musim Panen Gadu (Secondary Harvesting Season)
MPR	Musim Panen Raya (Main Harvesting Season)
MT	Metric Ton
NTB	Non Tariff Barrier
PATANAS	Panel Rural Data
RI	Republic of Indonesia
RT	Rumah Tangga (Household)
SAP	Structural Adjustment Program
STE	State Trading Enterprise
TMT	Thousand Metric Ton
TRR	The Rice Report
UKM	Usaha Kecil Menengah (Small and Medium Enterprise)
USD	US Dollar
USDA	United State Department of Agriculture
UUD45	Undang-undang Dasar 1945
WTO	World Trade Organization

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CHAPTER 1
INTRODUCTION

The agriculture sector in Indonesia employs 44 million labors or 43.7% of 90.8 million of the total labor. Presently, the contribution of agriculture sector to the GDP continues to decline, it was only 15% of the total GDP in 2004. The food crops sub-sector play an important role in the agricultural' GDP. It gives the highest contribution (50%) in compare with the other sub-sectors, such as, the estate crops, the livestock and the fishery sub-sector (Appendix 1.1). Indeed, the growth of these sub-sectors is low. In 2003, for example, the growth of the fisheries sub-sector reached 5%. Meanwhile, the growth of the food sub-sector was only 3.7%.

Poverty is still becoming the main problem in the rural areas. The average of people living in poverty line is about 36.1 million people (16.7%). Almost 70% of those people are rural areas' inhabitants. Rural poverty has reached to 23-25% since 2002 (Appendix 1.2). The rural poor, are generally found work in the agriculture sector, particularly in the food crops and in the livestock sub-sectors.

The level of unemployment had grown 10% per year since 1992 to 2005. In 1992, the average of unemployment was 2.7%. In 2005, it became 10.3% (Appendix 1.3). The agriculture sector took 60% of the total rural employment, consisted of 13.5 million self-employed labors (family and temporary labor), 12.5 million unpaid rural family labors and 5.2 million waged or hired labor (Appendix 1.4).

In the early of the 1970's, the "ORBA" regime of the Indonesian Government[1] set the development of agriculture sector as its' first priority, particularly the food crops sub-sector. Many rural infrastructures were developed at that time, such as irrigation, agricultural extension infrastructure and rural roads. During that time, the expenditure for agriculture sector was extremely high, particularly dedicated to fertilizers and seeds. For example, during 1978 to 1983, the expenditure for agriculture reached 9.6% from the total Government's expenditure. Then, in 1993 to 1998, the expenditure declined to 5.6 %. In 1997 to 2000, the budget of the Government for agriculture was left to only 2.3%.

In the late 80's, the agriculture sector was not became the development priority anymore. Since then, its' productivity tend to decline steadily. Then, the Government allocated much of its' expenditures to the industry sector. Since then, many rural infrastructures were found abandoned.

In the year 1997, known as the Indonesian economic crisis, the Government's debt to the IMF were extremely high. In 1998, the Government had external debt about 168% of the GDP. As the economic growth recovered in 2002, the Government's debt outstanding and disbursement declined to 80% of the GDP. Consequently, the Government is obligated to pay the interests and the disbursement fees. It has affected to the declining ability of the Government to finance the public infrastructure i.e. the agriculture sector's development.

[1] ORBA: New Order regime, a sociopolitical or economic system in Indonesia, during the period of 1965-1997

The IMF' role in Indonesia was not just to advise the Government on the macroeconomic stability, but had gone wider and deeper to almost all aspects of the development. Indonesia had an obligation to implement the development's plan and strategy designed by the IMF/ the World Bank. Inflation, exchange rate stabilization and interest rate are pushed up and became the top priorities. The deficit of the development plan' budget was pressed down to the lowest point. At the same time, the Government/ the Public food agency such as the BULOG was forced to became the private entity. All kinds of monopoly were abolished, and the food crops commodity tariff was designed at the lowest level 0% to 5%. Indonesia became the most liberalized country for agriculture products, particularly for the food crops commodity.

It was the beginning of the radical trade liberalization for Indonesia. The LOI (Letter of Intend) signed by the Government on June 24, 1998 showed that the Government had to stop the BULOG' import monopoly on soybean, wheat and sugar. Since then, it has marked the beginning of the import surge of many important food products. Lately, the Government corrected and reformed its' trade policy, particularly for rice and sugar. The input price subsidy was pulled out. However, the tariff level for several food products e.g. soybean, corn, meat and chicken were set lower compared to what the other developing countries had set. The applied tariff set for those commodities were only 0-5%.

THE IMPORTANCE OF DOMESTIC FOOD AND RICE PRODUCTION

As described earlier that food crops accounted for 50% of the agriculture' GDP. Food crops produce not only the protein, mineral, vitamin and fibers, but also produce product so-called the non-food services. The non-food services are food security, national security, rural development, poverty reduction, filter for excessive urbanization and rural livelihood. This is the reason why food import cannot be placed and seen a perfect substitute to the role of non-food services had played (Lee 2001). The domestic food production must be treated as an effort to reduce the poverty and to develop the upper and the down stream of the agro-industry.

Among food commodities, rice is the most important food product related to the employment, the rural livelihood and rural development. About 11.3 million people engage as the producers of paddy commodity. The paddy production reached 54 million ton or 9% of the world paddy production. The size of wet land is about 12 million hectare (Ha) (Table 1.1). It is concentrated in Java and other provinces outside Java i.e, the South Sulawesi, the West Nusa Tenggara (NTB), the South Sumatra and the Lampung Provinces.

Here, the two largest industries are related to each other. Rice industry is closely related to the paddy industry. In the primary or paddy industry alone, around 11.3 million people are employed, mostly are the small and poor farmers. In 1993, the Agriculture Census (CBS) show that 49% households (8.7 million food farmers) occupied less than 0.5 hectare of land or on average 0.24 Ha per household. In the national average, the land holding size is 0.86 Ha per household.

Most laborers in the rural areas both men and women work are engage in the rice farming activities. The farming activities is seedling, planting, land preparation, maintain/caring and harvesting. Some other farm laborers are also involved in the drying, husking, collecting, and milling activities. It was estimated that around 109 thousands of rice milling units may produce almost 36 million ton of rice/year. About 0.7 millions people (male and female) involved in rice mills processing-industry. They work as collector, drier, and post harvest labors.

Paddy and rice industry is the biggest industry in absorbing labors in the rural areas or even in the national level. In comparison, sugar cane and sugar mill industry can only employ 0.98 million people. Soybean and soybean processing industry employ 1 million people. Meanwhile, paddy (unhusked paddy) contributes 12.6 billion value added or 2.9% of the agriculture' GDP. It is the highest among single commodity in the agriculture sector.

The paddy/rice' industry is inter-connected to several upstream industries, such as seeds, fertilizers, pesticides, agriculture machinery/tools. Likewise, the rice industry will be connected to the downstream industries, such as hotel/restaurant/food stall, feed, flour and food industries. The interconnection is elaborated in details in Chapter 3.

Table 1.1. Selected Indicator for Agriculture Sector and Rice

Rice import volume (MMT/year) [a)]	1.3
Rice import dependency ratio (%)[a)]	4.3
Paddy to Agriculture GDP (%)[b)] o Food crop to agriculture GDP [c)]	27.3 49.4
Rice/Paddy employment (Million)[d)] o Rice/Paddy to agriculture employment (%)	12.05 28.8
Rice Consumption Participation Rate (%)[e)] o Rural Areas o Urban Areas:	 98 - 99 96 - 97
Paddy production (TMT)[f)]	54,056
Rice harvesting areas (000 Ha)[f)]	11,923
Paddy production to total world production (%) g)	9
Farmers' Terms of Trade: o Period 1996-000 o Period 2001-2003	 106 109

Note:
a) 2000-2003 in average
b) For 2002
c) For 2005
d) Agriculture employment including primary (paddy industry of 11, 03 million) and semi processing product (rice industry of 1, 02 million) for 2002
e) Range from low to high-income group, for 2002
f) Rice= as dry paddy (GKG). For areas and production harvested in 2004.
g) Yearly average period 2002-2005
Source: calculated from the CBS data

RICE IN THE INTERNATIONAL SETTING

During the 2002 to 2005 period, the world paddy production reached 599.8 MMT/year. China and India are two biggest paddy producers in the World, each of them reached 175 MMT and 126 MMT/year in the same period (Appendix 1.5). The paddy production in Indonesia reached about 54 million ton or 9% of the total world's production.

Rice consumption and production are mainly centered in Asia. Around 82% world's production concentrated in the 8 Asian countries, namely China, India, Indonesia, Bangladesh, Thailand, Vietnam, Burma and Philippine. Around 86% of the world's rice is exported by the 6 main producers countries, which is: Thailand, India, Vietnam, USA, Pakistan and China. The USA is the only country outside Asia which became one of the biggest rice' producer in the world. Almost all of its production is for export purposes.

Almost all of the rice producers' countries in Asia produce rice to supply their domestic needs. Only if their rice production had met their domestic needs, will they then export the excess/the rest. In 2006, the three important exporter' countries India, Vietnam and Pakistan restricted their rice for export. The reason was that the paddy production had sharply declined by long drought, floods, hurricane, insect-/disease-attacks. This is why the world rice market is classified and called as the residual market. It is different from the other food commodities.

Almost all Asian countries have and keep the reserved stock program for their food stabilization and for the emergency purposes. Rice is the dominant one and generally used for the reserved stock. The Asian countries both as rice net exporter or net importer have a huge amount of rice reserve stock, i.e., China (34 MMT), India (7 MMT), Vietnam (1 MMT), Thailand (2 MMT), Japan (1 MMT), South Korea (1.2 MMT). Indonesia maintains its rice reserve stock about 1 MMT. In fact, the Government only owns 350 TMT, the rest stock of the stock belong to the BULOG as the SOE (State Own Enterprise). That is the reason why the rice producers and exporters' countries are not sensitive to response the world rice price. As discussed before, if the domestic rice price increased and became unstable, several exporters' countries e.g. Vietnam, Burma and Thailand restricted the rice for export.

Rice traded in the world's market is only 28 MMT, which is only 7% the total rice production in the world of 401 MMT/year (Appendix 1.5). That is the reason why, until now, the rice trade is characterize as having a thin market. The amount of rice traded is low compare to its total production. The volume of trade for other food commodities such as wheat and corn are higher. It reached to 20% and 15% from its total production, respectively (Amang and Sawit 2001). This is why the rice price in world market is unstable. It had experienced increase up to USD 600/MMT. For the last ten years, the rice price is more stable but low. In 2002, it reached 160-171/MT with price index 72 (FAO 2006).

The rice producers' countries, either a net importer or a net exporter, both developing or developed countries do provide a huge supports for their rice farmers and do provide subsidy for rice export. Rice is one of the highest/heavily-subsidized' commodity in the rich

OECD developed countries. Not less than 79% of rice farmers' income come from the Government support so-called the PSE (Producer Support Estimate). The support is found the highest among any other food commodities, such as milk, sugar and wheat (Husein Sawit and Rusastra 2005). Rice is included in the 5 commodities that received huge domestic support under the Farm Bill in the USA (IATP 2007a)

The world's rice price is influenced by the subsidy. Therefore its' price may not be used as a reference or an efficiency indicator due to the market distortion. If a country open his market without safeguard, it would depress its domestic rice price by itself. Then, it could cause the domestic rice loss its competiveness, even in their own domestic market. The average price of domestic rice in Indonesia declined 10.4%, from USD 156 in 1996-2000 period became USD 140/MT in 2001-2003 (Husein Sawit and Rusastra 2005). The rice price in international market increased slightly (USD 280/MT) with the price index of 109 in 2006 (FAO 2006).

In 1998-1999, when Indonesia liberalized the rice market to 0% without non-tariff barrier, the domestic rice price fell down. In 1998-1999, the rice import reached 4 MMT/year or almost 15% of traded rice in the world market. At that time, the import dependency ratio reached to 11%. However, in 2000, the new trade policy was enforced. The tariff was set Rp 430/kg (specific tariff equal to 30% ad valorem). Then, it was again enforced the non-trade measure, such as import ban, quota, and the physical inspection.

Indonesia is imported rice mostly from Thailand and Vietnam. In 2005, the total rice import was 195 TMT. Since 2004, it drastically declined, due to restriction of the rice import. However, Indonesia has imported rice from the developed countries, i.e., from Australia (5%), Japan (45%), the USA (46%) during the period of 1996-2005. It will be discussed further in the Chapter 3.

THE NATURE OF IMPORT AND ITS IMPACTS

The international trade particularly multilateral trade of WTO is focussed more and more toward market liberalization. Non-tariff barriers such as import monopoly, quota, import prohibition were found completely abolished. Tariff, then, become the most important instrument to protect the domestic market from the imported products or the downfall of import price of the agriculture products. The Government may provide a temporary safeguard (SSG) or is being drafted as the SSM and become the new SSG for the developing counries' need.

The tariff bound for rice in Indonesia which was 210% was down to 160% at the end of the Agreement on Agriculture (AoA). Besides, the TRQ could be utilized for 70 thousands ton in-quota with 90% bound tariff. However, the applied tariff was low. It was because of the SAPs and the IMF' pressures related to the Indonesia's debt outstanding and dibursement (1997-2006). It was then, the radical liberalization on food had begun. Rice and sugar were the two commodities among others had had negative impacts due to the radical liberalization.

The BULOG's import monopoly for food commodities was abolished. Rice import activities were given to the general importers. The applied tariff was set to 5%. The subsidies given to the farmers was reduced drastically, such as fertilizer, pesticides, credit and others. As the new Government took over in the 2000 (President Abdulrahman Wahid), the rice trade policy was reformulated. New tariff rate and non tariff barrier are applied to protect the rice' industry.

Rice imports are kept under-controlled. In fact, the tariff instruments are found could not protect completely the domestic market from the rice smuggling activities. The higher the tariff level, the bigger the incentive the smugglers' got. Since January 2004, the Government has applied an import-ban during harvesting season. Then, the Government restricted the import all year long. The import was limited only for the Government' reserve stock known as- the *Cadangan Beras Pemerintah* or for other important purposes. It could only reach to not more than 250 ton/year. It was then, when the consumption and production balance influenced the import decision. It will be discussed further in the Chapter 5.

Indonesia had experience rice import surges in 1998 and 1999. It reached 84% and 78% above the 3 years moving average. It had happened again in 2002 and it reached 42% and 11% in 2003. Symptoms of import surge are the depressing of the domestic rice price, the decreasing of flows and volumes of trade of the inter-regional or inter-island of the domestic/local rice .

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The import surge had affected directly the rice/paddy industry, includes are the farmers, paddy millers, traders, harvesting and post-harvesting labors. It had also affected the seed, fertilizer, pesticides and agriculture machinery/tools' industries. However, the systematic research to see the impact of rice import surge is found very rare conducted in Indonesia.

It has a serious impact considering the role of paddy/rice industry as the key industry for the rural development. It can be seen and proved from the index of backward linkages or forward linkages effect ratio- which is higher than 1. The paddy and rice industries absorbed 12.1 million people, particularly labors in the farming activities and through the involvement of the Small and Medium Enterprise (SME) in the rural areas. There is no other industry in Indonesia that as big as the rice and paddy industries. The giant industry in the country but lack of support from the Government and is given much less supported and less protected in the liberalization era. If this industry become weaker or experience a decline in its production, it would be difficult to speed up the rural development, so as the poverty reduction.

THE METHODOLOGY

Prior to conducting the field research, the team had organized a national consultation meeting among all stakeholders involved in the rice industry in Jakarta, Indonesia to discuss issues on import, rice import surge and its impact.The impact was related to farmers, rice milling, paddy/rice traders, consumers, etc. There were around 25 people or representatives attended the meeting. They are from the farmers association such as the *HKTI,* the *KTNA,* the *Dewan Tani*, the *Dewan Beras Nasional,* the rice milling/ rice-processors association, the

NGO Representatives (the Global Justice, the Oxfam, and the Indonesian' NGO), the beaureucrats from the Minister of Agriculture, the Minister of Trade, and the Minister of Foreign Affairs representing the Government.

Next step was to survey the issues related to a modern rice milling in Karawang, West Java. Then, the team conducted several farmers groups' discussions (FGD) with large farmers and progressive farmers in the villages. The issues relatedf to rice import and import surge was getting sharp and more focus.

The team prefered to utilize the research result regarding the National Panel of Farmers Surveys (*PATANAS*) that are available in the ICASEPS' office, rather than to repeat collecting input-output data from the fields. We rely heavily on the data-sets from the comprehensive and the formal research in 2002 and 2004 in rural areas of the West Java' Province.. Rice farminginput-output and other related-data regarding the rice farmers were collected from the extensive formal research of the PATANAS[2].

Among sample rural areas in PATANAS, it was then selected to only 4 villages for a deeper study in relation to the impact of the rice import surge. Two selected villages is located in the north coast of West Java and the other two selected villages is located in the central of West Java were chosen for this study. All the villages are dominantly occupied by the rice farmers. Hence, the details study of the millers, farm laborers, rice farmers, rice traders, etc, can be collected easily. The West Java' Province is chosen due to the reason being as one of the largest rice production area in Indonesia. About 50% of total Indonesian' rice harvesting area is in Java. Almost a half of the Indonesia's irigation areas are located in Java.

Qualitative information had been collected by the junior research team in the 4 sample villages. The interviews was guided by the issues and the questionaires. The reseach procedure discussed about the positive, negative and neutral impact of the rice import surge and the incidence of falling in the rice price.

The field evidence was then discussed intensively in Bogor to reach a temporary conclusion. Right after, the senior research team further visited the villages again. Senior team collected detailed data and information concerning the impact of the import surge.

Qualitative and quantitative methode are used to analize the field data. Quantitative data was analysed using the two-ways tables, the figures and the graphics. The previously-collected data were analyzed in accordance to the import surges issues. Meanwhile, many secondary data at the macro level were also used in the analysis. The data were mostly provided by the National Socio-Economic Survey/SUSENAS by the Board of Statistics(CBS), the National Employment and Labor Surveys/SAKERNAS by the CBS, the Input-Output Data/I-O by the CBS, the Indonesian Statistics by the CBS includes the GDP, the data from the Farmers Associations/Unions/Boards (PERPADI), data from the BULOG, and the data and information from the Ministry of Agriculture.

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[2] PATANAS is a panel national surveys as long term projects covers major Provinces in Indonesia started in the mid of 1980s uptill now (2007).

Monthly rice import data set came from the CBS, for 10 year periode: 1996-2005. This data set was used to calculate the *import surge* (IS) for rice. The IS formula is as followed:

$IS_t=(VM_t-VT)/VT*100$
where:
IS_t is import surge in percentage, for year-t
VM_t is import volume for year-t
VT is volume trigger, calculated using the 3 years moving average (MA).

If IS_t is positive and higher than 10%, then it is identified as import surge.

THE OBJECTIVE OF THE STUDY

The main objective of the study are:

1. To improve the understanding and the awareness on the impact of rice import surge
2. To identify the exact policy to respond to the impact of import surge, and
3. To suggest and strengthen the position of the G-33 countries on the SSM and the SP.

Table 1.2. Rice Import Surges: Qualitative Approach in Sample Villages

Village	Sub District/District	Laborer	Farmers		Traders		M
			Small Scale	Large Scale	Small	Medium	S
Nagrak	Banjaran, Bandung	+	0	+/-	0	-	
Pagelaran	Pagelaran, Cianjur	+	0	+/-	0	0	
Rajasinga	Terisi, Indramayu	+	0	-	-	-	
Sampalan	Kutawaluya, Karawang	+	0	-	0	0	

Notes:
(-) Negative impact from the 2002 and 2003's import surge. The Import surge data in 1997-1998 did not apply, because the data was abnormal years, generally by the import rice price, particularly by the monetary crisis.

(+) Positive impact of the import surge in cheap/low price.

a) Large farmers: High marketed surplus, price is important for this group.

b) Big traders: usually had huge stock, so they need an attractive selling price. Import surge might press the price, so their remarks were negative. However, some of them remarked positively, because they could buy import rice in cheap price, then they blend with local rice then sold it in higher price.

c) Small traders: impact negatively in some areas. They had to buy unhusked paddy in wet season then sold it to first or second dry season (MK1 or MK2). They remarked negatively to the import surge.

d) Small rice millers: had no impact to import surge. They only work as paddy miller and were not traders. Therefore, they did not see any impact of import surge to the rice price.

e) Farm Labors: They wanted cheap rice price, because they had very low income. Import rice and cheap price brought positive impact to them.

CHAPTER 2
SSG AND SSM FOR DEVELOPING COUNTRIES: A REVIEW

The developing countries often have difficulties in managing the import surge of agriculture products. The available safeguard such as the SSG or the Agreement on Safeguard is difficult to be implemented, costly, slow and ineffective. Hence, the need for an effective and a flexible safeguard is critically important for the developing countries. Therefore, a temporary safeguard mechanism for developing countries is a matter of urgency to be decide in the Doha round negotiation.

The developing countries have proposed a new safeguard, called the SSM (Special Safeguard Mechanism). The SSM is a temporary safeguard mechanism that caused by the surge in import or the decline in price. This safeguard should be flexible and effective to protect the import surge or falling in the international price. The G-33 proposal on the SSM will be discussed briefly as follows.

THE SSG IS NOT EFFECTIVE

Almost all developing countries should pay much attention in managing the import surge in their countries. Influx or mounted of the low-price import products in a country will give a negative impact to its agriculture industry, employment and rural development. In fact, the dominant numbers of population in developing countries live in rural areas. Almost of them had to relies their incomes heavily from the agriculture sector or other sectors which are closely-related to the agriculture sector.

The FAO (2005a) study show that there are many incidences of the import surge of the agriculture products in the developing countries. In 1984-2000' period, for example, there was import surge of various commodity and products in many developing countries in the Asia, the Africa and Latin America. The FAO also reported that import surge occurred for two-third of the agriculture products in the developing countries.

Among the products, meat and vegetable oil occupy most of the of import surge' cases. Nigeria, Malawi, the Philippines are among the developing countries which often suffered by the import surges (Table 2.1). Actually, import surge is used to indicate the external shock. This phenomenon arises when import suddenly increases in high volume or above the base level or trends. The price movement in the world market mostly determines the phenomenon of the depressed-import prices. The declining agriculture product/commodities' price in the world market affects negatively to the local/domestic agriculture products, rural development, and employment in the rural areas.

Table 2.1. Cases of *import surges,* Selected Countries in Asia, Africa and Latin America, and products/commodities:1984-2000

Negara	Rice	Maize	Vegetable Oil	Meat	Poultry Meat	Milk
Bangladesh	6	9	7	5	2	3
Philippine	9	7	9	12	14	5
Haiti	2	4	7	4	8	5
Dominican Rep.	-	0	3	8	6	3
Honduras	5	0	8	6	11	3
Jamaica	4	3	9	3	3	1
Peru	4	4	4	4	9	6
Kenya	3	5	7	4	5	4
Madagascar	5	7	5	3	5	5
Malawi	3	9	7	5	10	12
Nigeria	7	9	8	5	5	6
Uganda	4	8	11	4	2	1
Zambia	2	4	4	8	5	6

Note: Import surges is defined as 20% of positive deviation using 5 years *moving average*.
Source: FAO (2005a).

Import surge has no specifics definition in reference threshold. Article 5 of the AoA mentioned that the current volume of import exceeded some given trigger level. Studies conducted by the Oxfam (2002a/b) and the ActionAid (2003) also show that the developing countries had experienced the import surges. For example, Jamaica was overwhelmed with chicken, Kenya with the dairy products, Senegal with the tomato paste, and Haiti with rice.

The temporary safeguard is needed to manage the import surge. Without an effective safeguard, import surge will negatively affect the domestic production.

Sometimes, safeguard is known as an escape clause, the escape clause of obligation in certain condition. The agreement on the safeguards stated that the safeguard could not be implemented without investigation, including public hearing[3] and public notice[4]. This procedure is costly and requires long times. However, the developed countries must not apply the safeguard, if the import from the developing countries is not more than 3% or below *de minimis* level (Gallagher 2000; Das 2000).

Temporary safeguard for agriculture products are available from the Agreement on Safeguard and Special Safeguard (SSG). It is written in the Agreement on Agriculture, specifically on the Article 5. The Annex 5 of the AoA explains what is categorized as the special treatment. The Agriculture products that have the SSG are and should be written in the each-country' schedules of commitment. For the product, the country Members may apply a temporary safeguard under Article *XIX GATT 1994* and the Agreement on the Safeguard.

Yet, there are only several developing countries have use their right and apply to get the SSG. This is an unfair treatment. All of the country Members should have the SSG without considering whether or not they will or are using it.

[3] The result of the research must be reported to the Safeguard Committee (WTO) and keep it to whom it may concern. The result might be rejected. Therefore, there is no guarantee that the agreement will be reached.
[4] The notice must be announced to whom it may concern, such as: importer and exporter.

In 1995-2004, during the AoA implementation period, there were only 22 or 56% of the developing countries from the 39 WTO country members got their SSG. Six member countries or 22% of the developing countries got their rights for the SSG and utilized it as the safeguard instruments. However, the utilization rate for the SSG was very low. The developing countries utilized it only 1% from the 163-tariff lines (FAO 2005a).

Those 22 developing countries had their rights on 2.125 tariff lines or only 35% from total tariff lines (6.156) as registered in the WTO (Table 2.2). By contrast, the developed countries had registered many of their products to get the SSG. They had registered for 4.031 tariff lines or 65% of the total tariff lines. The Switzerland had the highest number of tariff lines (961) for SSG. The USA and the European Union had 189 and 539 tariff lines, respectively (WTO 2004). In fact, the developed countries do not have the need of the SSG, because they do not have the supply-side constraint in their agriculture productions.

Table 2.2. SSG registered by Developing and Developed Countries by Product Category (Total Tariff lines)

	All Countries	Developing Countries	Developed Countries
Total	**6.156 (100%)**	**2.125 (35%)**	**4.031 (65%)**
Cereal	1.089	399 (37%)	690 (63%)
Oil seed/oil	712	304 (43%)	407 (57%)
Sugar/confectionary	298	150 (50%)	148 (50%)
Milk	728	365 (36%)	464 (64%)
Meat	1356	471 (35%)	885 (65%)
Drink/Spirits	329	115 (35%)	214 (65%)
Fruit/Vegetable	831	187 (23%)	644 (77%)
Others	814	235 (29%)	579 (71%)

Source: summarized from Table 2, FAO (2005a)

The developing countries registered their meat, cereal and milk products for SSG. The FAO (2005a) reported that the utilization rate of SSG in each developing country was very low. Korea utilized only 7%, Nicaragua: 2.4%, Costa Rica: 1% and the Philippines: 0.8%.

Many developing countries applied the price SSG, with exception of the China Taiwan. From 163 triggers, 80% of them were the price SSG. The FAO concluded that even though the SSG was offered to all agriculture products for developing countries, however, the misused of SSG would not occur. The SSG' or SSM' usage was related to finance and administration burden. Hence, the above explanation on using the SSG was not supported by the empirical evidence.

There are many reasons on why the usage of the SSG by the developing countries is very low. Among them are: (i) the implementation of the SSG is complicated and inflexible[5], (ii) the bound tariff is high but the applied tariff is low. The low applied tariff is due to the debt service problem with the international finance Institution, just like what has happened in Ghana and Indonesia.

[5] Term in Agreement on Safeguards, the SSG was not easy for developing countries to apply, especially when it comes to proves that primary industry by millions heterogen farmers were injured. This kind of proving shall take much time and will be costly. Therefore it is found very rare the application for a protection mechanism.

Indonesia registered the SSG for the two commodities only which are milk/margarine and cloves with 13 tariff lines. That was written in the Schedule XX1. In fact, Indonesia has never utilized it as a temporary safeguard instrument since it was registered in the WTO. Besides all of the above constraints, nowadays, the need for the SSG is far different from the need back in the 1994. The chicken, sugar, soybean and rice industries are almost collapsed due to the import surges. The price of the import product was very low due to highest subsidies amount given in the developed countries. This problem was not known in advance when adopting the AoA back in the1994.

Since 2000, the agriculture trade had gone through reform, including the temporary protection is being re-negotiated. Finally, the developing countries (particularly the G-33) will have a new safeguard mechanism-called the SSM (Special Safeguard Mechanism). Then, the SSG will soon be replaced by the SSM. Hence, the SSM should be made simple and flexible enough to be utilized by the developing countries effectively.

The SSM proposal was agreed in the July Package of 2004 and was declared by the 6th Ministerial Conference in Hong Kong, December 2005[6]. In Hong Kong, the Ministers declared that "*Developing country Members will also have the right to have recourse to a Special Safeguard Mechanism based on import quantity and price triggers*." Based on this Agreement, then the detail work on the modalities should have been done. The modality of the SSM proposed by the G-33 will be discussed as follows.

THE G-33 PROPOSAL ON THE SSM

The agriculture commodity market, particularly the food crop is seasonal and is highly varied among seasons. A country that reduces its tariff, without non-tariff barriers will be facing the increasing in the price-instability in the world market and import surge. Thus, it will negatively affect farmers and their farm' production in the developing countries.

Previously, many developing countries implemented non-tariff barriers i.e., quota and import-licensed, the STE' monopoly. The non-tariff barrier can isolate the domestic market from the price instability in the international market. In the era of WTO, tariff or safeguard was used as an instrument for protection. These instruments are considered too weak to protect the market in the developing countries, as discussed earlier.

Generally, the developing countries have limitation in their financial capability. They are the price takers in the world market. On the other side, the developed countries are found heavily-subsidized their products, so the market price of the products tends to be artificial and low. Most of the food product' price did not reflect the efficiency level (ICTSD 2005).

Price fluctuation and declining are the symptoms of the import surge. Import volume for a product is suddenly increased abnormally. It has a potential threat to the domestic food sector. Thus, it causes the production to be declining and is reducing the incentives to improve new technology, etc. The result of the research is becoming useless. On top of it, the urbanization and social unrest in the village and city will increased. As mentioned in the previous chapter, the imported-food cannot be placed as a perfect substitute to the domestic-food, taking into account the role of non-food services of the domestic food production plays.

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[6] July Package" in Para 42 of Annex A, mentioned that: " A Special Safeguard Mechanism (SSM) will be established for use by developing country members" (WTO 2004). See, the Minister declaration document December 18, 2005 (document WT/MIN/(05)/W/3/Rev.2(WTO 2005).

That is the reason why a flexible safeguard is needed. The SSM is a solution mechanism brought by the G-33 countries.

As a safeguard, the utilization of the SSM must fulfill certain requirements. It is related to price and volume trigger. A trigger is used if the SSM fulfill the requirements as a temporary safeguard of the import surge and the falling import price. The G-33' proposal mentioned that the SSM will be implemented based on the price and volume trigger.

THE MODALITY FOR IMPORT SURGE

Import surge must be measured with simple methods. Import surge is analyzed through the import volume of a product. The level of the import surge depends on the volume trigger.

The G-33 proposal stated that volume trigger is defined as a volume of imported product, which had passed the average level for the last three years in accordance to the availability of data. Therefore, we can say that the "trigger" means a single import level indicator that has been used for all this time.

The G-33 proposal also stated that it would apply the moving average methods to predict the chances of import surge. The G-33 is proposing to use the last 3 or 5 years moving average. Moving average approach[7] is used as volume trigger. By using the approach, the trigger becomes more dynamics. The number calculated will change depending on the speed of the economic' development, the growth of the demand and supply of the product or commodity.

The Formula for the import surge is as follows:

$$IS_t=(VM_t-VT)/VT*100$$

Where:

IS_t is the import surge in percentage in the year-t
VM_t is the import volume in the year-t
VT is the volume trigger based on the import volume moving average (MA).
MA is the moving average of the last 3 or 5 years.

If the IS is more than 5 %, the SSM fulfill to be implemented by a developing country concerned. The G-33' proposal stated that a country with more than 5% import surge would implement the remedy by increasing its tariff. Then, the additional tariff is called as the SSM tariff. It will add up above/exceed the bound tariff.

There are three different bands based on the level of import surge. If the IS is 5-10%, then the additional tariff is 40-50% of the Bound Tariff (BT), the highest number is then taken. If IS_t is more than 30%, the tariff is raised up to 60-100% of the BT. The additional SSM tariff is shown in Table 2.3 as follows.

[7] The moving average is often called as the rolling average. If the highest and the smallest numbers are cancelled in the 5 years MA, then it is called as the Olympic Average.

Table 2.3. Additional SSM Tariff by 4 Tier of Import Surge: G-33 Proposal

Tier of Import Surge	Additional SSM Tariff (t) 1)	Additional SSM Tariff (t) Related to Bound Tariff 1)
IS =<5%	t=0%	t=0%
5%<IS =<10%	t=40%	t=50%*BT
10%< IS =<30%	t=50%	t=75%*BT
IS>30%	t=60%	t=100%*BT

Note: IS = % of import surge; t=additional SSM tariff; and BT=bound tariff.
1) The highest number of the two columns is selected

THE MODALITY FOR THE FALLING IN PRICES

Similar to import surge, the falling import price must also be measured in a simple method. Price trigger is defined as a reference price, the reflection of normal condition in the market. If the import price is found below the reference price, the price-depression is occurred. Accordingly, a developing country can implement the additional SSM tariff.

Proposal of the G-33 stated that price trigger or reference price is taken from the monthly price of a product in the last 3 years[8] (WTO 2006). If the import price products converted to IDR is below the reference price, then the SSM should be implemented.

The formula of falling import price is as:

$FP_t=(CP_t-PT)/PT*100$

Where:

FP_t is the falling price in percentage in month-t
CP_t is the current price in month-t
PT is price trigger. SSM is measured using the moving average method based on CIF price in IDR. Moving average is measured in 36 months within the last three years.

The G-33' proposal also stated that if the price falls more than 5%, then the SSM has fulfilled the requirement to be implemented by a developing country as a safeguard. Remedy can be applied case by case or from ship to ship of the imported-product. Additional tariff must not exceed the difference of the import price and the reference price in percentage (WTO 2006).

The formula of the additional SSM tariff (t) is:

$5\% < t =< FP_t$

Where: FP_t is as explained above.

[8] The SSG was used in 1986-1988 as a reference. It was not realistic as reference price. The price is rising up, and so as the IDR exchange rate to the USD

CHAPTER 3
RICE PRODUCTION AND MARKET PATTERN

THE ROLE OF RICE

Generally, for many countries in Asia, and particularly for Indonesia, rice is considered as a strategic commodity. Rice becomes the foundation for the rural development. Paddy industry is related to the development of the upstream and the downstream industries. The upstream industry consists of seed, fertilizer, and the agriculture tools and pesticides industries. The downstream industry consists of rice milling, hotel/food stall/restaurant, flour and food industries, and the feed industry as well (Figure 3.1)

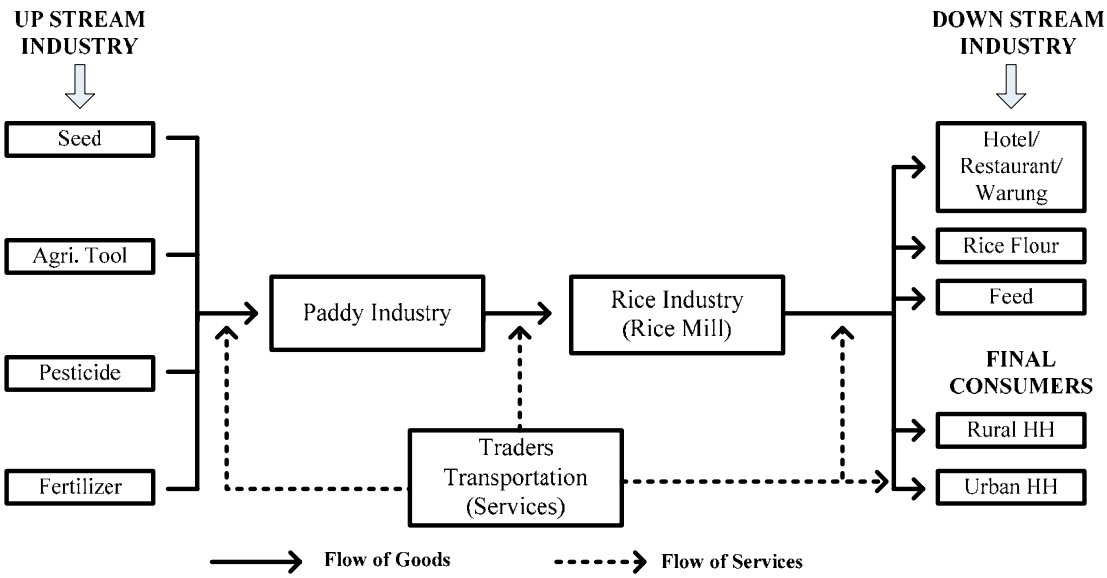

Figure 3.1. The Rice or Paddy Industry and Its Linkages

The input/output data (I/O) 2003 showed that the backward and forward linkages effect ratio was higher than 1. It means that the backward and forward linkages effect ratio is above the average of all economic sectors. With the index higher than 1, paddy and rice industry become the key industry for rural development and the key to encourage the small and medium enterprises (SMEs)' development.

Paddy and rice industry absorb 12.1 million labors. The highest labor absorption ever, not only in the agriculture sector but also within all other industry nationally. Small-scale farmers are the major players in the paddy/rice industry. Meanwhile, half of rice milling industry is categorized as the small scale milling industry. Only 5.5% of the milling capacity (equal to 39 million tons/year) belongs to the large millers. Around 2.3% of total existing milling units are large rice mill **(Appendix 3.1).** It is predicted that only 60% the milling capacity was used, under capacity 40%. The capacity could even lower if the amount of the imported rice were too high. It shall have a negative affects to rice industry productivity and will reduce rural employment.

Many researchers (e.g. Tabor, 2001) had analyzed the importance of food security in Indonesia. Paddy and rice are more than just foodstuffs. Paddy and rice production create social benefit for public in. It is known as public goods. It means that the consumption of a product for a person does not reduce its availability for other consumers. Dillon *et al* (1999) identified the role of non-food services of rice as follows:

"(a) **Political stability**: unless there are adequate supplies of domestic rice at an affordable price, consumers tend to panic. Rice riots contributed to the downfall of both President Sukarno and President Soeharto. (b) **Environmental and cultural preservation**: irrigated sawah production makes a positive contribution to soil fertility, to the prevention of urban flooding and to biodiversity conservation. Indigenous cultural traditions associated with the rice cycle are preserved. (c) **Public health**: irrigated rice production generates rural ambient cooling and involves continuous village water flow. The former reduces morbidity risk and the latter enhances rural sanitation. (d) **Employment generation**: rice is the most labor-intensive rural activity. Rural labor absorption reduces rural under-employment. This discourages excessive rural-urban migration and eases urban congestion costs. (e) **Income-distribution:** labor intensive rice production raises rural incomes and reduces rural poverty. This contributes to a positive improvement in income distribution. (f) **Labor-market competitiveness**: rice is the principle wage-good for unskilled labor. A competitive and stable supply of rice contributes to stable and competitive labor costs. This, in turn, inspires labor intensive development in the non-rice sub-sectors. (g) **Economic stability**: adequate rice supplies contribute to price stability and improve the domestic investment climate."

THE RICE PRODUCTION

Small-scale farmer produce food commodity, particularly paddy. The Agriculture Census in 1993 showed that the average size of food crop area was 0.86 Ha/household. Forty-nine percent of them occupied 0.24 Ha area/household. The size of land cultivated are found declined a long with the population growth and the low employment creation, particularly in the rural areas. In 1983, the land size of area was higher, about 1.05 Ha/household (Appendix 3.2).

Paddy production also depends on the season and the availability of water. The paddy harvest area reached 11.8 million Ha/year (average 2004-2005 periods). It was the largest food corps in Indonesia as compared to cassava or maize, which only have 1.3 million Ha and 7.3 million Ha, respectively. Wet land (*sawah* land) area is about 8.9 million Ha, in which 7.3 million Ha is irrigated land, with the planting index reached to almost 2.

The main harvesting season of paddy production is lasted from the month of February to May, which took 48% of the harvesting area or production' share. Followed by the secondary season which get 35% and the rest is lean season (**Figure 3.2)**

The price of paddy is low during the main season but then continuously going up to reach its peak in the lean season. The falling price becomes normal in the main harvesting season. The inelastic demand of paddy and rainy/wet season, make it hard for farmers to keep their rice stock. In that season, the market always fails to give appropriate price incentive to the producers. The millers and traders depend heavily on the solar system (sun) to dry the paddy. Thus, it reduces the absorbing capacity. It is one of the reasons why the government

needs to have a procurement price in order to reduce the risks in rice farming activities. The aspects of seasonal production and price will be discussed further in the Chapter 5.

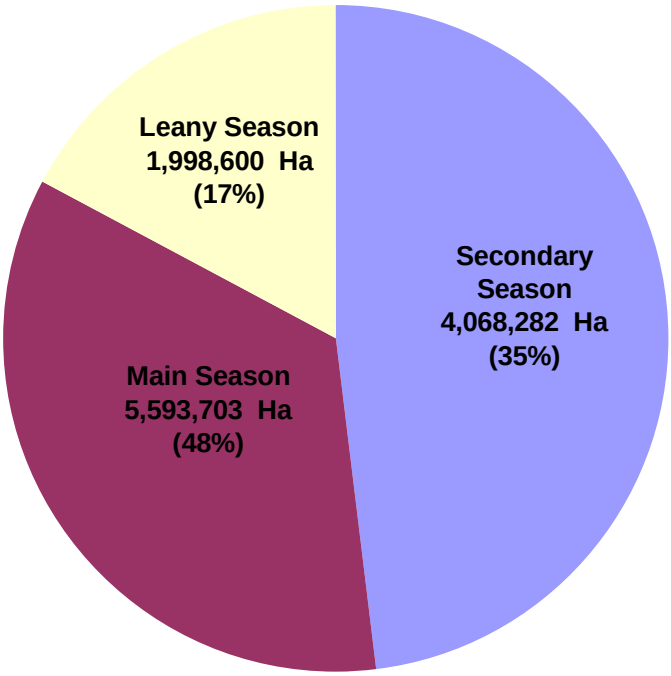

Figure 3.2. The Rice Harvesting Season

The Government through the BULOG as the STE' importer buys paddy or rice to absorb the over/excess supply, especially in the main harvesting season. The volume of rice procurement by the BULOG is about 2 MT /year, which is about 7% of the total rice production. The public' procurement of paddy declines during the El Nino/La Nina seasons. It can only take a half of the normal season. This intervention may encourage the competition in paddy /rice market. It can also rise up the farm gate price. Thus, market failure might be corrected. At least 81% of the BULOG procurement of rice occurs in March to June every year, mostly in the main harvesting season.

Output price support should be reduced and discipline should be used, as written in the Amber Box' category in the AoA. However, it is on exception for developing countries like Indonesia if the price support is less than 10% of the total value of production (*de minimis*). Only the rice/paddy are the commodities that the Government has maintain price support policy. Whereas, the output price for other food commodities was abolished since early 1990's.

Husein Sawit *et al* (2003) calculated *de minimis* for rice. The lowest *de minimis* value had occurred in 1998. At that time, the national production was depressed sharply. The long drought (El Nino) had affected the declining in the production. The highest *de minimis* level was on 2000, it reached 7.3% (Table 3.1). The average of *de minimis* was around 5.6% a long the 1998-2003 periods. It is below the allowed *de minimis* level for the developing country.

Every year, the value of *de minimis* is below the WTO regulation (10% for the developing countries). Therefore, on the base on the WTO regulation, the rice price supports will have a low/minimum in market distortion.

Table 3.1. *Market Price Support and De Minimis for Rice: 1998-2003*

Year	Applied Administered Price IDR/kg	External Fixed Price (average 1986-88) IDR/kg	Eligible Production Tons	Total AMS (billion IDR)	Total value of Production (billion IDR)	De Minimis (%)
1998	1,660	367.77	249,231	322	53,102	0.61
1999	2,310	367.77	2,448,752	4,756	68,172	6.98
2000	2,310	367.77	2,173,585	4,222	57,875	7.29
2001	2,470	367.77	2,010,791	4,227	66,567	6.37
2002	2,470	367.77	2,131,608	4,481	73,779	6.07
2003	2,790	367.77	2,008,954	4,866	75,294	6.46
Average	2,335		1,837,154	3,812	65,956	5.61

Source: Husein Sawit et al(2003).

THE RICE CONSUMPTION AND THE FOOD SUBSTITUTE

Indonesia, just like any other developing countries is characterized as a country with low household income, with a high household expenditure on food. The expenditure for food is dominant, reached to average 57% during the 2002-2004 periods. The expenditure was 11% for cereal particularly for rice (Table 3.2). The expenditure for food in rural household was higher than in the urban areas. The rural household food expenditure was about 65%, and 16% is for cereals.

The household expenditure for prepared-food is also becoming important to be noticed. It had increased dramatically after the monetary crisis. It accounted on the average of 10% per year. Most of prepared foods come from import, particularly from the developed countries and the MNCs.

Table 3.2. Average per Capita Expenditure in Urban and RuralAreas: 2002-04

	2002	2003	2004	Rataan '02-04
Urban				
Food (Rp/mo)	144,352	155,686	155,169	151,736
Non-Food (Rp/mo)	128,942	149,064	164,052	147,353
Total (Rp/mo)	273,294	304,751	319,220	299,088
Food share (%)	52.8	51.1	48.6	50.8
Cereals share (%)	8.6	7.0	6.5	7.4
Prepared food share (%)	11.2	11.5	11.6	11.4
Rural				
Food (Rp/mo)	101,692	107,764	108,112	105,856
Non-Food (Rp/mo)	51,092	58,992	63,324	57,803
Total (Rp/mo)	152,784	166,756	171,435	163,658
Food share (%)	66.6	64.6	63.1	64.7
Cereals share (%)	18.0	14.8	13.7	15.5
Prepared food share (%)	7.6	7.6	8.4	7.9
Rural+Urban				
Food (Rp/mo)	120,649	127,957	128,459	125,688
Non-Food (Rp/mo)	85,687	96,945	106,878	96,503
Total (Rp/mo)	206,336	224,902	235,337	222,192
Food share (%)	58.5	56.9	54.6	56.7
Cereals share (%)	12.5	10.4	9.4	10.8
Prepared food share (%)	9.7	9.8	10.3	9.9

Note: expenditure in nominal term. Percentage to total expenditure
Source: Statistical Year Book of Indonesia, CBS

Rice is the most dominant crop among the other staple food produced (e.g. corn, sago, cassava) in Indonesia. In 2002 for example, rice contributed to 88% staple food energy of both high and low income households. The other staple foods that contribute in the staple food energy are corn, noodle and cassava. Corn and cassava still play an important role for low-income households. Meanwhile, the high-income households depends mostly on the noodle, particularly from the wheat flour.

The household involve in food consumption can be seen from consumption participation rate. The higher the participation rate, the higher the number of the people consumes the product. The participation rate for rice reaches 98% and 97% for low and high income household, respectively (Appendix 3.4). The participation consumption rate, outside rice (e.g. cassava and corn) is low, which is less than 25%. The higher the household income the lower the consumption of corn, cassava or sago. They prefer rice and other food made of wheat flour. Corn, cassava and sago are considered now as the inferior food.

The most important substitute food is the wheat flour. Nowadays, the consumption of food made from flour is mostly by the high income households. It is 40 to 60 times higher than the consumption of low income households. It consists of wheat flour, instant noodle, noodle, bread and sweet bread.

The consumption of wheat is also encouraged by the increasing of urbanization and working woman. Eviandaru *et al* (2001) took the data from the Asian Week (May 25, 2001), and stated that Indonesia is the second largest countries after China for its instant noodle consumption. The consumption level of Indonesians reach 8.9 billion pieces per year. In comparison to Thailand and the Philippines, each of them is only 1.5 and 1.4 billion pieces per year.

According to the survey in four cities in Java, instant noodle has become a popular fast-food. Around 64% respondents stated that instant noodle was their favorite instant food. Around 32% stated that instant noodle was snacks and only 4% stated that it was everyday staple food (Table 3.3). Half of instant noodle production is produced by large industry. The biggest producer is the Indofood Sukses Makmur. It captives 85-90% from the domestic instant noodle production and control the domestic market. In 2000, it was found that there were 50 brands of instant noodle with production ability to 8.2 billion pieces, yearly.

Table 3.3. The Way of Eating and Additional Menu of Instant Noodle

Purposes		Additional Other Menu			Total
		None	Vegetable/others	Egg/Meat etc	
Additional food	n	37	30	91	158
	%	(23)	(19)	(58)	(32)
Main food	n	4	1	13	18
	%	(22)	(6)	(72)	(4)
Food in rash time	n	89	70	156	315
	%	(28)	(22)	(50)	(64)
Total	n	130	101	260	491
	%	(27)	(21)	(53)	(100)

Note: Respondents in 4 cities in Java: Bogor, Solo, Semarang dan Yogyakarta
Source: Eviandaru *et al* (2001)

The menu changes in the middle and low income household to flour made food affect to the production of domestic staple food (e.g. cassava, sweet potatoes, sago and corn). It is because of the unbalanced or the biased-policy towards rice. Many of the Government's policy unconsciously encourage the consumption of wheat by making the flour price relatively lower than rice price. It gives bad impact/influence to the domestic non-rice food producer. Thus, the dependency on wheat import continuously increases. Nowadays, Indonesia imported wheat around 5 million ton/ year, especially coming from the USA, Australia and Canada.

The change of consumption pattern occur in other Asian countries is in the contrary (opposite) with Indonesia. The change to flour consumption is very slow for low and middle class household. Indonesia, in the contrary, the speed of flour consumption is closely the same for all classes of household (low, middle and high), even though the consumption level per capita of the high income household is higher than the low and middle income households.

Indonesia must have the capability to produce the amount of food its people need, in order to avoid food import dependency, particularly rice. Rice market is classified as residual market that is controlled by few exporters. Besides its high risk, it cannot be imported at any cost. To avoid food import dependency is not an autarky trade policy. It merely allows the

international trade to support domestic supply (not to substitute the local food production entirely).

Indonesia has to develop its own or local food industry. It is a lifetime effort for the country like Indonesia to reduce poverty, to strengthened food security and to develop rural areas. To achieve those goals, Indonesia must develop the food sub-sectors as well as the food industry by using local/domestic production such as: rice, maize, soybean, meat, sugar, others. Therefore, the food import policy is used merely as the supporting role for strengthening the domestic food industries.

THE RICE IMPORT AND THE IMPORT SURGE

For long time, Indonesia has been a net rice importer country, except in 1984 it reached its self sufficiency in rice. Since 1990, the rice import has continuously increased along with the income and population growth, particularly the declining of the Poor. The peak of rice import in Indonesia was happened in the year of the monetary crisis in 1998-1999.

The monetary crisis had occurred coincided with the long drought (El Nino) seasons. That had caused the rice production declined to 3.37% and 0.28% for each year of 1997 and 1998, respectively. Therefore, the rice import in 1998-1999 reached to 3.8 MMT/year. That was closely equal to 15% of total rice traded in the world market (Table 3.4). At that time, self-sufficiency ratio was depressed into 88%, the lowest ratio ever since 1990. That means that the rice import dependency ratio increased to be 12%/year. The trade policy also had its contribution to the decreasing of the self-sufficiency ratio as discussed in the Chapter 5.

Table 3.4. Rice: Production, Import and Import Dependency Ratio: 1995-2006

Year	Gross Production (TMT)	Import (TMT)	Import Dependency Ratio (%)	Import to Vol. of World Trade (%)
Yearly Average				
1996-97	32,211	911	3.0	4.7
1998-99	31,633	3,827	11.7	14.6
2000-03	32,356	1,318	4.3	5.1
2004-06	34,337	280	0.9	1.0

Source: Appendix 3.5

The rice import in Indonesia mostly came from the other developing countries, particularly for the low and medium quality. In 2000-2003, around 76% of rice import was low and medium quality **(Appendix 3.6).** That kind of rice quality was not fit to the consumer tastes and preferences. However, the traders were using the rice to mix with their local rice. So that, they can came up with new rice quality and sale it at the low prices.

Generally, Indonesia is imported rice from the developing countries. In 1996-2005, around 97% of rice import came from the developing countries, particularly from Thailand, Vietnam, China, India and Pakistan (Table 3.5). The last 10 years, Indonesia mostly imports rice from Vietnam and Thailand, accounted around 0.5 MMT/year each. Meanwhile

rice import from India and China was only 115 TMT and 192 TMT/year in (1996-2005 period).

Table 3.5. The Rice Import by Country Origin, Total for 1996-2005

Country	Total MT	Import Share (%)	Growth (%/year)
1. Developed Countries	1,019,416	6.71	0.78
1.1. UNITED STATES	473,308		
1.2. AUSTRALIA	52,272		
1.3. CANADA	4,379		
1.4. NEW ZEALAND	10		
1.5. UE(15)	18,748		
1.6. JAPAN	455,141		
1.7. SWITZERLAND	108		
1.8. Others[2]	15,451		
2. Developing Countries	14,170,219	93.29	-17.68
2.1. CHINA	1,922,692		
2.2. INDIA	1,158,639		
2.3. THAILAND	4,799,371		
2.4. VIET NAM	4,881,377		
2.5. Others[3]	1,408,140		
TOTAL	15,189,636	100.00	-16.87

Note: see more detail in the Appendix 3.7

Japan also exports rice to Indonesia in form of the food aid, directly or indirectly through WFP. The food aid was found prominent during the monetary crisis period of 1999-2000. The USA is the most important rice exporter for Indonesia. The country exported almost 47 MT ton rice per year. Rice import from the USA increase significantly both in the liberalization era and the tariff-barrier era. In 1996, rice import from the USA was only 9 TMT ton, then it increased up to 75 TMT in 1999. In 2001 and 2003, Indonesia imported the highest amount of rice from the USA, 178 TMT and 108 TMT respectively. It was the highest during the last 10 year period. Since the change of the rice trade policy regime in 2004, the imported rice from the USA has declined sharply (only 2 TMT in 2005). For the last 10 years, half of rice import in the developing countries had came from the USA (around 47 TMT yearly (Table 3.6)).

Table 3.6. Indonesian Rice Import from Developed Country and the USA (MT)

Year	USA	Other D'ped Country	Total D'ped Country
1996	9,031	6,980	16,011
1997	0	12,352	12,352
1998	22,072	17,756	39,828
1999	74,956	385,725	460,681
2000	49,409	46,975	96,384
2001	177,889	1,522	179,411
2002	13,393	33,158	46,551
2003	107,608	25,231	132,839
2004	16,767	7,327	24,094
2005	2,184	9,081	11,266
Average (MT)	47,331	54,611	101,942
Average (%)	48	52	100

Note: D'ped is developed country
Source: See more detail in Appendix 3.7.

The USA had exported rice to Indonesia, not only under the food aid program, but also under the PL480 program, provided soft and long term credit loan. The credit scheme was also found costly for the Indonesian Government. Indonesia had to pay a higher price, almost doubled as compared to the world market price.

This program had been rejected by the Ministry of Finance and the Bappenas of Indonesia. However, the USA had successfully "forced" the Government to accept the program of PL480. If the USA had failed to convince the BULOG for example, it approached the other Ministry, it could even approached and proposed the program and went directly to the top level, the President or the Vice President. By then once the Government agreed to the program, the USA would export rice to Indonesia based on its need, even though at that time Indonesia was during the harvesting seasons (i.e., import had come at the wrong time). The Indonesian Government was powerless, even to arrange the delivery time. Hence, it caused the stock of rice at the BULOG was excessively over. The next impact was the rice procurement absorb from the local/domestic producers had to be reduced tremendously.

The USA can sell rice at the lower price to the Asian countries, even though the cost of production relatively high. The USA through its Farm Bill 2002 gave a huge amount of subsidy to 5 commodities, namely rice, cotton, wheat, maize and soybean (IATP 2007a).

For the last 10 years (1996-2005), the import surge for Indonesia is also calculated and analyzed. Import surge is defined if there is import surge more than 10% from the moving average of the last 3 years period. Rice import surge occurred in Indonesia in 1998, 1999, 2000 and 2003, at the level 84%, 78%, 42% and 11%, respectively (Table 3.6).

Table 3.6. Import Surges for Rice: 3 Years Moving Average as Volume Trigger

Year	Total Import (Kg)	Volume Trigger (VT)	Change in Import (%)	Import Surge (%) (>10%)
1996	1,469,526,770			
1997	351,992,126			
1998	2,900,550,168	1,574,023,021	84	Yes
1999	4,751,849,761	2,668,130,685	78	Yes
2000	1,375,497,862	3,009,299,264	(54)	None
2001	649,487,560	2,258,945,061	(71)	None
2002	1,811,988,250	1,278,991,224	42	Yes
2003	1,437,472,137	1,299,649,316	11	Yes
2004	246,256,381	1,165,238,923	(79)	None
2005	195,014,801	626,247,773	(69)	None

Notes:
MA= moving average (3 years), treated as Volume Trigger (VT)
ΔVM= change import volume to VT (%)
Source: CBS (for import data)

Import surge is getting worst during the harvesting season. In 1998-1999 and in 2000-2003, the amount of rice import reached to 79% and 77%. It caused directly and indirectly to the distortion of inter-season price movement. The price of paddy in the lean season was lower than the paddy price in the main harvesting or the secondary harvesting seasons. It also had caused the incidence of high falling prices under the Government' procurement price (Table 3.7). In other word, import surge affect negatively to the inter-season and inter-island trade. Hence, that would make it difficult to protect farmers' from the farm gate price of rice falling during the harvesting seasons.

Table 3.7 Volume of Import, Falling of Farm Gate Price during Import Surge, and Depressed-Price

Year of Import Surge	Volume Import during Harvesting Season (Main and Secondary)	Import Dependency Ratio (%)	Price in Lean Season is lower than Price in Main or Secondary Season	Farm Gate Price Falling under Floor/Procurement Price (%)
1998	79%[a)]	9.4	c)	c)
1999	79%[a)]	14.1	Yes	8.3
2002	77%[b)]	5.8	Yes	7.7
2003	77%[b)]	4.6	Yes	42.9
Year of no Import Surge				
2005	d)	0.8	None	15.2
2006	d)	0.6	None	7.3

a) average for 1998-999
b) average for 2000-03
c) can't be detected, due to instability of foreign exchange rate (IDR/USD)
d) Import mostly occurs in the lean season.

CHAPTER 4

THE IMPACT ASSESSMENT

THE IMPORTANCE OF WEST JAVA IN THE INDONESIAN RICE

The Indonesian production of paddy/rice comes from 9 Provinces, namely: West Java, Central Java, East Java, South Sulawesi, North Sumatera, South Sumatera, West Sumatera, Lampung, and West Nusa Tenggara. West Java is one of the main production centers in Indonesia.

West Java Province covers the largest both production and harvested area of rice in the country. Its share accounts for 18% of the total rice production in Indonesia; with average around 9.5 million tons GKG/annum, for the last five years. And similar with the rice area harvested, around 16% of total area harvested in Indonesia have come from this area and have been calculated for an average around 1.9 million ha/annum for the last five years (Appendix 4.1 and 4.2).

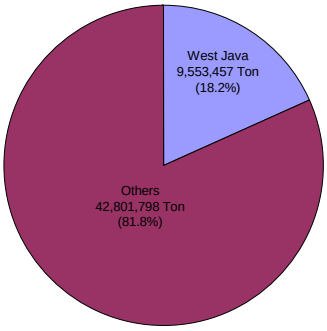

Figure 4.1. Share of West Java' Province to Indonesian Rice Production (the average of 2000-2005)

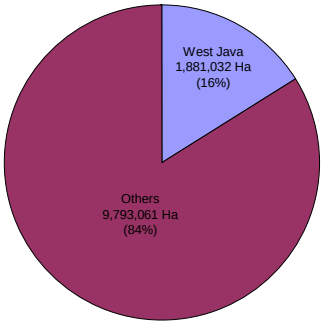

Figure 4.2. Share of West Java' Province to Indonesian Rice Area of Harvesting (the average of 2000-2005)

The study was conducted in the four Districts of the Province of West Java. They are: the District of Cianjur, the District of Bandung, the District of Indramayu, and the District of Karawang. While Karawang dan Indramayu are the two Districts representing the northern coastal part of Java Island (low-land sawah) as the main center of rice production in West Java, Bandung and Cianjur are Districts represent the central part of Java Island (up-land sawah) which also serve as the main rice production areas in West Java Province.

In each District, one village- that has a dominant rice crop- was chosen as case studies in order to get more comprehensive/in depth qualitative and quantitative data on rice farming, rice milling and rice/paddy trading.

The four villages was the village of the PATANAS (*Panel Petani Nasional*)-a baseline and comprehensive surveys, conducted in 2001 by the ICASEPS (Indonesian Center for Socio Economic and Policy Studies). They were chosen as a base for qualitative and quantitative data. In each village, called Nagrak, Pagelaran, Sampalan, and Rajasinga, around 57 to 102 farmers were taken as samples for a quantitative input-output data of rice farming (total number of farmers in the PATANAS-West Java' Survey: 244).

The Import Surge' study was then focus to get the qualitative information on the effects of rice import surge, covered both formal and informal methods using questionnaires.

Several FGD were conducted on the 4 villages to get the qualitative information in December 2006 and January 2007. The average landholding size of rice farmers was found as follows: 0.28 hectare (ha) for Nagrak' village, 0.22 ha for Pagelaran' village, 1.21 ha for Sampalan' village, and 0.36 ha for Rajasinga' village. Except for Sampalan' village, the average area found in the study is similar to the average landholding size of the majority Java Island' farmers. Generally rice farm are managed by small scale farmers with landholding size less than 0.5 Ha.

Majority population in the villages is small scale farmers' households. The average age of the household's head is 44-47 years old, and the wife is 3-6 years younger. Usually, each household consists of 3-5 people. The average education attainment is only 3-6 years (primary school). Lots of young men and women had left their villages; instead they prefer to look for a job (informal job) in big city like Jakarta or Bandung. The jobs/working fields in villages are scarce and limited; therefore we found many disguise unemployment's.

THE INPUT- OUTPUT OF RICE FARMING

In general, a one year cycle of cropping pattern of paddy in West Java can be divided into two main harvest seasons: (i) the wet and rainy season which is usually on May (lasted for 2 months), and (ii) the dry season which is usually on December (lasted also for 2 months). For some areas located close to the irrigation channel and sources of water, a one year cycle can even be three harvest seasons.

The production of rice involves amount of expenditure for inputs such as seeds, labors/workers, fertilizers, pesticides/insecticides, and others. Among that expenditures, the labors' wage is the highest expenditure for rice farmers.

From the table of Cost Structure of Paddy/Rice Farming in W. Java, Indonesia in the Wet and Dry Season (Appendix 4.3), one can assess that the expenditure for labors dominates the rice farming activities. Total expenditure in labors' wage was found varies among the

villages. However, the expenditure shares 61 to 65 percent of the total expenditure. Below is the chart of expenditure structure of rice farming in the W. Java Province in thousand IDR per Hectare..

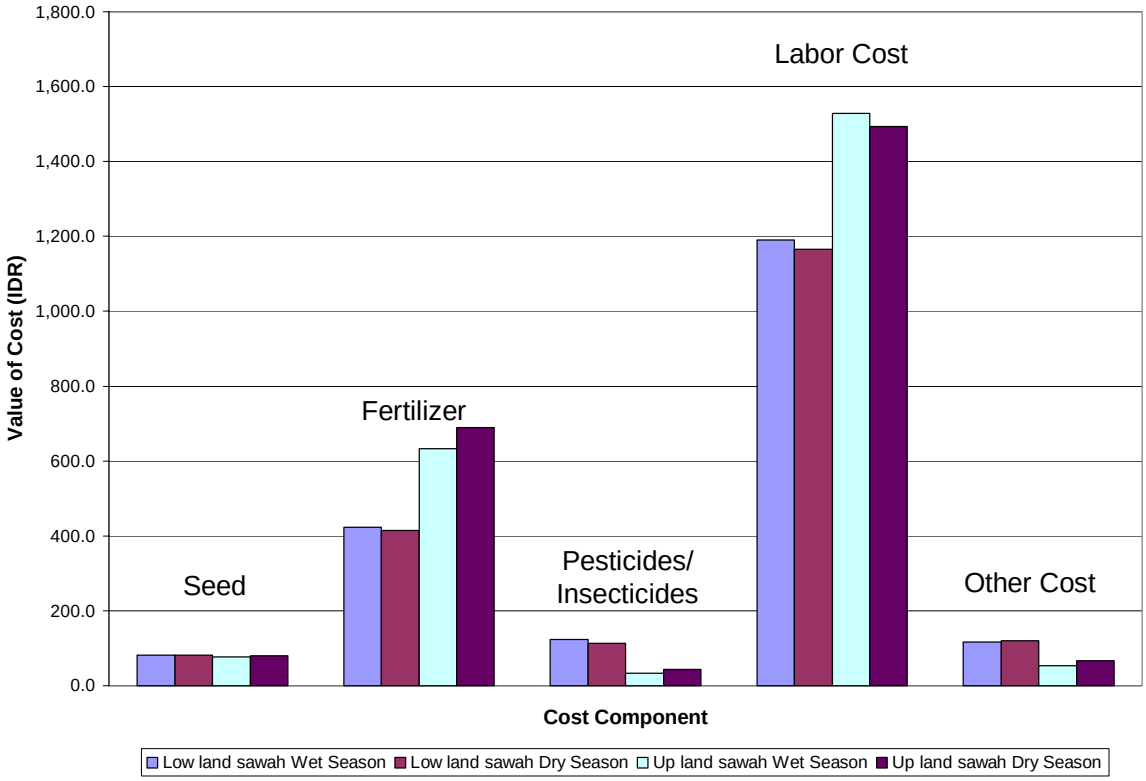

Figure 4.3. The Cost Structure of the Rice farming in the W.Java Province, Indonesia in the Wet and the Dry Season, 2001

During both the wet and dry seasons, the cost for seeds constitutes around 3.3 to 4.3 % of total cost. The costs for fertilizers are 21.8 to 29.1 % whereas the costs for pesticides/insecticides are 1.5 to 6.4 % of the total cost. Other costs are around 2.3 to 6.3 % of the total cost, which is usually the cost for water-maintenance, village land taxes, and bamboo-fences. There are no significant differences on the cost structure found between the wet and dry seasons, except that the total cost for upland sawah was found higher than the low-land sawah. It was mainly due to the higher cost for hired-labors and fertilizers.

Looking at the cost structure and the cost allocation for labors per hectare of the rice farming in the sample villages (Appendix 4.3 and 4.4), the data infers that the major expenditure goes for hired-labors. The data shows that 61.6 to 65.8 percent of total cost of rice farming goes to pay the labors'/workers' cost during the wet/primary' season and around 61.5 to 63.1 percent during the dry/lean' season. Therefore it is become important to see the correlation between the wages and paddy/rice' price at the villages' level. It was found that

there is a *positive correlation* between the rice price and the wages, but the relationship is *not reversible*. If the rice price increases, the wage will follow. However, if the rice price decreases, the wage will remain.

The low price of rice will have a negative effect for farmer incentives to plant rice. Consequently, it will affect the demand for hired labor as input of rice farming activity. For that reason, the rice price fluctuation will affect to the wage level both in nominal and real. This fact was often forgotten in the making of the rice pricing policy.

The charts below show how significant were the hired-labor' cost to the total cost of labor on the rice farming activities, both in the wet and dry seasons in the sample villages. In all sample villages, more than 60% of cost allocation for labors goes to pay the hired-labors. Female hired-labors were seen high in use in the lowland sawah, which are found in the Sampalan' and the Rajasinga' villages. On the other hand, in the upland sawah (Pagelaran and Nagrak villages), the male hired-labors were seen higher both during the wet and dry seasons.

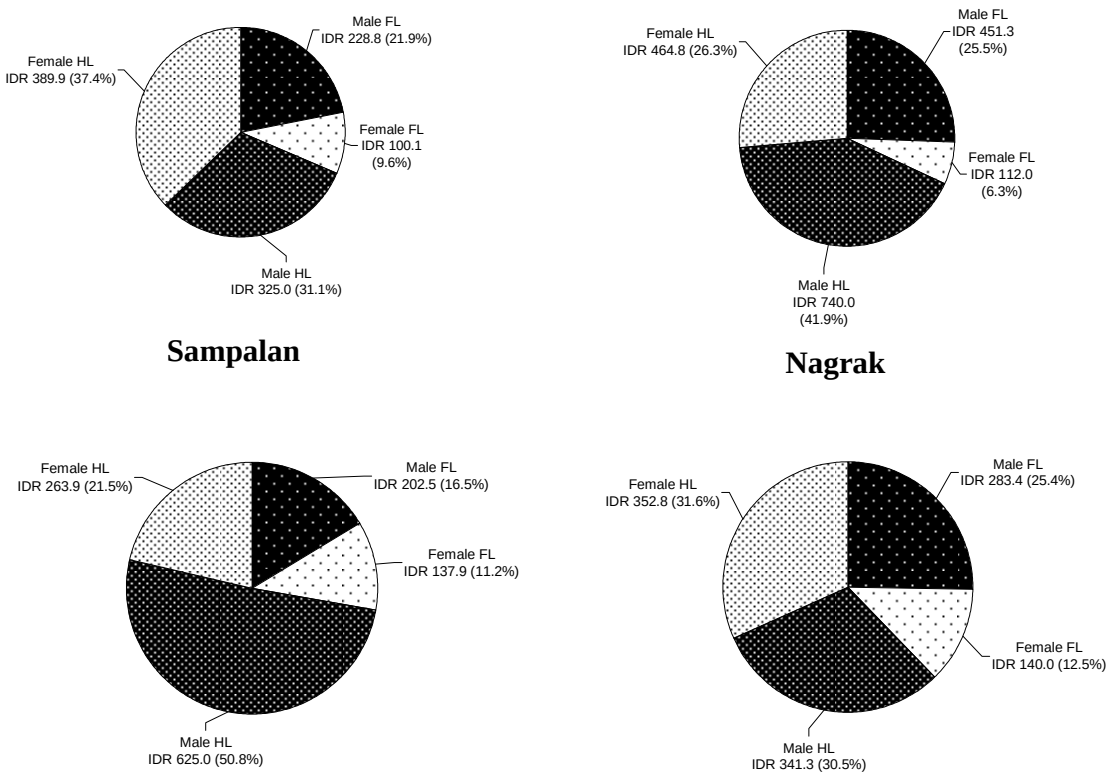

Figure 4.4a. Labor' Cost Structure of the Rice Farming in Wet Season in the Sample Villages

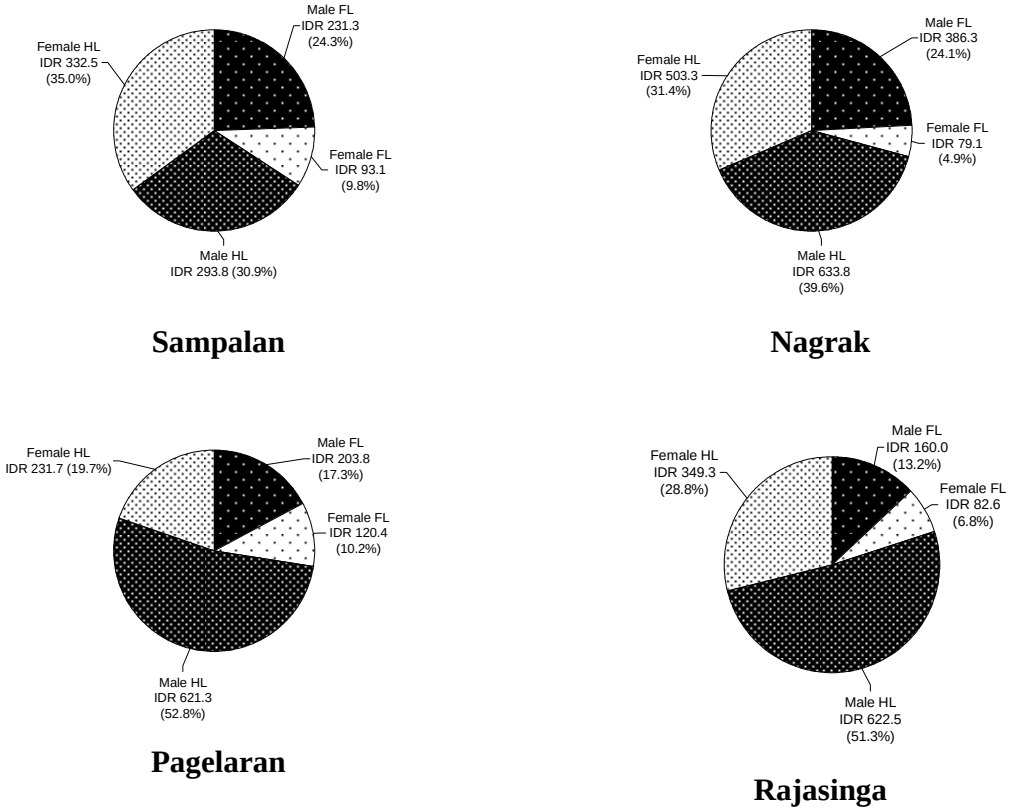

Figure 4.4b. Labor' Cost Structure of the Rice Farming in the Dry Season in the Sample Villages

In the rice farming activities, the total number of mandays per hectare per year are found between 216.8 to 327.8. If we look at it per season, the total number of mandays is found from the lowest of 102.5 in the Sampalan village during the dry season to the highest of 177.7 in the Nagrak village during the wet season (Appendix 4.5) From this total number of mandays, *the women contributes more than the men*. Even though if we calculate the hour per day, we will find that it is insignificantly different due to the fact that man-hours per day are found to be higher than woman-hours per day. Or, in other words, men are working with more long hours per day than women in the rice farming activities. The number of labors in a family and the hired labor are shown in the following charts. Female labors are dealing with planting, weeding and harvesting activities while the male labors are mostly deal with the land preparation and post-harvesting activities.

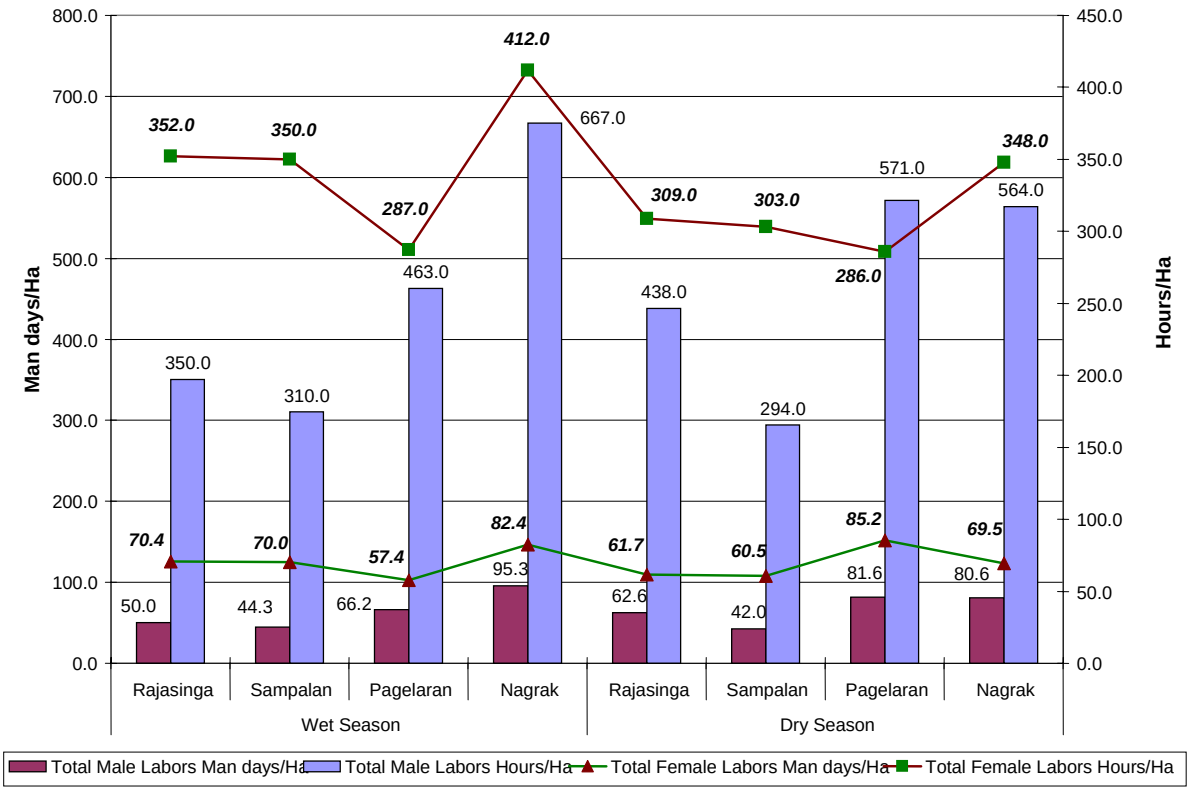

Figure 4.5. Labor Allocation of Time on Rice Farming Activities in W. Java, Indonesia Wet and Dry Season, 2001

The dependency of rice farming to hired-labor is high, meaning that rice farming does create job opportunity in the rural areas. More than 60 % of the labors in the farming are hired-labors. Half or more of those hired labors are in fact women. Therefore, work-opportunity for women are found more affected, if rice farming activities decrease in the areas.

If we compare to other commodity, rice farming activities absorb more labors in the sample villages compare to other crops farming activities (Appendix 4.7). For example, for soybean farming activities the total mandays per hectare was only 79.0. It has already imputed/calculated the family-labors. The hired-labors for soybean farming activities were only 24.8 mandays per hectare per year. Mostly labors-used in the soybean farming activity came from within the family. Another example is for mungbeans farming activity. It can only absorb 66.8 mandays per hectare per year.

The production of rice is varied among sample villages. Production in wet season is generally higher than the dry season (Appendix 4.6) In the wet season, the production is found between 3.5 ton per hectare in Nagrak village to 5.6 ton per hectare in Rajasinga village. Whereas in the dry season, the highest production is found in the Sampalan village 4.8 ton and the lowest in Pagelaran village of 4.0 ton per hectare. The net income farmers had got from

rice farming activities were spread between IDR 1 880 thousand to 3 501 thousand with imputed/calculated family labors.

If we look into the B/C ratio of rice farming activities of all sample villages, it shows that rice farming activities is still can be considered as a good and profitable business. The B/C ratio are found 1.76 to 2.65 in wet season and 1.81 to 2.84 in dry season The low-land sawah' B/C ratio is found higher than the up-land sawah, meaning it is more beneficial to plant rice in the low-land sawah areas compare to up-land sawah areas.

THE HOUSEHOLD INCOME

On average, total income per household in W. Java is IDR 10 341.3 thousand per year. Divided by the number of people/person within the household, it make the income per capita as IDR 2 438.9 thousand or equivalent to real income[9] of 1 180.7 kilograms of rice. In Rajasinga' Village, the total household income is IDR 6623.5 thousand, or percapita as IDR 1 498.5 and equivalent to real per capita income of 725.1 kilograms of rice. In Sampalan' Village, the total household income is IDR 8818.9 thousand, or per capita as IDR 2070.2 and equivalent to real per capita income of 1001.7 kilograms of rice. In Pagelaran' Village, the total household income is IDR 7872 thousand, or per capita as IDR 2093.6 and equivalent to real per capita income of 1013.1 kilograms of rice. In Nagrak' Village, the total household income is IDR 6462.4 thousand, or per capita as IDR 1648.6 and equivalent to real per capita income of 710.64 kilograms of rice.

If we look into the household' structure of the income (Appendix 4.8), the share of agriculture is 47.50 % and the share of non-agriculture is 52.50 %. More detail, the share of rice farming activities are only 13.70 % to the total income in the low-land sawah and 5.42 % in the up-land sawah. However, the contribution of labor work activities in the rice farming is found significantly adding to the share of agriculture to the household' income. The low share of rice farming activities to total household income is caused by several facts found in the fields, i.e.: land conversion (Box 4.1), depressed/low prices of local rice produced by farmers, high price of inputs-used.

The import surge of rice tends to depressed or lowers the local rice prices up to 30 percent. This in turn would have impact on the level of income the households should have been gotten. Based on the data above that 47.5 % of household' income are from agriculture, we can calculate that on average the income of households were decreased 15 % due to the import surge of rice during the year 2001-2. If there is no import-surge of rice during that time, the household' income could have been 15 % higher than what was shown in the Appendix 4.9.

[9] Real income per capita equivalent to kg of rice, the price of rice in 2000/1 is IDR 2065.6 per kg

To get a clear and comprehensive view of the impact of the rice import surge in West Java, a Supply Chain Management (SCM)' map/diagram in West Java is drawn from the field surveys. Generally, the supply chain of rice in West Java is shown in Figure 4.5 below:

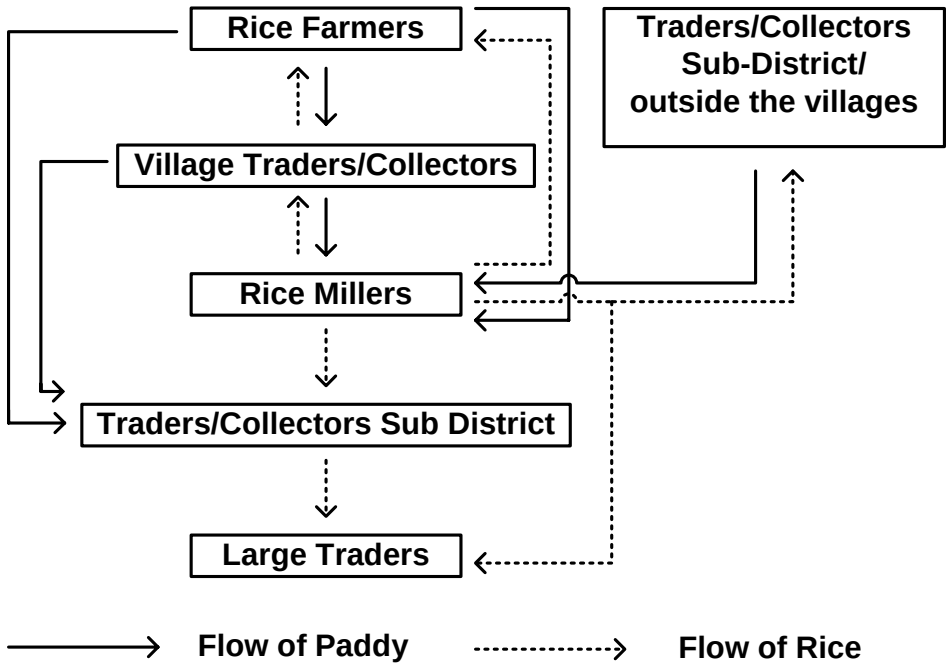

Figure 4.5. Rice Marketing for Paddy and Rice in West Java

Rice farmers sell rice in a husked to a few marketing channel. Some farmers, sell their rice in a husked to collector in the village, some sell to the rice millers and some other sell their rice directly to the sub district collectors/traders. The farmers never meet the big distributors. Some of the rice millers only concentrate as rice miller services, but there was found that some of them are function as a rice seller/trader too. However, generally, rice millers operate two kinds of activity which are rice milling and rice selling.

Figure 4.5 above shows that there are some SCM actors/stakeholders are affected (direct or indirect) by the rice import surge. The impact on each actors or stakeholders is described below.

The following topics are the impact assessment of rice import surges to each actors or stakeholders of rice industry in the four sample villages. The actors or stakeholders are: (i) farmers, consist of large farmers, small scale farmers, and farm labors. (ii) traders/collectors and (iii) rice-millers, consist of small and large millers.

THE IMPACT ON THE FARMERS

In Nagrak village, the rice import surge has negative impact to farmers with landholding areas more than 1 or 2 Ha. It happened because the imported rice usually have low price. It therefore, pressed the selling price of the local rice, especially during the main harvesting season. Thus, it had caused to the decreasing of the farmer's revenue and income.

The rice import surge was felt happened in the villages in the year 1998, 2001 and 2002. The price of rice was so low during that period. It reached down to the level of IDR 700-800 / kg GKP (GKP=*Gabah Kering Panen*=Unhusked Paddy with more than 20 percent moisture). There were so many stocks of rice available in the market during the period. However, the farmers could not differentiate where they came from (whether they were local rice or imported rice). The fact was farmers only knew that their rice was paid so low.

In the the Sampalan' and Rajasinga' villages, the farmers who had large landholding size or farm area (more than 2 Ha) suffered more due to the rice import surges in 1998 and 2001-2002. The rice price was depressed and cheap as the rice import entered the local markets. It made their rice selling price decreased. In the same years, the unhusked rice' price in their village was very low; it reached down to IDR 700-800/kg GKP. They wished that the unhusked rice price did not fall in the harvesting season. They also said that the year of 2001-2002 was the hardest year of their life. Back then, besides the fall of the rice' price, their corps was also damaged by the insects' and other pests. Their paddy production was fallen and its' price was decreased. In the normal condition, when the supply or production is low, the rice price is supposively higher. However, due to the rice import surge, the impact was reversed; it pressed the domestic price down.

Rice farming activities are also conducted by the sharecroppers and land-rented farmers besides the land-owner' farmers. The farm laborer or workers are involved in both farming activities; started from planting to harvesting. Both male and female farm laborers and workers mostly get a daily or contract wage.

The sharecropping system in West Java is a 50-50' sharecropping (*maro* or *nengah)*. The seeds', fertilizers', pesticides/insecticides, farm taxes' and village taxes/contribution' (routine per period and land and building taxes) expenses are co-paid by the land-owner and the share-cropper. It was both farmers' responsibilities. Meanwhile, the all costs of land preparation, planting, and maintenance are paid by the share-cropper. Net income received in rice harvest is shared between the land-owner and share-cropper. The common share of rice harvest in the village is 1:5. It means that 1/6 part of the total paddy harvested from the land become the share-croppers' right to receive, and the rest, 5/6 is for the land-owner.

Therefore, if the total costs of the paddy farming are calculated, then, the income of the share-cropper' farmer is less than 50 percent from the total net income. The rest is for the land-owner. The details of the paddy farming are shown in the table below:

Table 4.1. Cost Structure for Rice Farming in 4 Sample Villages, West Java, 2001 (Average)

Village	Sampalan		Nagrak		Pagelaran		Rajasinga	
	IDR	(%)	IDR	(%)	IDR	(%)	IDR	(%)
Seed	61,221	4.23	77,507	3.56	95,623	6.19	61,674	3.09
Fertilizer and Pesticides	688,881	47.59	722,192	33.21	658,145	42.61	697,737	35.01
Labor Cost	553,920	38.27	1,338,780	61.57	708,684	45.88	559,204	28.06
Other cost	143,460	9.91	35,866	1.65	82,040	5.31	674,326	33.84
Total Revenue	3,294,304		3,196,891		3,355,994		4,103,880	
Total Cost	1,447,482	100.00	2,174,345	100.00	1,544,492	100.00	1,992,941	100.00
Profit	1,846,822		1,022,546		1,827,889		2,110,939	

Source:PATANAS, 2001 (analyzed).

Farm workers' or laborers' groups are also categorized as farmers, but they do not own/have a farm land of their-own. However, their main sources of income depend on the rice farming activities. The number of farm workers or laborers farmers found in the villages is high. In all 4 regencies study areas (Karawang, Indramayu, Bandung dan Cianjur) the number reached to 15-20 percent of the total farmers.

Female workers or female laborers usually work in three main farming activities; which are planting, weeding and harvesting. For planting activity they are used to do it in group. When rice import surge happened, the rice planting and harvesting areas were decreased. It made their lives became marginalized. In the Nagrak village, the year of 1996-1998 was the dark years of their lives as rice farmers. There was huge land conversion to non agricultural and there was cropping pattern' change from rice to other crops.

One other fact found was the level on the farm-workers' or laborers' wages. Nowadays, the nominal labor wage has been adjusted and raised. However, the laborers' do not feel in their livelihoods' increased. Two main reasons that brought up to the surface are: (i) the real wage actually decreased; the wage was on IDR 7000/day, it equaled to 3 liter of rice, but now, the wage hits IDR 10 000/ day, it equals only to 2 liter of rice (ii) The price of non rice products raised over the rice price, meanwhile their purchasing power declined. That caused them to suffer more.

Box 4.1. Fact 1: The changes of farmers' cropping patterns and changes on the rice millers association' member

In Nagrak village, Bandung Regency, more than 100 Ha paddy's farm had converted, because paddy farming was not profitable anymore. Previously, the cropping pattern might harvest 3 times in a year which are paddy-paddy-paddy. Since there was a rice import in 1997-1998, the planting pattern in this area became paddy-vegetables; moreover there were vegetables-vegetables only. Many farmers planted vegetables because of its high economic price. This had caused the production of paddy/unhusked rice became disturbed. The effect was also felt by the trade collectors or rice millers because it became more competitive to get unhusked rice as raw material. The raw material supply, in facts, was getting scarcer. Previously, there was differences in prices among areas, so the miller could take some margin and might expect a profit out of it, but nowadays, the unhusked rice' price declines and relatively similar for all areas, thus the miller profit declined and even has no profit at all. Rice seller/ miller operator in this area has an association called *Himpunan Pengusaha Beras Banjaran* or Banjaran Rice Millers Association. Regarding such changing in cropping patterns, the decrease of production of rice or rice supply and the tight business competition, has made the number of association's member decline rapidly; file bankrupt, or changing business. In the starting phase of the association, the members were 90 millers, and today they were only less than 10 members left. The business declined rapidly in 2002.

Box 4.2. Fact 2: The food security of the female workers/laborers' households (changes in food pattern, as a strategy to defend from the negative impact of rice import surge, an Indramayu case)

The main job of the female workers/ laborers who do not own a land is to work as a labor in paddy farm. Female labors are smaller in number than male labors, and generally, the female labors work inside the villages. Female workers/laborers are paid for the planting, weeding, and harvesting activities. On those three activities the female workers are dominantly involved. In average, they work 10-20 days per month. In 1997-1998, they were paid IDR 1500-2500 per man day, in 2001-2002, they were paid IDR 4000-7000 and in 2007, they are paid IDR 15000-17500 per man day. Even tough, the wages differ for each activity- e.g. for planting, it is counted by the wide of the land they are contracted, meanwhile,for the weeding or harvesting, wage are counted per man day, The fact is their income is still far below the poverty line which equals to 2100 calories per capita daily, and it is even worst if it is measured in MDG's US $ 1 /day. To get rid of this income loss, they have to change their food patterns, including the husband and kid's food pattern at home. For 10 months of a year, their families only eat rice twice a day (instead of 3 times) and for the rest of 2 months they only eat rice once a day. To overcome their lack of food (food insecurity), they start to consume inferior food; such as roots and tubers. They prefer not to consume other staples and rice is the only main staple for them. The food security in villages was really affected by the decreasing of their wages due to the low price of rice.

THE IMPACT ON THE TRADERS/COLLECTORS

Traders/collectors as parts of the rice or paddy supply chain actors are also directly affected by the rice import surge. Mostly, small or big collectors have started their rice seller business in West Java more than 10 years.

In the last ten years, the rice price tends to increase because of the increasing price of oil and gas. According to one of the traders, the rice price increased rapidly in 1998 to

2006/2007. But, the difference was in 1998, the rice's price increased rapidly because of the monetary crisis as the Rupiah exchange rate decreased rapidly. Meanwhile, in 2006/2007, the rice price increased because of the nature factors such as long drought season, disasters and the delayed harvest time. These factors finally affected the domestic supply of rice.

Traders in Cianjur and Bandung have sold imported-rice in huge amount in 1998. At that time, there were many imported-rice came from other countries such as India, Pakistan, China, Vietnam, USA and Thailand in the local rice market. The rice from Thailand and Vietnam were dominant.

From the trader point of view, the imported rice and local rice are equal in quality. However, the imported rice is tasteless. The imported rice price is IDR 300-500/kg cheaper than the local rice with the same quality. The traders mix the local and the imported rice. The customers are attracted to buy because the price is lower than pure local rice.

Regular rice import or rice import surge may inflict financial loss to the trader, if those imported rice enter the market without counting the local main harvesting time. The local village rice price is depressed/paralyzed due to the low price of imported-rice. If the traders have kept many local rice stocks, financial loss intends to occur. That because they have to sell them at very low price. The condition may trouble them to absorb the farmer's rice or unhusked-rice. It may cause the farmer's unhusked rice price is depressed tremendously.

THE IMPACT ON THE MILLERS

Rice import surge also affects the paddy or rice millers as the actors on rice business chain industry. The impact can be seen accordingly to the miller scale' of operation, for example, a small paddy milling that own one unit macchine has to operate its milling process only with 2 man workers; other example is: the small scale or large paddy milling who own more than one unit of machine. They have to combine their units into one larger unit to increase their milling capacity.

In Karawang and Indramayu Districts, the small and large millers were found having financial loss due to the rice import surge, and also due to influx in of the rice from the outer Karawang into the local markets. The local rice price became low. Meanwhile the millers had to buy the unhusked-rice from the farmers in higher price with the low profit. They found it difficult to sell the rice at a decent price, so, they experienced financial lost in their business during 1998 and 2002 which was the year of the import surge.

The small paddy/rice milling process is as follow : first, the unhusked-rice from the farmers are sun-dried for 2 days, and then the dried-unhusked rice are kept for overnight before they are milled to rice. Besides rice, the milling also has side-products/by-products, like finely-ground grains of rice *(menir)*, *dedak*, and husk. Usually, the small paddy milling capacity is 3 tons of unhusked-rice daily during the main harvesting time.

The marketing pattern for small traders (they are millers also) do is described as follows: (i) the rice is sold to the rice trader in rural areas, (ii) the menir is sold to neighbors and outer village buyer as base material of mixed rice, (iii) the dedak is sold to regular collector/trader, finally (iv) the husk is sold by demand.

After the drying and milling process, 100 kg GKG becomes 68 kg rice; 5-7 kg animal feed, 3-5 kg finely ground grains of rice and 20 kg husks. The dedak is used as animal feed or processed into bran oil, menir is used as rice flour, and husk is used as fuel or hydroponics' grown mediator.

Small millers are worried if the rice price declines. They sell their rice as fast as they can as their strategy. The small millers are afraid to sell their rice to Jakarta's Central market because they cannot compete with the big sellers or distributors.

Farmers are likely to sell their rice/unhusked rice to small millers because the small millers pay back the farmers in shorter time than the big millers do. They usually pay the farmers in about 2-7 days, or even pay the farmers forward (in-advance). Some of the small millers' activities is solely to mill the rice without involved in the trade of rice. To small millers, the rice import surge affects only to the declining number of milling user and the declining of the production. They believe that the local rice and the imported rice have their own market segment.

However, the import surge affects differently for the big paddy millers that owned 10 tons unhusked rice or 6 tons rice in average capacity. Rice import surge will decrease the price of their rice. Besides, each big miller are having 20 workers, 3 units trucks and 12 workers (1 driver, 1 co-driver and 2 labors for each truck) that have to be paid and maintained weekly. All these workers experienced the negative impact of low price of rice.

If the rice import surge occurred just like in 1998 and 2001-2002, they are sure that the rice price will go down and affect the miller' productivity and the rice distribution. More workers were found to be laid-off because the millers work under their normal capacity (under-capacity).

After 1998, every time the import issue came out, the affect was really catastrophic for the rice industry. There was a trader that experienced a loss in transportation cost when he brought his rice to Johar Central Market in Semarang (Central Java). He had to go back with his rice because the rice price was going down at the market. He said that, rice import surge makes the price was depressed into 30 percents. However, he thought that not all imported rice had bad quality; some of them have good quality, especially rice from Thailand.

He suggested the Government to manage the rice import to come in the month of November to January. That is because those are the scarcity months before harvest. On that season many people will need rice in a stable price, especially for those who do not farm rice. But, when the main harvesting time comes (usually starting in February), the rice import is not needed. This will stable the rice price.

In general we can say that the rice import (regular import or rice import surge) had pressed down the domestic rice price to IDR 300-500 per kg (equal quality) in the year 2001-2002. Millers in Nagrak village could produce 140-150 tons unhusked-rice or equal to 80-90 tons rice per months before the lack of paddy production had occurred. But, after the cropping pattern changed from paddy to vegetables, the unhusked-rice material from Nagrak Village were emptied due to the decrease of unhusked rice production. Meanwhile, the farmers who planted rice tended to keep their unhusked-rice for their own consumption.

This situation was strengthened by the farmer statements that they were still kept part of their farm-land to plant rice with rice for their own consumption. They would not convert their whole farming-land into horticulture plants. They rationalized it on the thinking that the high risk of horticulture plants and its' price unstability.

Besides the negative effects from the rice import surges to almost every actor in the rice industry, it was found a slight positive impact of rice import surge. It is happened to a big city' rice consumers in 1998 or 2002. They found easiness to buy either local/domestic or imported rice in lower prices with lots of choice to choose from.

GENERAL IMPACTS

The rice import surge can decrease the average price of paddy/unhusked-rice or rice in West Java' villages up to 30 percents lower than the local' rice price. Rice import surge indirectly effects were felt by the stakeholders, especially the farmers and paddy millers. It happened because the rice import surge was relatively short (about 1 year). The Government tried to reform the rice policies in many ways. It will be described in the following Chapter 5.

However, the rice import surge had indirectly pressed the rice farmer households and rice millers' income due to the low rice price they got, especially in lean/dry season prior to the main-harvest season. The farmers had to sell their paddy/unhusked-rice in low price/unit. Traders and millers were affected through the decreasing of their volumes of trade.

Displaced farm-workers due the rice import surges are hard to be directly measured in this study. However, the indirect effect was significantly found through the cropping-pattern changes occured from rice-rice-rice to rice-horticulture/vegetables, (found in Nagrak' villages). However, it did not spread automatically and occurred in other places.

If, the rice import surge is extended for more than - years, it might have a greater impact. Poverty in rice producer villages would increase as the declining of areas planted/harvested and rice production. It was not easy for farmers and labors to find alternative or other jobs in villages, the situation may lead to a high urbanization. It also would not be easy to find a job in the cities as the unemployment rate was recorded high. The female workers were found to be more vulnerable as it is found more difficult for female workers to find alternative jobs in the cities, with the exception for those who were still young and educated.

CHAPTER 5
POLICY AND REGULATORY ENVIRONMENT

In the last 10 years, Indonesia had experienced many changes in its rice trade policy. The changes were aimed to protect its domestic rice/paddy industry. The rice policy is classified into 4 periods: (i) the *monopoly* period, which was happened prior to the monetary crisis in 1997; (ii) the *free trade* period, during 1998-1999; (iii) the *tariff barriers* period, during 2000-2003; and (iv) the *non-tariff barriers* period, which is since 2004. Below is the brief discussion of each period.

THE MONOPOLY' AND THE HIGHLY SUPPORT' PERIOD

The New Order regime took over to govern Indonesia in the middle of the 1960's. The stabilization of macro economy, particularly inflation became the center of economy development policy. The rice price played an important role to determine the inflation rate. Thus, the rice price could be controlled in order to stabilize the general price.

The rice stability policy could be seen from two different sides: (i) inter-season price stability due to the differences of paddy production in the main harvesting season (51%) and the secondary harvesting season (32%), and (ii) price stability inter-period. It is due to the effect of the weather and the international rice market. The BULOG is designed with the aim to stabilize the price both inter-season and inter-period of times.

The BULOG was used as the single-importer or STE for food security purposes. The main task of the BULOG is mostly related to the food security and to protect the small scale rice farmers. The STE in the WTO means *"…governmental and non-governmental enterprises, including marketing boards, which have been granted exclusive or special rights or privileges, including statutory or constitutional power, in the exerciser of which they influence through their purchases or sales the level or the direction of import or export…"*.

The BULOG, known and notified in the WTO as a sole importer and sole exporter, was given mandate by the Government to monopolize import of some commodities, particularly rice. For that reason, the monopoly activity of THE BULOG must have obeyed the STE rules regulated by the WTO. The regulations were: (i) non-discrimination, (ii) commercial consideration, (iii) on schedule commitment, and (iv) the transparency of its activity. Regulation number (iii) means and should be interpreted so as that the price difference between domestic and import rice must not exceed the bound tariff (160%).

The BULOG had its right to monopolize the rice import in order to stabilize the domestic rice price. As we know, the rice price in the international market was instable and high. The BULOG managed this task through and by using import quota. The imported rice was then being sold at the ceiling price. In that period, the domestic rice price was more stable in compare with the rice price in the international market. The IFPRI' study had shown that during the 1981-1983 period, and the 1986-1990 period, the variance of the border price of each period were 0.14 and 0.15. Meanwhile, the variances of the domestic wholesale prices were found to be more stable, only 0.03 and 0.06 (Islam and Thomas 1996).

On the Schedule XXI, Indonesia is committed to open the minimum market access for rice. It was 70 TMT/year with the 90% bound tariff. However, beside quotas, Indonesia could

also implement the tariff up to 180%. At the end of AoA implementation, in 2004, the tariff should be declined to 160%.

The rice import monopoly has been in practiced since the Dutch colonization era. The Dutch colonial restricted the free trade of rice to maintain the rural' prosperity. The reason was due to the low rice price in the global market and the weak position of the farmers (Boeke, 1946). Since then, the rational reason to control the rice trade had changed. However, import monopoly was kept on as an instrument because of the sensitive-political reason (Mears 1981).

THE RADICAL LIBERALIZATION' PERIOD

In the middle of 1997, the exchange rates of some of the Asian currencies were depressed by the USA Dollars (USD). It had influenced the Indonesian monetary crisis. In the beginning of January 1997, the exchange rate of IDR to USD was around IDR 2.500/USD. Then, it was depressed to IDR 6.000/USD. In June 1998, it reached the peak of IDR 16.000/USD.

The monetary crisis affects the economy crisis. Many financial and real sectors were closed-down, especially the banking and the construction sectors. The unemployment level increased sharply. The price of goods was uncontrollably high, especially the price of rice. In 1998, inflation rose to 78%, previously, it was kept under 10%. In 1996 for example, inflation rate was only 6%. Indonesia was forced to borrow debt from the international financial institution (IMF). In 1998, the debt outstanding and disbursed reached to 168% of the GDP[10]. Since then, Indonesia must have taken the IMF prescriptions for its economic recovery, particularly for its monetary stability. The prescriptions also went to other sectors, particularly the food sector.

In the 1998, the Government declared a free trade for all food product, including rice. The role of BULOG was limited and narrowed [11]. In 1999, its role as the STE was abolished. Privilages for BULOG were eliminated, include: credit subsidy, off-budget fund, access to subsidized exchange rate. Since then, the free trade policy for food import (i.e sugar, rice, wheat, soybean) monopolized by BULOG was left out. Government treated BULOG and the other private sectors equally for import of rice, sugar, wheat and soybean.

All the things explained above had happened because of the Government commitment to the IMF program. The IMF bounded the Government with the LOI (letter of intend). The LOI was designed in Washington, the head office of the Fund. The IndonesianGovernment had no right to change the LOI, even for one word. The Government must signed the agreement. After agreed, the Government had to legislate them by the Presidential Decree, Ministerial Decree or other Decree in order to strengthened the implementation.

In the LOI, October 31, 1997, the statements related to the BULOG was: *"(i) The government intends to phase out import and marketing monopolies and price control on agricultural commodities, except for rice, sugar, and cloves over the next three years; (ii) As a first step, on November 3, 1997, wheat and wheat flour, soybeans and garlic were made freely importable; (iii) In order to alleviate the burden of adjustment on the part of the affected*

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[10] In 2006, Indonesia's debt was only 40% of GDP. It declined sharply because Indonesia decided to return the entire debt to IMF.

[11] In 2002, after notified in WTO, , The BULOG had its right as STE.(See Husein Sawit 2005)

parties, import tariff will be applied to soybeans and dried garlic (20%) and wheat flour (10%) and will be reduced to 5% by 2003. Then, the Government legislated the Ministerial Decree no.45; November 1997 regarding the BULOG' authority in price control was limited only to rice and sugar.

The other LOI, September 11, 1998 stated: *"also, for the first time in thirty years, we will allow private traders to import rice"*. Then, in September 22, 1998, the Government was legislated the Ministerial Decree no. 439 regarding free duty for rice import.

The LOI, May 14, 1999 was related to the privatization and subsidy. It stated: "*Special audits of BULOG, Pertamina, and PLN are expected to be completed on schedule by end-June 1999. …Efforts are underway to ensure that all enterprises scheduled for privatization in the Master Plan are audited to international standard"*. Then, in May 19, 1999, the Government legislated Bank Indonesia-BI (Central Bank)' law (UU BI no.23) of 1999. It stated: "*BI will not again facilitate subsidized credit (KLBI), including credit facility for BULOG.*

All of the agreements above had had never been discussed transparently and publicly. The public and even the Parliament never knew and aware of them. That was the undemocratic agreement and process ever made by the Indonesia. All domestic economist and political experts were shocked by the radical reformation done by the Government. In fact, some of the agreement broke and by pass the national constitution (UUD 45 and GBHN) (Baswir 2003, and Swasono 2003).

In January 1998, President Suharto signed a program related to "KKN" (corruption and nepotism) abolishment with the IMF. Indonesia citizens, including military officials who watched TV and read the newspapers on the following day or afterward were left shocked and mad. They saw how the President signed the proposal in front of the arrogant look of Mr. Camdessus. That was very humiliating moment for Indonesians.

Many domestic and overseas experts saw the oddness of the "proposed" IMF program to Indonesia. Blustein (2001) stated that Paul Volcker (former chaiman of the Fed) was shocked to see the disconnection between the clove monopoly abolishment and the stabilization of the macro economy. Mr. Volcker stated:" *I'd never read an entire Fund program before*". Then he added: "*The Fund's business is macro policy, and that's stuff you can change. How programmatic you can be, in things the stuff you can change. How programmatic you can be, in things that go into basic culture and economic structure-whether that's productive or counterproductive, well, it's a continuing issue, that's all I will say*".

At the same time of the monetary crisis, El Nino is also occurred. It had caused the declining of paddy production to -3.37% (1997) and -0.28% (1998). During this period, Indonesia had imported rice tremendously high, reached to 3.6 million ton/year. It was the largest import since the independent period. The imported rice dependency ratio was only 3%. Then, it increased 4 times or up to be 12% in the period.

In 1997 and 1998, there was a huge rice import surge, about 84% and 78%, respectively. In 1997-1998, the imported rice price was higher than the wholesaler's price. The high price of imported rice in IDR was caused by the instability of IDR exchange rate to USD. However, since the middle of 1998, the price of the imported rice became lower than the domestic rice price. The IDR currency is stable and the rice price in the international market is declined (Figure 5.1). Thus, the domestic rice price was found depressed. This had made the rice farmers and millers unhappy and filed complains.

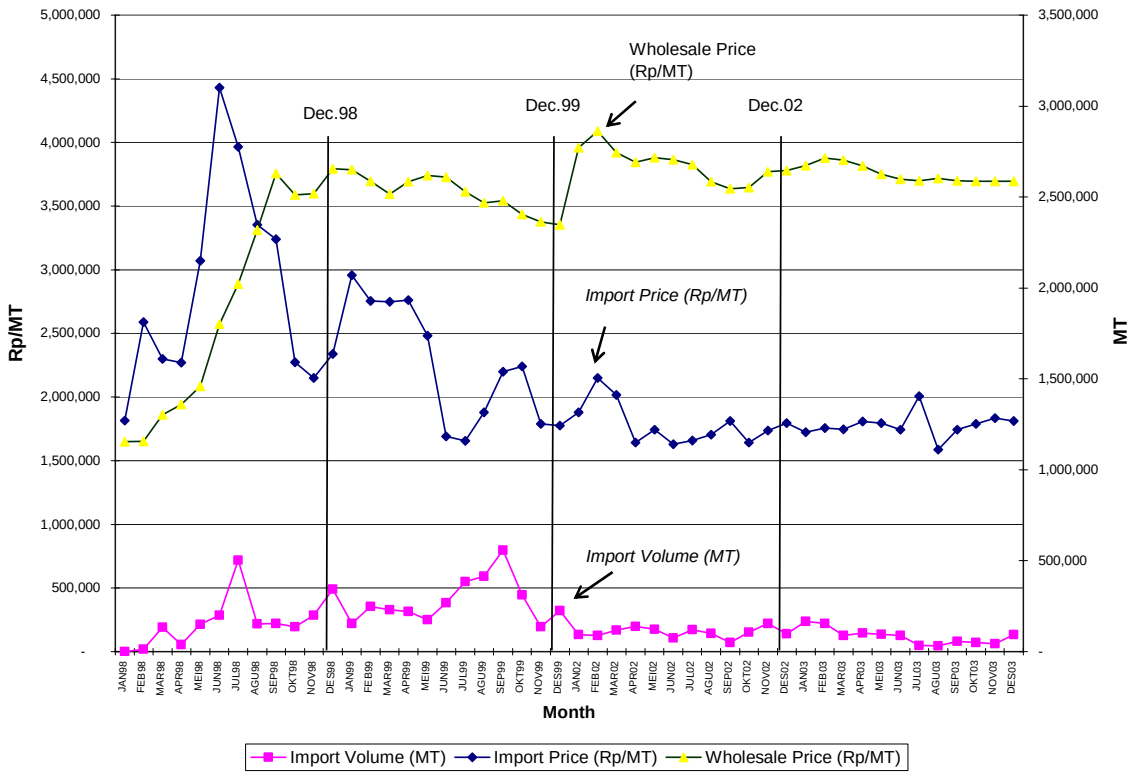

Figure 5.1. Rice: Import Volume, Import Price, Wholesale Price, and Periode of Import Surge

THE PROTECTION VIA TARIFF' PERIOD

The world rice price had declined during this period. It reached the lowest point to USD 140/ton. The strength of IDR exchange rate to USD had caused the price of imported rice cheaper than before. Farmers and millers were shocked. The productions of rice from producers in the rural areas were moved slowly to the urban consumers. Therefore the price of paddy and rice was found depressed and had made the inter-island rice trade almost stopped. Due to the above condition, the new Government (President Gus Dur) re-discussed the free trade policy of rice and sugar with the IMF/Fund.

During the 2000, the period of the rice import surge, the difference between the price of the imported-rice and the international price, was found, right after the Indonesia economy had recovered. In the period of import surge again in 2002 and 2003, the price disparity was found high (Appendix 5.1)

The imported rice had come to Sumatera and Kalimantan Islands, which are the main consumers' area outside Java Island. The distribution of imported rice is shown in Figure 5.3. The imported rice entered the wholesalers in the big cities, both outside and inside Java. Even though the imported rice was not found heavily distributed to the producers areas, the farmers could feel the effects. The rice from the rural areas could not be moved and traded to the urban

consumers. The inter-island trade almost stopped. It had caused the rice and paddy prices' at producers' areas was depressed.

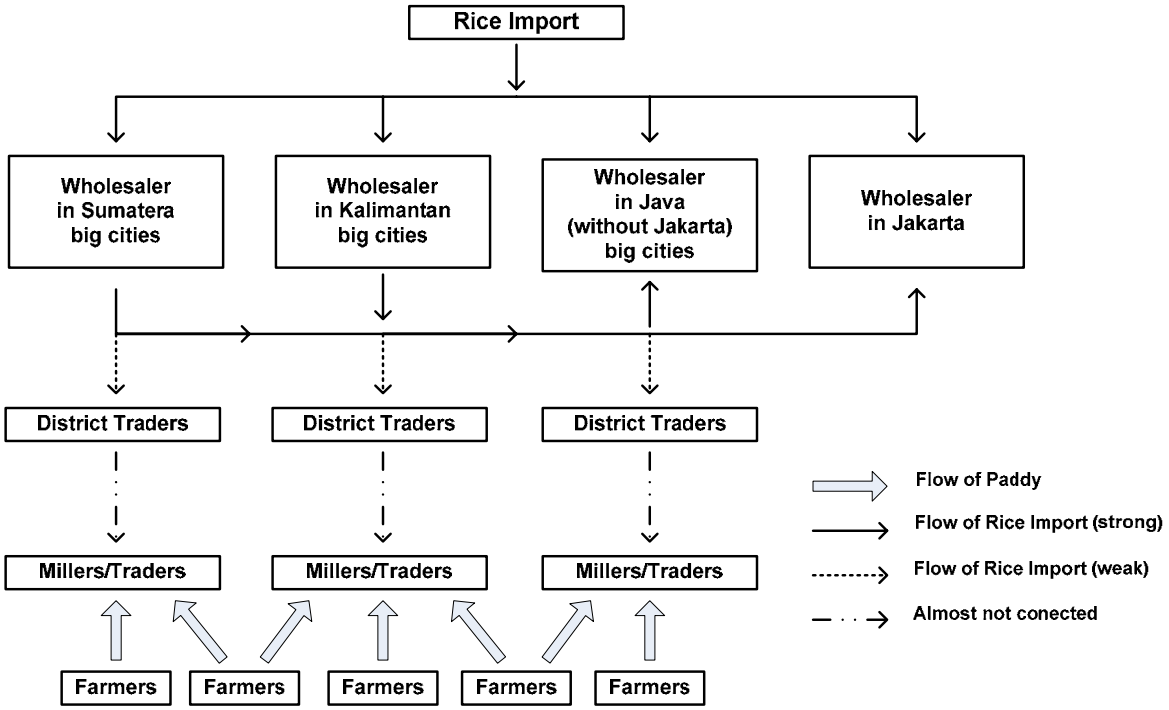

Figure 5.2. Flow of Rice Import to Indonesia

The paddy price in the producer'/farmer' level must be analyzed in accordance to the pattern of paddy harvesting season, because paddy is a seasonal commodity. Half of the total harvesting area occurs in the main harvesting season, which is the wet season. Meanwhile in the secondary season, it only takes 35%. The rest 15% occurs in the lean season. If there is no Government intervention at all (such as procurement price and managing the rice import), the farm gate price of paddy will fall in the main harvesting season. The price will increase at peak in the lean season.

The pressure of the rice price below the procurement price was widened and huge. It reached to 43% in 2003. Unusually, the inter-season price movement was messed and unpredicted. The prices of paddy (in *GKP-Gabah Kering Panen* or per-unit price) in the lean season or in the secondary harvesting season were lower than the price in the main harvesting season. It means that the imported-rice was mostly come in the secondary harvesting season; it then had caused the oversupply/excess condition. For that reason, the rice price in the lean season declined (Figure 5.3). The instability of the rice price will reduce the incentive to the traders, to the millers to buy, to mill and to stock the paddy or rice.

In 1998 the import surge of rice was occurred. However, the distortion of price occurred in 1999. The price in the lean season was lower than the price in main harvesting

season. The price is excessively fell down. It was then; the Government implemented a tariff for rice: IDR 430/kg, or equal to 30% *ad-valorem* since January 2000.

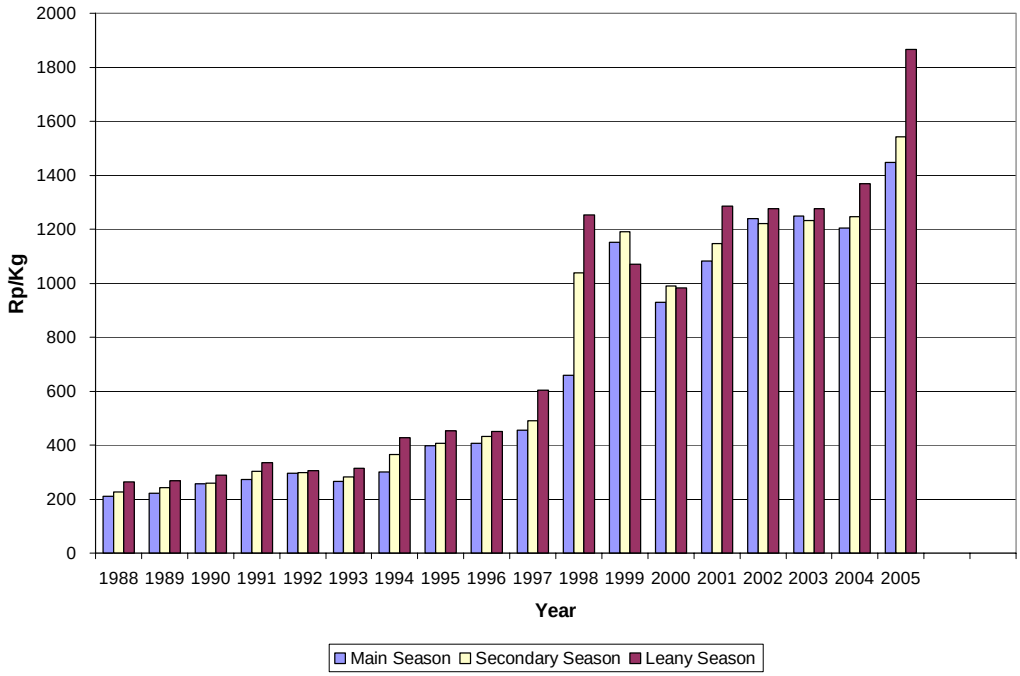

Figure 5.3. Seasonal Paddy Price at Farm Level by Season: 1998-2005

At first, the IMF/Fund did not agree with this new tariff policy. A senior Minister, Dr. Kwik Kian Gie complained about the meeting with the junior expert of the Fund. The Fund staffs mostly had little experience in the Indonesian economy, particularly in the food sector. Mr. Yusuf Kalla, back then as the trade Minister was also complained the same. They both had to meet the IMF team for 5-6 times and was only to get an agreement to increase the tariff rate from 0-5% to 30% for rice and sugar.

Finally, since January 2000, the Government implemented the new tariff rate policy. But, due to the ineffectiveness of the tariff, then, there was a physical inspection (red line) for rice. It was needed to effectively implement the tariff policy.

In fact, the tariff was not easy to be implemented. There were so many constraints had to be faced at the borders. The infrastructure was not well developed and available. The number of guarding ship/boat to secure the coast was too-limited and old. The limited budget and the rigidity of budget are among other constraints had to be faced. Besides, the low level of salary for the border employee and controllers, as well the high incidence of corruptions have created situation harder for them to control the smuggling of rice.

Physical inspection, as well, did not work well to control smuggling. The mismanagement had also occurred in Tanjung Priok, the capital' harbor. Whereas in fact, the purpose to implement the specific tariff is to reduce the amount of import documents,

particularly related to the price. Meanwhile, the importers views are different. They practiced the under-invoice schemes (Tabor, *et al.,* 2002). That was far different from the tariff specific implementation in the developed countries. In the developed countries, the purpose of tariff specific is to increase protection in percentage, if the product price in the world market is found declined.

The ineffectiveness of tariff can be seen from the difference on the rice import data of exporter countries and compared with the official data reported by the Government. Rice data from exporter countries come from the TRR was far higher than the Government data as reported by the CBS. The difference of data was getting bigger and higher from time to time. In 1998-1999 period, 25% of rice import data from the CBS was lower than the TRR. Meanwhile in 2000-2003, it rose up to 44% (Table 5.1). The higher the difference of the domestic and the international rice price, the higher the insentive for smuggling.

Table 5.1. Rice Import from Different Data Sources: 1996-2005 (MT)

Year	CBS	TRR	Differences (%)
1996	1,469,527	1,173,014	25
1997	351,992	781,604	-55
1998	2,900,550	6,076,542	-52
1999	4,751,850	4,182,774	14
2000	1,375,498	1,511,611	-9
2001	649,488	1,404,051	-54
2002	1,811,988	3,707,037	-51
2003	1,437,472	2,775,328	-48
2004	246,256	633,756	-61
2005	195,015	446,679	-56
Yearly Average			
1996-97	910,759	977,309	-7
1998-99	3,826,200	5,129,658	-25
2000-03	1,318,611	2,349,507	-44
2004-05	220,636	540,218	-59

Note: CBS=Central Bureau Statistics; TRR=The Rice Report

In 2002 and 2003, the movement of paddy price inter-season was again disturbed due to the import surge[12], 42% and 11% respectively. The rice import mostly entered the country in the secondary season. Meanwhile, the domestic rice production was well available (Table 5.2). It had caused the increasing of rice supply and stock. Then, in turn, the rice price in the lean season was depressed. The paddy price declined during that period. At that time, the falling prices in the lean season were 13% and 42%, respectively (Appendix 5.2).

The free trade' period started in the 1999. The seasonal price movement was distorted because the consumers in urban areas particulary, mostly prefer to consume the imported rice. The price of paddy at the producer' areas in the main harvesting season was higher than it was in the secondary and the leany season (Figure 5.2). Started in 2004, the new trade policy was

[12] See Chapter 3 (Table 3.6)

adopted. It was then, seasonal pattern is becoming normal again. The movement of the inter-season prices had given incentives for the small and medium enterprises, traders and millers to do their bussiness. The rice import restriction have played an important role here.

Table 5.2. Rice Production and Import Volume by Season: Yearly Average

Harvesting Season	Rice Production		Import Volume	
	Average 1998-99			
	(MT)	%	(MT)	%
Main Harvesting Season	16,244,149	51	865,252	22
Secondary Harvesting Season	9,906,401	31	2,202,784	57
Lean Season	5,741,532	18	827,083	21
TOTAL	31,892,082	100	3,895,119	100
	Average 2000-03			
Main Harvesting Season	16,770,602	51	516,994	40
Secondary Harvesting Season	10,411,157	32	432,334	33
Lean Season	5,425,630	17	343,810	27
TOTAL	32,607,390	100	1,293,139	100

Note: Main Harvesting Season (Feb-May); Secondary Harvesting Season (Jun-Sept), and Lean Season (Oct-Jan)
Source: calculated from CBC data

The increasing of the paddy price at the producer areas has a positive affect to the Government' procurement price. Even though the level of depressed-price was high (43%) at the main harvesting season of 2004, the price kept declining to 21% in the lean season (Appendix 5.2). In the main harvesting season of 2005, the depressed price was only 27%. It was lower than the main harvesting season before 2000, except for 2002.

The tariff instrument did not work well to protect farmers from the unfair trade. Meanwhile in fact, the instrument was considered as a transparent tool. It had paralyzed the norms of multilateral trade. The reason was because the weakness on the implementation and the lack of infrastructure at the borders. Besides, the poor attitude of the Government' Officers at the border made it hard to abolish the smuggling. The higher the tariff, the higher the incentive to do the smuggling.

One effect of inability in managing the rice import, it has created a low incentive for the inter-island trade. Also, the rice from producer areas was not moved smoothly to the urban consumers. It had depressed the rice farm gate price. This condition has had a negative effect to the small scale farmers and the small and medium enterprises. The income distribution and the rural development were depressed as well.

THE QUANTITATIVE RESTRICTION' PERIOD

The difficulties, the mismanagement, ineffectiveness of tariff to protect the local industry, became the reason for the Government to apply the rice import ban and the quantitative restriction for rice import. In January 2004, the rice import was restricted (see

Trade and Industrial Ministerial decree no.9/MPP/Kep/1/2004). This policy has a strong support is backed up by the Parliament and the farmers' organization.

The import restriction is applied within and during several months period. They are period of: (i) a month before main harvesting season, (ii) during the harvesting season, and (iii) two months after the harvesting season. Out of those months, the imported rice was controlled by the quota. The import quota was given to the importer-producers (IP) and to the registered-importers (IT). Rice import was not opened for the general importer. The Government, then, applied more strict trade policy, and had banned the rice import for all month throughout the year.

Based on the fact, the implementation of the import restriction could avoid smuggling more effectively. Since 2004, the rice import drastically declined. The import average declined to 221 thousands ton/year during 2004-2005 periods. The inter-season movement of paddy prices was then back to its normal, however, the rice price is becoming high, (Figure 5.3).

This restriction has impacts to the increasing of the rice price in the producer areas. It can't be considered good for the Indonesian development. However, the best effort to do is to maintain and keep the stability of the rice price in normal line. It is by then; the farmers may obtain and get reward to increase their productivity and efficiency. Therefore, the rice import must be well managed in order to achieve the rice price stabilization, which in turn, will increase the farmers and the rural livelihood.

THE ODD PRESCRIPTION FROM THE WORLD BANK

Since the late 2006, the World Bank (WB) continually criticized the Indonesian Government regarding the increasing of the rice price. Lately, the World Bank eagerly proposed and offered the Government to make the BULOG to become a private entity, to liberalize import and to have and let the private enterprises become the local price maker. The state institution (the BULOG) is considered fail on its duty (World Bank 2007).

The role of World Bank in Indonesia had not changed yet. Unfortunately the WB did not seem to understand or to see the disappointment of the Indonesian people. The Indonesian had to go through their country' economic crisis, have to painfully realize the huge amount of debt outstanding, and have to also painfully realized that half of the country' natural resources controlled by the foreign enterprises. The advice of the World Bank is no longer credible for the Indonesian people. Even though, it gives a well-thought advice, the Indonesian people remain unsure and suspicious. It was due to the old reputation of the World Bank as a destroyer to the country that had had economic crises.

The World Bank should increase their understanding of the procedures of arranging public policy in the democratic ways. It must not deals with or involve only several policy experts. The rice policy is the public policy; therefore, it must be supported widely by the all citizens, the House of Representatives and the local government. Researchers or foreign institutions which do not understand the farmers and rural households should not be involve in.

The arrangement of the rice policy prescribed by the WB (World Bank 2007) represents and based on the foreign literature, from 100 of the total literature, only 3-4

literature written by the native Indonesians. Whereas, in fact; the Indonesian experts had conducted and had done many studies on paddy/rice. However, the WB ignores their references. It shows the weakness of WB to understand the mind set of the Indonesian experts.

The World Bank had also tried to influence several neo liberal economic Ministers. It often gave some suggestions to the change of rice policy in many forums since the late 2006 by inviting some Indonesian expert to its base in Jakarta. It also conducted an outbound seminar at United Nations Institutions located in Bogor, Indonesia. However, the WB ia always avoids the open and frank discussions with the civil society or the Indonesian experts who have the opposite opinions or against its mainstream of thoughts.

Some of the results are discussed as follows. The World Bank stated that there was a serious increase of the Poor people in line with the increase of the rice price. It was bad for Poor because many farmers were categorized as net consumers. This is a definitely a wrong perspective by the WB. The rice harvesting pattern is based on the season. The surplus happens in the main and secondary harvesting seasons, and the deficit is happens merely in the lean season. Meanwhile, the SUSENAS and the BPS data show some contrary results. The usage of SUSENAS data is merely to estimate the seasonal production and cost. The annual data is based on the weekly research then counted extrapolated to yearly. Therefore, as a result, the deficit of the production is likely happened to be all year long. This became the data source used by World Bank to defend its argument on the Poor.

The intensive study conducted by Sumaryanto *et al* (2001) in Brantas River Basin in East Java reported a contrast and opposite results of the WB. The farmers managed rice farming in the wet planting season (MH), the first dry planting season (MKI) and the second dry planting season (MK2), each: 0.35 Ha, 0.33 Ha and 0.23 Ha per farmer, consecutively. The land control is mostly and commonly found in the rice farming activities.

The World Bank reported that per capita rice consumption is about 107 Kg/capita/year (Table 5.3). This figure represents the amount of rice consumed directly by the farm households (out of rice consumption in the form of meals bought from restaurants or warung or meals in the places of work, etc). This figure is somewhat relatively not much different to the national average figures.

Table 5.3. Per capita rice consumption of poor and not poor farmers by regions in the Brantas River Basin, East Java: 1999/2000.

	Poor farmer		*Non Poor farmer*		*All*	
	% HH	Kg/capita	% HH	Kg/Capita	HH	Kg/capita
Upstream	42.5	106.6	57.5	120.5	120	114.6
Middle stream	53.0	109.2	47.0	102.2	200	105.9
Downstream	56.9	105.1	43.1	101.7	160	103.6
All	51.7	107.2	48.3	107.5	480	107.3

Note: HH=household
Source: Sumaryanto *et al* (2001)

The average paddy production (unhusked rice) produced by farmers is around 462 Kg. Hence the marketable surplus[13] is around 354 Kg/capita/year. Marketable surplus in the 1st or wet season is the highest in a year, but it become negative in the 2nd or dry season. Finally, in the latest season, most farmers do not grow paddy, and size of paddy area is declining significantly. Therefore, it is incorrect to assume that all small scale farmers are the net consumers all year long. They are net producers in the first two seasons (MH and MK-1) and they are the net consumers in the last season (MK2). Their decisions regarding what and how much to consume and regarding the expenditures for their farming activities have to take into account the seasonality factors.

Next, the World Bank report is too shallow, because it judges the rice industry is merely as and on the base of commercial purposes. It did not see the role of rice in creating the non-food services. As mentioned earlier, rice creates the politic and economic stability, the income distribution, and the job opportunities. The rice price in the market has not yet taking into account role of rice as the non-food services to the consumers. Consumers should pay higher rice price than the market price.

As described earlier, the paddy/rice is the key industry to the development of the country, particularly rural development. A beneficial industry that absorbs large labors particularly in rural areas must be analyzed completely and not partially. Therefore, the rice industry needs an extra and wise attention for the long term purposes.

Back to the price discussion, price is one but is not the only one incentive for businessmen to operate. The increase of productivity and efficiency is the other incentive that should not be ignored. It is called as the non-price incentive. Price incentive and non-price incentive are complementary and strengthening to each other (it is not substituted to each other). Therefore, the non-price incentive does not work well if the rice price is low or under the production cost.

The level of poverty caused by the rice price is an example of a shallow perspective by the WB. It is a short term research or ad-hoc activity. To gain short term purposes one should not sacrifice the long term purposes. It is nearly impossible to reduce the long term poverty in the rural areas while the rice industry as backbone is nearly collapse. It will be substituted directly by the other commodity, such as horticulture. Banning an industry that has comparative advantage is forbidden. Meanwhile, as fact, the other industry is still going through the process of development. Horticulture development as one case may cause high risk and price instability because the market and the distribution infrastructure are not yet developed in the rural areas.

All of the above explanation reminds us to the Mexico experience in liberating the corn commodity as its staple food. The corn farmers were migrated and switched to be potatoes farmers. However, the farmers transmigrated themselves to the urban areas. Some of them immigrated to the USA (IATP 2007b and Albert 2004). The potatoes plantation is differed much from the corn, particularly in its storage system or post-harvest activities. The Government had not yet prepared the suitable infrastructure for potatoes' development. That had caused the increase of poverty and unemployment.

[13] Marketable surplus of rice is production minus consumption

While ignoring the key sectors such as paddy/rice sub-sector, the risk is getting bigger and higher. The unemployment becomes higher, the poverty gets more prevails and the urbanization goes rapidly. Then, the crimes, pollutions, and class action in the cities would rapidly increase. That is the result of ignoring the rural income and the work field improvement.

Trade may not solve all those problems, especially poverty. Reducing the food price will only satisfy the short term effect, it is not the solution of the real problem. The main problems are the limited work fields, the low productivity, the low- and depressed-incentive in the agriculture sector. Price incentive is the most important one. Furthermore as a fact, when the rice price is cheap enough in the period of the high import surge, the numbers of Poor people were not decline significantly. On the contrary of the fact above, the increase of the rice is considered as the causal factor of the increase of poor. It is an absurd conclusion.

In the economic literature is rarely found that poverty in the developing countries can be solved by reducing the food price. It is a wrong concept of poverty reduction. The exact ways are supposed to be as follows: the real sector movement, the job field' creation, and the rural agriculture productivity improvement. The paddy/rice industry is the one that needs to be improved in the country. Food price reduction is certainly not the solution at all.

The Rice Price and Poverty: The Odd Analysis from The World Bank Study/Report

The other odd analysis reported by the World Bank was about the correlation between rice price and poverty which had been discussed accurately and systematically by Sugema (2006). He said that the World Bank had failed in summarizing the correlation. Indeed, rice has contributed much in inflation (23%), but, the role of non-rice is much higher (77%).

Moreover, he stated that his research and other researches (The UNIDO and the UNSFIR) found that the number of poverty in BPS-data is not responsive to the effect of inflation. The cause of inflation is dissimilar to the inflation component. The rice price is the component of inflation that tentatively causes the inflation itself.

Furthermore, he stated that eliminate the poverty by focusing in the rice costs and price is incorrect. The low outflow of poor family is caused by its incapability to gain satisfactory income. The income improvement will constantly increase job and activity productivity. It is the best solution to eliminate poverty.

The measurement of the poverty line is important. The measurement indicator of the poverty before the economic crisis was the low income based on the consumption. The Sen' concept (2000) on the non-income poverty was ignored. Sen stated poverty as capability deprivation in fulfilling basic needs such as: health, housing, education and food. Sen's perspective of poverty focused on non-income poverty, not in vice versa.

Poverty is not responsive to the price and inflation. According to this fact,the UNDP creates the human poverty not the income poverty. The Index of the poverty is called the Human Development Index. This is the best reference. The Index research was done by the UNDP years later. In 2004, the report on the Economy and Democracy: Disbursement of Human Development was published by the BPS, the Bappenas and the UNDP.

Dhanani and Islam concept (2000) calculated and stated that the human poverty in Indonesia was 25%. In comparison to the income poverty (BPS) was only 11% in 1996. Unfortunately, the human poverty concept is rarely used as reference in the arrangement and making of the local and the national development programs. Therefore, Indonesia is left behind by the other ASEAN countries in providing funds and improvement for the country' social security, which measures in the indicators, such as: the life expectation, the numbers of babies born alive and the purified drinking water.

CHAPTER 6
CONCLUSIONS AND RECOMMENDATIONS

THE MACRO PERSPECTIVE

In Indonesia, rice cannot be classified only as the product that produces food and fibers. Rice/paddy creates precious non-food services, such as employment creation, poverty reduction, food security, national security, and a political stability. Therefore, the domestic rice production can't be substituted perfectly by the rice import.

Rice import surge in Indonesia occurred in 1998, 1999, 2002 and 2003 within the last 10 year period (1996-2005). At the beginning of import surge in 1998, the rice and milling farmers did not feel the negative effect because the domestic price was still high, due to IDR depreciation to the USD. However, in the 999, the negative effect of import surge for farmers started to arise. The import rice was becoming cheaper because of the stability of exchange rate, the strength of IDR currency, and the declining of rice price in the international market.

Government responded to it in many ways. One of the responses was the changes in the trade policy. During the 1998-1999, the radical liberalization of trade was declared. Hence, the Government had no power to protect farmers from the import surge and the lower price. Free trade policy was not what the Government want and need, but forced by the IMF (Fund) as a consequent of the Government loan to the Fund. The Fund prescribed the free trade policy for rice was in order to stabilize the Indonesian macro economy

Since 2000-2003, the Government had set a specific tariff for rice. It purposes was not only to protect farmers but also to reduce the mismanagement of import. To control import volumes is much easier than to control the rice import value. That is because the rice price is varied based on its quality, its delivery time and the exporter countries etc. In fact, the specific tariff is not effective; therefore the Government conduct a physical inspection of the imported rice.

The tariff did not work effectively to protect import surge in the 2002 and the 2003. Rice smuggled under-invoice is found widened through the legal and the illegal port. It was estimated that half of the imported rice coming to Indonesia was categorized as smuggled rice.

The legal and illegal imported rice entered many ports and areas in the Kalimantan and the Sumatra Islands. It was then, distributed to many cities in those islands and many large cities in the Java Island. In some consumer areas had fully flooded with the rice imports. In some of the non-producing areas, the rice import reached to the village markets. It made the price of paddy depressed and lower. This is happened because the rice from the production areas did not move fast and smooth enough to the urban consumers.

For that reason, the falling price of paddy below the procurement price was widened. In the normal situation the price of paddy in the lean season had never been lower than price in the main or the secondary harvesting seasons. The falling in price was related to the effect of the import surge, especially in 2002 and 2003.

The rice traded inter-island and inter-regional were almost stopped. The farmers and millers suffered. Some of the paddy milling units that functions as millers and domestic rice

traders, are suddenly involved in the imported- rice trade. They had mixed the imported rice with the local rice to make better taste and lower prices.

Since January 2004, the Government started quantitative restriction of rice to avoid mismanagement at the border. A long with the Government' effort to stop smuggling, the domestic rice price became high. The inter-island trade is again regained its enthusiasm. Some of paddy milling has signed and expanded their contracts with the farmers to produce using the new rice variety wanted/requested by the millers.

While Indonesia was able to isolate its domestic market from import, the domestic rice price became high. It had caused the consumers, labors, small farmers having difficulties to access or acquires rice in the lean season. Indonesia has to properly manage its rice imports. Thus, the domestic rice price could be made more stable inter-season and inter-period.

THE MICRO PERSPECTIVE

The rice import surge affects indirectly the stakeholders, particularly farmers and rice-millers. However, the import surge indirectly had caused the income of household farmers and supply chain actors get depressed. It mostly happened in the lean season because of the declining rice price. The farmers must sell their rice in lower unit price. It had also reduces the rice trading volume in the traders/millers areas.

The higher the income from paddy, the higher the anxiety of farmers of imported rice and rice import surge. It may cause the price pressure. In contrary, the lower the income of the paddy farmer, the higher the need for the low price of rice.

Rice milling units felt difficult to get the paddy as raw material due to the high conversion rate to horticulture in the rice farms. Horticulture price was fluctuated and contained high risk. However, in some period of time, farmers may earn benefits above the normal condition and be able to cover their loss in the prior seasons. It is possible for rice farmers to plant horticultures in their 2nd or 3rd season activities if the plants require short periods of times (around 1 month). Considering the rural infrastructure and the limitation of the horticulture market, the Government' role is more needed here to facilitate and to play its major role as public institution.

Even though horticulture gives benefits to the farmers, many of them do not want to converse their rice farm for horticulture. Half of the farm size is still for paddy farming. The reason is for their own-household' food security, and to reduce their income risks.

The import surge of rice tends to depress or lower the local rice prices down to 30%. This in turn would decrease the household income on average 15% lower than what they normally get. Traders and millers were affected through the decreasing of their volumes of trade.

Farmers, millers and labors take the stability of rice/paddy price as their first priority. The price of rice/rice should be not too expensive or too cheap for them. The price stability will reduce the risk at the farming level, the rice milling level, and would strengthened their food security especially for labors and small farmers in the lean season.

From the total number of mandays records in the fields, the women workers contribute more in the rice farming activities. Therefore the female workers were found to be more vulnerable if the rice industry shrunken or collapsed. However, in general, the negative impacts of import surge did not last long. The Government acted fast enough to correct the trade schemes. The paddy/rice price did not fall for a long period of time.

RECOMMENDATIONS

Indonesia should consider rice import as an instrument to stabilize domestic rice price. The total rice import for import is bad policy as well free market policy. Indonesia must be able to manage rice import in flexible and effective manner

Indonesia needs an effective and flexible temporary safeguard for agricultural product.. SSM as proposed in Doha Round is very important for developing countries, especially Indonesia. The safeguard is needed to protect a country from import surge. It does not mean that developing countries are anti import or autharki. However, it is merely because SSM may help developing countries to manage its import in a better way.

The effectiveness of tariff instrument depends on the good infrastructure, resources and wages. The expenditure for controlling purposes must also be available in enough amounts with flexible usage. At the same time, law enforcement and corruption control are needed.

In fact, the applying purely tariff barrier for protection is not easy for Indonesia. It takes time to prepare the infrastructure, human resources, salary and financial management at the border. For that reason, Indonesia still needs non-tariff barrier, particularly quantitative restriction in order to protect itself from import surge. This instrument could be replaced with tariff barrier, as far tariff can be applied effectively as a tool for protection instrument.

Remedy of SSM by import surge or falling in price is using both tariff and non-tarriff barrier. The SSM is not powerful enough using only increasing tariff as remedy for import surge or falling in price. At least, there must be some transition period to prepare the total implementation of tariff barrier in developing countries. The time needed depends on each developing country. It should be considered in the Doha round.

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APPENDIXES

Appendix 1.1. The Composition of Agriculture GDP, 1980 - 2005 (year and percentage)

Agricultural Sector	1980 (%)	1990 (%)	1996 (%)	2002 (%)	2003 (%)	2004* (%)	2005** (%)
1. Food crops	60.70	60.60	52.80	49.64	49.57	49.40	49.43
Its'GDP Growth	2.54	3.08	2.36	2.13	3.64	2.89	2.57
2. Estate Crops	18.80	16.70	16.20	16.01	15.26	15.93	15.89
Its'GDP Growth	3.70	5.36	4.47	5.83	4.37	2.21	2.23
3. Livestock	6.10	10.40	11.20	12.71	12.75	12.76	12.81
Its'GDP Growth	3.32	4.06	4.93	6.52	4.13	3.35	2.87
4. Fishery	5.40	7.80	9.80	14.25	14.42	14.93	15.19
Its'GDP Growth	4.00	5.30	5.26	3.42	5.05	6.89	4.27
5. Forestry	9.00	4.50	10.00	7.39	7.16	6.98	6.68
Its'GDP Growth	6.18	0.12	0.61	2.31	0.52	0.70	-2.03
Share of Agr. GDP	30.70	21.50	15.40	15.39	15.24	14.98	14.54
Growth of Agr. GDP	3.10	3.51	3.18	3.45	3.79	3.26	2.49
6. Agric. Employment	54.80	53.90	44.00	43.54	45.37	42.54	43.42
Growth of Agr. Empl.	1.21	3.56	-2.30	2.03	3.30	-2.93	2.52
7. Rural Poverty	32.80	14.33	24.90	25.10	25.10	24.80	22.70

Source : Indonesia's Nasional Income, CBS, Faisal Kasryno, 1994, Statistical Year Book of Indonesia 2005/2006

*)Preliminary figures

**)Very preliminary figures

Appendix 1.2. Number and proportion of population below the poverty line: Rural and Urban 1996-2005

Year	Poverty line (Rp/cap/month)		Number of population below poverty line (millions)			Proportion of population below poverty line (%)		
	Urban	**Rural**	**Urban**	**Rural**	**Total**	**Urban**	**Rural**	**Total**
1996[3)]	42,032	31,366	13.60	19.90	17.70	9.60	24.90	34.50
1998[2)]	96,959	72,780	21.90	25.70	24.20	17.60	31.90	49.50
1999[3)]	92,409	74,272	19.50 (19.4)	26.10 (26.0)	23.50 (23.4)	15.70 (15.6)	32.70 (32.3)	48.40 (48.0)
1999[4)]	89,845	69,420	15.10 (15.0)	20.20 (20.0)	18.20 (18.0)	12.40 (12.3)	25.10 (24.8)	37.50 (37.1)
2000[5)]	91,632	73,648	14.60	22.38	19.14	12.30	26.40	38.70
2001[6)]	100,011	80,382	9.79	24.84	18.41	8.60	29.30	37.90
2002[7)]	130,499	96,512	14.46	21.10	18.20	13.30	25.10	38.40
2003[8)]	138,803	105,888	13.57	20.23	17.42	12.20	25.10	37.30
2004[8)]	143,455	108,725	12.13	20.11	16.66	11.30	24.80	36.10
2005[8)]	150,799	117,259	11.37	19.51	15.97	12.40	22.70	35.10

Note :

1) Berdasarkan standar 1998 yang disesuaikan dengan pola konsumsi tahun yang bersangkutan
2) Hasil Susenas Desember 1988
3) Hasil Susenas Februari (reguler)
4) Hasil Susenas Agustus 1999
5) Hasil Estimasi dari Susenas (KOR) tahun 2000 tanpa Aceh & Maluku
6) Hasil estimasi Susenas (KOR) tahun 2001 tanpa Aceh
7) Termasuk estimasi empat provinsi (NAD, Maluku, Maluku Utara, dan Papua)
8) Hasil Susenas Februari (panel) modul konsumsi
( ) Angka tanpa Timor Timur

Appendix 1.3. Indonesian population and proportion of labor force by status, and Rate of Unemployment

Year	Population (thousands)	Labor force		Proportion of labor force by status (%)			
		Total (thousands)	%[a]	Partly employed	Fully employed	Total employed	Un-employed
1992	185,828	80,704	43.43	39.41	57.88	97.29	2.71
1993	188,875	81,446	43.12	38.56	58.69	97.24	2.76
1994	191,860	85,776	44.71	37.55	58.10	95.64	4.36
1995	194,757	86,361	44.34	35.72	57.04	92.76	7.24
1996	197,483	90,110	45.63	39.44	55.66	95.11	4.89
1997	199,991	91,325	45.66	37.60	57.72	95.32	4.68
1998	202,251	92,735	45.85	36.99	57.55	94.54	5.46
1999	204,233	94,847	46.44	35.36	58.28	93.64	6.36
2000	205,843	95,651	46.47	33.23	60.69	93.92	6.08
2001	208,923	98,812	47.30	30.57	61.32	91.90	8.10
2002	212,003	100,779	47.54	31.17	59.77	90.94	9.06
2003	215,276	100,316	46.60	32.59	57.91	90.50	9.50
2004	217,854	103,973	47.73	31.36	58.78	90.14	9.86
2005	219,899	105,802	48.11	33.40	56.34	89.74	10.26
Growth (%/Year)	1.27	2.05	0.78	-1.83	0.13	-0.60	9.53

Source : CBS, Indonesia Statistic, 1992-2005/2006

Note : [a]: Proportion in total population. Before 1988, labor force is defined as the number of people older than 10 years, but it has been changed to 15 years since 1998; Partly employed are those who works less than 35 hours a week;

Appendix 1.4. Structural Changes of the Indonesian Rural Employment during 1986 – 2001

Employment Status and Main Economic Sector	Employment (Person)			
	1986	1991	1996	2001
1. Self-Employed.	11,432,632	10,887,763	12,345,623	9,541,939
a. Agriculture	5,618,864	5,707,961	5,744,434	3,572,838
b. Industry/Manufacture	708,615	760,651	1,184,326	884,452
c. Trade	3,118,048	2,855,191	3,457,649	3,114,124
d. Transportation	-	609,294	975,436	1,053,463
e. Others	1,987,105	954,666	983,778	917,062
2. Self-Employed, With Family Labor and Temporary Labor	13,981,009	15,265,413	17,549,670	16,256,735
a. Agriculture	11,772,629	12,793,701	13,699,738	13,578,434
b. Industry/Manufacture	621,643	696,194	1,137,190	726,557
c. Trade	1,252,293	1,428,297	2,166,209	1,659,559
d. Transportation	-	98,994	156,440	66,013
e. Others	334,444	248,227	390,093	952,729
3. Employee. With Permanent Labor	269,259	351,517	602,795	1,446,200
a. Agriculture	98,800	179,962	269,927	750,661
b. Industry/Manufacture	43,395	53,711	89,032	178,753
c. Trade	38,864	28,874	78,109	161,531
d. Transportation	-	28,956	75,496	133,995
e. Others	88,200	60,014	90,231	221,260
4. Wage Labor	10,294,950	11,352,724	13,714,415	13,032,524
a. Agriculture	3,212,479	4,055,373	4,325,184	5,248,563
b. Industry/Manufacture	1,635,052	1,979,563	2,617,319	2,330,698
c. Trade	243,268	320,370	557,392	577,394
d. Transportation	-	383,239	609,945	489,928
e. Others	5,204,151	4,614,179	5,604,575	4,385,941
5.Un-paid Rural Family Labor	18,649,293	18,411,292	13,837,299	14,431,215
a. Agriculture	15,632,326	16,233,763	11,371,860	12,504,381
b. Industry/Manufacture	741,115	784,535	1,101,386	750,641
c. Trade	1,152,532	1,118,185	1,129,284	959,115
d. Transportation	-	24,205	15,787	23,496
e. Others	1,123,321	250,604	218,982	193,582
Total Rural Employment	54,730,386	56,269,679	58,049,802	54,708,613
a. Agriculture	36,385,329	38,971,731	35,411,143	35,654,877
b. Industry/Manufacture	3,758,492	4,274,654	6,129,253	4,871,101
c. Trade	5,811,901	5,750,917	7,388,643	6,471,723
d. Transportation	-	1,144,692	1,833,100	1,766,895
e. Others	8,774,664	7,272,377	7,286,658	5,944,017
Share of Rural Employment to Total Employment (%)	80.09	73.63	67.74	60.24

Source: National Labor Force Survey of Indonesia (Sakernas CBS) 1986, 1991, 1996, 2001,CBS.

Appendix 1.5. Paddy Production, Export and Import of Rice in Selected Countries: 2002-2005 (MMT)

Paddy Production	2002	2003	2004	2005	Yearly	
					Average	%
Bangladesh	37.8	39.3	37.7	39.8	38.7	6
Brazil	10.6	10.4	12.8	13.2	11.8	2
Burma	22.8	23.1	24.8	25.1	24.0	4
China	176.3	162.3	180.5	182.1	175.3	29
Egypt	6	6.2	6.4	6.1	6.2	1
India	109	132.4	124.7	136.6	125.7	21
Indonesia	51.5	52.1	54.1	54.2	53.0	9
Japan	11.1	9.7	10.9	11.3	10.8	2
Korea, S	6.7	6.2	6.7	6.4	6.5	1
Pakistan	6.7	7.3	7.5	8.3	7.5	1
Philippines	13	14.2	14.5	15.1	14.2	2
Thailand	26.1	27	28.5	30	27.9	5
US	9.6	9.1	10.5	10.1	9.8	2
Vietnam	34.4	34.6	36.2	35.8	35.3	6
Total Word (Paddy)	571.9	586.4	609.1	631.9	599.8	100
Total World (Milled Rice)	382.3	392.0	407.2	422.4	401.0	
Rice Trade by Major Origin:						
1. Net Exporter Countries						
China	2.0	2.7	0.9	0.7	1.6	6
India	6.9	4.8	3.3	4.3	4.8	17
Pakistan	1.5	2.0	1.9	2.9	2.1	7
Thailand	7.2	7.6	9.8	7.3	8.0	28
Vietnam	3.2	3.7	4.5	5.3	4.2	15
USA	3.3	3.9	3.0	3.8	3.5	13
Others	4.1	3.5	3.4	4.5	3.9	14
Total Volume of Trade (MMT)	28.2	28.1	26.9	28.9	28.0	100
2. Net Importer Countries						
Indonesia	3.7	2.8	0.6	0.4	1.9	7
Nigeria	2.1	1.6	1.343	1.9	1.7	6
Filipina	1.3	1.1	1.083	1.9	1.4	5
Bangladesh	0.4	1.2	0.673	0.8	0.8	3
Iran	1.0	0.9	0.919	1.1	1.0	3
Malaysia	0.5	0.5	0.698	0.8	0.6	2
Sinegal	1.1	0.8	0.839	1.2	1.0	4
Others	18.1	19.1	20.7	20.8	19.7	70
Total Volume of Trade (MMT)	28.2	28.1	26.9	28.9	28.0	100
Volume of trade (%)	7.4	7.2	6.6	6.8	7.0	

Note: Milling yield paddy to milled rice 66.85%
Source:
1) Paddy production from Rice Market Monitor FAO (various year). Estimate data for 2005. Indonesia from CBS
2) Rice trade from The Rice Report (various years)

Appendix 3.1. Paddy Processing Unit and Capacity by type of processing in Indonesia: 1993-1997

Type of Processing		Average1993 to 1997		2000
		Unit	Capacity	Unit
Large Rice Mill				
	number	1,808	2,185,500	5,133
	%	2.26	5.53	4.73
Small Rice Mill				
	number	42,103	21,563,132	39,425
	%	52.64	54.60	36.30
Rice Milling Unit				
	number	28,848	13,916,694	35,093
	%	36.07	35.24	32.31
Engelberg				
	number	6,282	1,548,162	1,630
	%	7.85	3.92	1.50
Huller				
	number	669	175,563	14,153
	%	0.84	0.44	13.03
Polisher				
	number	270	101,672	13,178
	%	0.34	0.26	12.13
Total				
	number	79,980	39,490,724	108,612
	%	100	100	100

Note: Capacity is rice equivalent in tons per year

Source: Secretariat PERPADI (Rice Mill Association). Tahun 2000 dari Naskah Nur Gaybita (2002)

Appendix 3.2. Food Crops Family Frm by Size of Agriculture Land Holding: 1983 and 1993

Land Holding by Teir (Ha)	Agriculture Census 1983			Agriculture Sencus 1993				Change	
	Farm HH	Land Size (Ha)	Av. Land Holding (Ha)	Farm HH	(% HH)	Land Size (Ha)	Av. Land Holding (Ha)	HH	Average (HA)
<0,10	179,974	14,967	0.08	1,081,006	6.01	66,327	0.06	901,032	-0.02
0,10-0,19	1,751,539	247,378	0.14	2,294,537	12.76	329,398	0.14	542,998	0.00
0,20-0,49	4,563,552	1,448,005	0.32	5,350,891	29.76	1,703,695	0.32	787,339	0.00
0,50-0,74	2,614,275	1,513,236	0.58	2,767,251	15.39	1,615,178	0.58	152,976	0.00
0,75-0,99	1,372,601	1,133,577	0.83	1,363,020	7.58	1,134,765	0.83	(9,581)	0.01
1-1,99	3,166,465	4,070,805	1.29	2,991,747	16.64	3,859,119	1.29	(174,718)	0.00
2-2,99	1,202,733	2,689,204	2.24	1,293,272	7.19	2,871,133	2.22	90,539	-0.02
3-3,99	467,247	1,510,596	3.23	423,631	2.36	1,370,470	3.24	(43,616)	0.00
4-4,99	225,926	953,156	4.22	183,865	1.02	778,347	4.23	(42,061)	0.01
5-7,49	240,025	1,376,936	5.74	161,122	0.90	922,771	5.73	(78,903)	-0.01
7,5-9,99	60,619	508,304	8.39	36,968	0.21	309,557	8.37	(23,651)	-0.01
10-14,99	51,446	580,795	11.29	19,630	0.11	225,149	11.47	(31,816)	0.18
15+	31,038	642,494	20.70	11,487	0.06	254,711	22.17	(19,551)	1.47
Total	15,927,440	16,689,452.4	1.05	17,978,427	100.00	15,440,621	0.86	2,050,987	-0.19

Source: Agriculture Census 1993 and 1993, CBS

Appendix 3.3. Source of Energy by Main Food Crops (Cal/Cap/day), by income class, in Urban and Rural: 1993-999, and 2002

Areas	Food	2002						Rata-rata 1993, 1996 dan 1999					
		Low		Medium		High		Low		Medium		High	
		Kcal	%	Kcal	%	Kcal	%	Kcal	%	Kcal	%	Kcal	%
Urban	**Rice**	**959.9**	**90.9**	**927.9**	**89.5**	**902.5**	**88.3**	**1,049.2**	**91.9**	**1,000.4**	**90.0**	**965.0**	**88.0**
	Maize	5.8	0.5	5.2	0.5	4.2	0.4	5.5	0.5	4.3	0.4	3.8	0.3
	Sago	0.0	0.0	2.0	0.2	4.0	0.4	0.9	0.1	3.3	0.3	4.0	0.4
	Nuddle	54.5	5.2	67.9	6.5	77.9	7.6	55.2	4.8	74.4	6.7	94.4	8.6
	Cassava	27.2	2.6	26.8	2.6	26.7	2.6	23.0	2.0	21.4	1.9	21.4	2.0
	Sweet Potatoes	8.1	0.8	7.3	0.7	6.9	0.7	8.0	0.7	7.7	0.7	8.1	0.7
	Total Enegy	**1,055.5**	**100.0**	**1,037.1**	**100.0**	**1,022.2**	**100.0**	**1,141.8**	**100.0**	**1,111.5**	**100.0**	**1,096.8**	**100.0**
Rural	**Rice**	**1,119.1**	**87.2**	**1,130.1**	**88.6**	**1,121.8**	**88.6**	**1,155.6**	**88.5**	**1,182.9**	**89.3**	**1,183.7**	**89.0**
	Maize	55.8	4.3	36.3	2.8	30.4	2.4	49.2	3.8	31.2	2.4	24.2	1.8
	Sago	1.0	0.1	3.0	0.2	5.0	0.4	3.5	0.3	6.4	0.5	6.7	0.5
	Nuddle	27.6	2.2	30.8	2.4	37.5	3.0	25.6	2.0	35.6	2.7	52.3	3.9
	Cassava	67.7	5.3	62.9	4.9	56.0	4.4	59.9	4.6	55.5	4.2	45.4	3.4
	Sweet Potatoes	12.0	0.9	12.7	1.0	15.1	1.2	11.6	0.9	13.6	1.0	18.0	1.4
	Total Enegy	**1,283.2**	**100.0**	**1,275.8**	**100.0**	**1,265.8**	**100.0**	**1,305.5**	**100.0**	**1,325.1**	**100.0**	**1,330.2**	**100.0**
Total	**Rice**	**1,090.7**	**88.2**	**1,050.2**	**89.1**	**964.8**	**88.3**	**1,142.0**	**89.4**	**1,115.2**	**89.8**	**1,029.3**	**88.5**
	Maize	41.8	3.4	22.5	1.9	10.5	1.0	37.5	2.9	18.4	1.5	8.6	0.7
	Sago	2.0	0.2	4.0	0.3	6.0	0.5	3.4	0.3	5.2	0.4	5.3	0.5
	Nuddle	32.5	2.6	45.6	3.9	65.6	6.0	31.6	2.5	51.5	4.1	80.0	6.9
	Cassava	58.9	4.8	45.7	3.9	35.3	3.2	51.5	4.0	39.3	3.2	28.5	2.5
	Sweet Potatoes	11.0	0.9	11.0	0.9	9.9	0.9	11.2	0.9	11.7	0.9	11.1	1.0
	Total Enegy	**1,236.9**	**100.0**	**1,179.0**	**100.0**	**1,092.1**	**100.0**	**1,277.2**	**100.0**	**1,241.3**	**100.0**	**1,162.9**	**100.0**

Source: SUSENAS, CBS

Appendix 3.4. Consumption Participation Rate for Main Food, by areas and income group: 1993 and 2002

Wilayah	Food	1993			2002		
		Low	Middle	High	Low	Middle	High
Urban	Rice	94.6	94.7	94.6	95.3	96.1	97.2
	Cassava	21.3	21.8	21.4	27.4	24.7	22.1
	Sweet Potatoes	10.9	11.5	11.2	10.6	12.2	13.5
	Sago	0.6	1.8	2.6	0.6	1.5	1.9
	Maize	4.1	5.5	6.4	5.2	5.2	6.1
	Wheat Flour	6.8	12.3	19.2	14.3	20.2	25.1
Rural	Rice	92.9	94.2	93.9	98.2	99.1	99.4
	Cassava	31.3	33.3	31.6	38.2	38.4	35.2
	Sweet Potatoes	11.1	14.3	17.4	10.8	14.7	16.2
	Sago	1.1	2.5	3.6	1.2	2.1	3.5
	Maize	9.8	9.6	9.2	14.4	15.8	17.3
	Wheat Flour	4.9	8.8	12.8	9.9	12.5	15.2
Rural +Urban	Rice	93.4	94.4	94.5	97.9	97.3	97.3
	Cassava	29.4	28.3	24.1	36.7	31.2	25.2
	Sweet Potatoes	11.5	13.4	13.4	11.1	13.6	14.3
	Sago	1.1	2.2	2.7	1.1	1.9	2.5
	Maize	8.6	7.5	7.1	13.3	10.3	7.9
	Wheat Flour	5.5	9.9	16.4	11	15.4	22.3

Source: CBC (various year)

Appendix 3.5. Rice: Production, Import and Import Dependency Ratio, Self-Sufficiency Ratio: 1995-2006

Year	Gross Production (TMT)	Net Production (TMT)	Import (TMT)	Export (TMT)	Volume of Trade (TMT)	Import Dependency Ratio (%)	Self-sufficiency Ratio %	Import to World Trade Volume (%)
1996	33,216	29,894	1,470	0	19,664	4.7	95.3	7.5
1997	31,206	28,085	352	0	18,854	1.2	98.8	1.9
1998	31,118	28,006	2,901	0	27,668	9.4	90.6	10.5
1999	32,148	28,933	4,752	0	25,325	14.1	85.9	18.8
2000	32,040	28,836	1,375	0	22,600	4.6	95.4	6.1
2001	31,891	28,702	649	0	24,150	2.2	97.8	2.7
2002	32,541	29,287	1,812	0	28,225	5.8	94.2	6.4
2003	32,951	29,656	1,437	0	28,075	4.6	95.4	5.1
2004	34,184	30,766	246	0	26,875	0.8	99.2	0.9
2005	34,223	30,801	195	0	28,925	0.6	99.4	0.7
2006	34,603	31,142	400	0	28,575	1.3	98.7	1.4
Yearly Average:								
1996-97	32,211	28,990	911	0	19,259	3.0	97.0	4.7
1998-99	31,633	28,470	3,827	0	26,497	11.7	88.3	14.6
2000-03	32,356	29,120	1,318	0	25,763	4.3	95.7	5.1
2004-06	34,337	30,903	280	0	28,125	0.9	99.1	1.0

Note: revised:1-2-07

Source:

1) Rice Production and Rice Import form CBS.Forecast rice production for 2006 (Aram II). Net production is gross production less 10% for seed, lost, feed ect.

2) Volume of rice trade from The Rice Report, various years

Appendix 3.6. Rice Import by Grade: 1996, 2000-2003

Kualitas	1996	%	2000	%	2001	%	2002	%	2003	%	Av.2000-03	%
Fragrant/Basmati	220	0	13,627	1	14,186	1	33,675	1	33,390	1	23,720	1
High (100%B+5%)	51,989	4	105,630	7	141,550	10	138,364	4	117,077	4	125,655	5
Medium (10%B+15%)	297,165	25	522,294	35	547,556	39	1,380,933	37	1,117,688	41	892,118	38
Low (25%B+35%)	477,624	41	706,052	47	501,465	36	1,831,342	49	532,511	19	892,842	38
Broken (Pecah Kulit)	44,750	4	26,717	2	70,861	5	72,237	2	95,673	3	66,372	3
Glutin	93,767	8	108,957	7	52,973	4	101,796	3	129,169	5	98,224	4
Total	1,173,014	100	1,511,611	100	1,404,051	100	3,707,037	100	2,737,309	100	2,340,002	100

Source: TRR various year

Appendix 3.7. Rice Import by Country Origin, 1996-2005

Country	VOLUME (MT)										TOTAL	Growth	
	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	(MT)	(%)	(%/year)
1. Developed Countries	16,011	12,352	39,828	460,681	96,384	179,411	46,551	132,839	24,094	11,266	1,019,416	6.7	0.8
1.1. UNITED STATES	9,031	0	22,072	74,956	49,409	177,889	13,393	107,608	16,767	2,184	473,308		
1.2. AUSTRALIA	2	12,048	0	2,000	8,805	1,174	5,053	17,836	324	5,031	52,272		
1.3. CANADA	-	-	-	18	28	20	2,126	2,187	-	-	4,379		
1.4. NEW ZEALAND	-	-	-	-	-	-	-	10	-	-	10		
1.5. UE(15)1)	1	1	440	2,892	3,102	317	141	4,852	7,002	0	18,748		
1.6. JAPAN	6,978	303	5,266	377,484	35,037	11	25,779	232	1	4,050	455,141		
1.7. SWITZERLAND	-	-	-	-	3	-	-	105	-	-	108		
1.8. Others2	-	-	12,050	3,331	-	-	60	10	-	-	15,451		
2. Developing Countries	1,453,516	339,640	2,860,722	4,291,169	1,279,114	470,076	1,765,437	1,304,634	222,162	183,749	14,170,219	93.3	-17.7
2.1. CHINA	12,559	5,295	330,890	875,937	477,429	26,964	128,758	58,261	3,446	3,153	1,922,692		
2.2. INDIA	632,950	1,933	4,834	1,791	0	2,049	405,033	108,797	925	327	1,158,639		
2.3. THAILAND	521,949	180,348	995,347	1,373,640	361,773	189,818	420,326	493,702	134,434	128,034	4,799,371		
2.4. VIET NAM	117,577	132,899	1,143,560	1,803,959	369,547	142,512	561,729	506,013	58,810	44,773	4,881,377		
2.5. PAKISTAN	78,307	13,650	347,562	128,809	20,139	26,110	32,281	49,071	-	-			
2.6. Others3	90,172	5,516	38,530	107,033	50,226	82,624	217,310	88,789	24,548	7,463	712,210		
TOTAL	1,469,527	351,992	2,900,550	4,751,850	1,375,498	649,488	1,811,988	1,437,472	246,256	195,015	15,189,636	100	-16.9

Source: CBS, 1996-2005 (recalculated)

1: Austria, Belgium, Denmark, Finland, France, Germany, Italy, Netherlands, Sweden, UK

2: Armenia, Bulgaria, Malta, Slovakia, South Africa

3: Anguilla, Cambodia, Chile, Guam, Hong Kong, Jamaika, Korea Utara, Korea Selatan, Malaysia, Maldives, Mauritius, Mongolia, Myanmar, Peru, Philippines, Saudi Arabia, Singapore, Sri Lanka, Taiwan, Togo, Tunisia, U.S. Virgin Islands, Uni Arab Emirates, Venezuela

Appendix 4.1. Indonesian Annual Dried Paddy Grain Production by Province, 2000 – 2005

Production (Ton)	2000	2001	2002	2003	2004	2005*	Average
D.I. ACEH	1,404,580	1,246,614	1,314,165	1,547,499	1,552,078	1,388,863	1,408,967
SUMUT	3,514,253	3,291,515	3,153,305	3,403,075	3,418,782	3,423,762	3,367,449
SUMBAR	1,759,059	1,668,955	1,875,834	1,823,739	1,875,188	1,907,390	1,818,361
RIAU	431,351	413,391	396,644	414,237	454,186	421,364	421,862
JAMBI	536,779	556,564	561,007	578,346	579,404	579,635	565,289
SUMSEL	1,863,643	1,723,433	1,899,849	1,977,345	2,260,794	2,319,395	2,007,410
BENGKULU	362,979	376,973	379,818	413,375	414,741	441,276	398,194
LAMPUNG	1,946,406	1,992,726	1,951,109	1,966,293	2,091,996	2,119,658	2,011,365
BANGKA BELITUNG		16,430	10,317	12,173	18,763	18,727	15,282
KEPULAUAN RIAU							
Sumatera	**11,819,050**	**11,286,601**	**11,542,048**	**12,136,082**	**12,665,932**	**12,620,070**	**12,011,631**
D.K.I. JAKARTA	16,275	16,886	11,303	7,558	13,465	12,863	13,058
JABAR	10,749,868	9,237,593	9,166,872	8,776,889	9,602,302	9,787,217	9,553,457
JATENG	8,475,412	8,289,927	8,503,523	8,123,839	8,512,555	8,424,096	8,388,225
YOGYAKARTA	654,289	661,802	653,577	652,280	692,998	670,703	664,275
JATIM	9,224,353	8,672,791	8,803,878	8,914,995	9,002,025	9,007,265	8,937,551
BANTEN		1,433,397	1,468,765	1,691,923	1,812,495	1,861,776	1,653,671
Java	**29,120,197**	**28,312,396**	**28,607,918**	**28,167,484**	**29,635,840**	**29,763,920**	**28,934,626**
BALI	826,838	789,232	808,970	793,260	788,360	762,684	794,891
N.T.B.	1,488,191	1,458,616	1,370,171	1,422,440	1,466,757	1,367,869	1,429,007
N.T.T.	461,413	448,001	468,171	509,419	552,205	460,084	483,216
Bali and Nusa Tenggara	**2,776,442**	**2,695,849**	**2,647,312**	**2,725,119**	**2,807,322**	**2,590,637**	**2,707,114**
KALBAR	903,191	941,630	985,489	1,027,122	1,060,652	1,016,858	989,157
KALTENG	362,630	360,084	395,239	490,080	590,434	491,088	448,259
KALSEL	1,332,364	1,406,070	1,346,007	1,410,141	1,519,432	1,598,835	1,435,475
KALTIM	401,955	366,708	442,633	430,286	486,167	497,969	437,620
Kalimantan	**3,000,140**	**3,074,492**	**3,169,368**	**3,357,629**	**3,656,685**	**3,604,750**	**3,310,511**
SULUT	514,477	310,802	346,079	369,930	407,358	432,624	396,878
SULTENG	576,933	520,642	746,023	738,607	725,725	722,070	671,667
SULSEL	3,658,836	3,728,736	3,893,915	4,003,079	3,552,835	3,381,543	3,703,157
SULTRA	314,955	263,477	298,813	334,307	322,362	339,847	312,294
GORONTALO		158,871	153,222	156,158	163,094	167,152	159,699
SULAWESI BARAT						253,076	253,076
Sulawesi	**5,065,201**	**4,982,528**	**5,438,052**	**5,602,081**	**5,171,374**	**5,296,312**	**5,259,258**
MALUKU	36,288	33,885	12,033	31,189	36,148	37,239	31,130
MALUKU UTARA				60,131	51,800	57,934	56,622
PAPUA	81,534	75,031	73,123	57,889	63,367	60,797	68,624
IRIAN JAYA BARAT						24,311	24,311
Maluku and Papua	**117,822**	**108,916**	**85,156**	**149,209**	**151,315**	**180,281**	**132,117**
Outer Java	**22,778,655**	**22,148,386**	**22,881,936**	**23,970,120**	**24,452,628**	**24,292,050**	**23,420,629**
INDONESIA	**51,898,852**	**50,460,782**	**51,489,854**	**52,137,604**	**54,088,468**	**54,055,970**	**52,355,255**
West Java	**10,749,868**	**9,237,593**	**9,166,872**	**8,776,889**	**9,602,302**	**9,787,217**	**9,553,457**
Others	**41,148,984**	**41,223,189**	**42,322,982**	**43,360,715**	**44,486,166**	**44,268,753**	**42,801,798**
Indonesia	**51,898,852**	**50,460,782**	**51,489,854**	**52,137,604**	**54,088,468**	**54,055,970**	**52,355,255**

Note: Preliminary data
Source: Statistical Yearbook of Indonesia, 2005/2006.

Appendix 4.2. Indonesain Annual Rice Harvesting Area by Province, 2000 – 2005

Area (Hectare)	2000	2001	2002	2003	2004	2005*	Average
D.I. ACEH	336,765	295,212	315,131	367,636	370,966	331,969	336,280
SUMUT	847,610	801,948	765,161	825,188	826,091	813,415	813,236
SUMBAR	396,919	376,710	424,253	411,860	422,582	426,950	409,879
RIAU	141,640	132,507	129,025	132,887	145,239	134,300	135,933
JAMBI	171,395	164,826	165,729	159,463	156,803	154,941	162,193
SUMSEL	555,427	511,928	561,724	570,010	625,013	626,757	575,143
BENGKULU	108,751	105,212	109,519	110,550	110,929	116,818	110,297
LAMPUNG	496,879	501,119	475,461	472,635	495,519	495,783	489,566
BANGKA BELITUNG		7,130	4,497	5,236	7,402	6,587	6,170
KEPULAUAN RIAU		-	-	-	-	107	107
Sumatera	**3,055,386**	**2,896,592**	**2,950,500**	**3,055,465**	**3,160,544**	**3,107,627**	**3,037,686**
D.K.I. JAKARTA	3,562	3,357	2,322	1,724	2,941	2,579	2,748
JABAR	2,188,479	1,866,069	1,792,320	1,664,386	1,880,142	1,894,796	1,881,032
JATENG	1,669,486	1,650,625	1,653,442	1,535,625	1,635,922	1,611,107	1,626,035
YOGYAKARTA	137,849	137,259	134,848	130,681	132,869	130,973	134,080
JATIM	1,754,178	1,708,478	1,686,431	1,695,514	1,697,024	1,693,651	1,705,879
BANTEN		335,029	338,666	348,033	364,721	374,755	352,241
Java	**5,753,554**	**5,700,817**	**5,608,029**	**5,375,963**	**5,713,619**	**5,707,861**	**5,643,307**
BALI	155,049	147,942	148,660	145,294	144,146	139,863	146,826
N.T.B.	340,635	330,661	310,969	319,417	325,984	300,394	321,343
N.T.T.	176,272	165,621	165,858	176,381	183,728	162,222	171,680
Bali and Nusa Tenggara	**671,956**	**644,224**	**625,487**	**641,092**	**653,858**	**602,479**	**639,849**
KALBAR	361,163	361,944	346,572	353,434	365,218	349,923	356,376
KALTENG	161,616	150,690	157,855	195,249	229,003	202,860	182,879
KALSEL	432,953	428,040	421,399	438,487	443,508	459,541	437,321
KALTIM	138,348	125,463	153,214	135,809	141,348	140,808	139,165
Kalimantan	**1,094,080**	**1,066,137**	**1,079,040**	**1,122,979**	**1,179,077**	**1,153,132**	**1,115,741**
SULUT	121,594	72,271	80,363	84,385	92,439	94,946	91,000
SULTENG	161,093	146,611	197,029	190,106	181,705	176,699	175,541
SULSEL	806,041	827,265	837,878	847,305	772,773	731,783	803,841
SULTRA	85,799	71,497	79,251	91,230	84,888	91,585	84,042
GORONTALO		35,639	34,652	34,635	37,741	39,110	36,355
SULAWESI BARAT	-	-	-	-	-	59,225	59,225
Sulawesi	**1,174,527**	**1,153,283**	**1,229,173**	**1,247,661**	**1,169,546**	**1,193,348**	**1,194,590**
MALUKU	14,819	14,552	4,534	9,436	11,160	11,341	10,974
MALUKU UTARA			-	16,409	15,216	16,950	16,192
PAPUA	29,153	24,392	24,403	19,029	19,954	18,478	22,568
IRIAN JAYA BARAT						7,697	7,697
Maluku and Papua	**43,972**	**38,944**	**28,937**	**44,874**	**46,330**	**54,466**	**42,921**
Outer Java	**6,039,921**	**5,799,180**	**5,913,137**	**6,112,071**	**6,209,355**	**6,111,052**	**6,030,786**
INDONESIA	**11,793,475**	**11,499,997**	**11,521,166**	**11,488,034**	**11,922,974**	**11,818,913**	**11,674,093**
West Java	**2,188,479**	**1,866,069**	**1,792,320**	**1,664,386**	**1,880,142**	**1,894,796**	**1,881,032**
Others	**9,604,996**	**9,633,928**	**9,728,846**	**9,823,648**	**10,042,832**	**9,924,117**	**9,793,061**
Indonesia	**11,793,475**	**11,499,997**	**11,521,166**	**11,488,034**	**11,922,974**	**11,818,913**	**11,674,093**

Note: Preliminary data
Source: Statistical Yearbook of Indonesia, 2005/2006.

Appendix 4.3 Cost Structure of Paddy/Rice Farming in West Java, Indonesia in Wet and Dry Season, 2001

(In thousand IDR per Hectare)

No.	Agroecosystem	N	Input Cost						Labor Cost		Other Cost		Total Cost	
			Seed		Fertilizer		Pesticides/ Insecticides							
I	Wet Season		IDR	%	IDR	%	IDR	%	IDR	%	IDR	%	IDR	%
	1. Low land sawah*)	189	81.2	(4.2)	422.4	(21.8)	123.8	(6.4)	1,190.5	(61.6)	115.9	(6.0)	1,933.8	(100)
	2. Up land sawah	172	75.8	(3.3)	632.2	(27.2)	34.1	(1.5)	1,528.1	(65.8)	53.4	(2.3)	2,323.6	(100)
II	Dry Season													
	1. Low land sawah	177	81.0	(4.3)	414.8	(21.9)	113.2	(6.0)	1,166.3	(61.5)	120.4	(6.3)	1,895.7	(100)
	2. Up land sawah	165	80.4	(3.4)	688.9	(29.1)	43.5	(1.8)	1,494.0	(63.1)	66.2	(2.6)	2,367.0	(100)

Source: PATANAS 2001-West Java, Primary data calculated

*) Sawah = rice-paddy field

N= total West java

Included in low-land sawah is : Rajasinga, Sampalan, and 2 other villages

Included in hign-land sawah is : Pagelaran, Nagrak, dan 2 other villages

( ) = in percentage

Appendix 4.4. Cost Allocation for Labors per Hectare in Wet Season and Dry Season in West Java, Indonesia, 2001

(In thousand IDR per Hectare)

Season	Agroecosystem	N	Family Labor		Hired Labor		Total Labor	
			Male	Female	Male	Female	Male	Female
Wet Season	Low land sawah							
	1. Rajasinga	44	283.4	140.0	341.3	352.8	423.4	694.1
	2. Sampalan	32	228.8	100.1	325.0	389.9	328.9	714.9
	Up land sawah							
	1. Pagelaran	41	202.5	137.9	625.0	263.9	340.4	888.9
	2. Nagrak	32	451.3	112.0	740.0	464.8	563.3	1,204.8
Dry Season	Low land sawah							
	1. Rajasinga	43	160.0	82.6	622.5	349.3	782.5	431.9
	2. Sampalan	25	231.3	93.1	293.8	332.5	525.1	423.5
	Up land sawah							
	1. Pagelaran	36	203.8	120.4	621.3	231.7	825.0	352.1
	2. Nagrak	31	386.3	79.1	633.8	503.3	1,020.0	596.4

Source: PATANAS 2001-West Java, Primary data calculated

Appendix 4.5. Labor Allocation of Time on Paddy/Rice Farming in West Java, Indonesia in Wet and Dry Season, 2001

(In thousand IDR per Hectare)

Season	Agroecosystem	N	Family Labor		Hired Labor		Total Labor		Total Labor	
			Male	Female	Male	Female	Male	Female	Male	Female
Wet Season	Low land sawah		Man days/Ha	Man days/Ha	Man days/Ha	Man days/Ha	Man days/Ha	Man days/Ha	Hours/Ha	Hours/Ha
	1. Rajasinga	44								
	2. Sampalan	32	22.7	20.0	27.3	50.4	50.0	70.4	350.0	352.0
			18.3	14.3	26.0	55.7	44.3	70.0	310.0	350.0
	Up land sawah									
	1. Pagelaran	41								
	2. Nagrak	32	16.2	19.7	50.0	37.7	66.2	57.4	463.0	287.0
			36.1	16.0	59.2	66.4	95.3	82.4	667.0	412.0
Dry Season	Low land sawah									
	1. Rajasinga	43								
	2. Sampalan	25	12.8	11.8	49.8	49.9	62.6	61.7	438.0	309.0
			18.5	13.3	23.5	47.5	42.0	60.5	294.0	303.0
	Up land sawah									
	1. Pagelaran	36								
	2. Nagrak	31	16.3	11.3	50.7	71.9	81.6	85.2	571.0	286.0

Source: PATANAS 2001-West Java, primary data- calculated

Appendix 4.6. Input-Output of Rice Farming Activities in West Java*), Indonesia, 2001

(In thousand IDR per Hectare)

No	Input-Output	Wet Season				Dry Season			
		Rajasinga	Sampalan	Pagelaran	Nagrak	Rajasinga	Sampalan	Pagelaran	Nagrak
		(n=44)	(n=32)	(n=41)	(n=32)	(n=43)	(n=25)	(n=36)	(n=31)
I.	Production (Kg/Ha)	5,664.0	4,764.0	4,140.0	3,540.0	4,410.0	4,690.0	4,110.0	3,770.0
II.	Value of Production (thousand IDR)	5,619.0	4,326.0	3,900.0	4453	4,375.0	4,873.0	4,032.0	4,637.0
III.	Cost of Production:								
	1. Input:								
	a. Seed	60.9	60.3	90.9	73.0	61.1	62.4	95.4	87.7
	b. Fertilizer	545.6	492.9	610.1	594.6	507.3	512.2	638.2	7,710.0
	c. Pesticides/Insecticides	194.8	199.3	20.6	48.4	167.3	194.4	47.5	31.0
	d. Sub Total (1)	801.3	752.5	721.6	716.0	735.7	769.0	781.1	889.7
	2. Labor:								
	a. Family Labors	423.4	328.9	340.4	56.3	242.6	324.4	324.2	465.4
	b. Hired Labors	694.1	714.9	888.9	1,204.8	971.5	624.1	852.9	1,151.0
	c. Sub Total (2)	1,117.5	1,043.8	1,229.3	1,768.1	1,214.1	948.5	1,177.1	1,616.4
	3. Other Cost:	198.4	124.7	69.1	51.5	198.4	124.7	69.4	51.5
	4. Total Cost:								
	a. With out Family Labors	1,693.8	1,592.1	1,679.6	1,972.3	1,844.8	1,393.1	1,703.4	2,092.2
	b. Include/Imputed Family Labors	2,117.2	1,921.0	2,020.0	2,535.6	2,087.4	1,717.5	2,027.6	2,557.6
IV.	Net Income								
	a. With out Family Labors	3925.2	2733.9	220.4	2480.7	2530.2	3479.9	2328.5	2544.8
	b. Include/Imputed Family Labors	3,501.8	2,405.0	1,880.0	1,917.4	2,287.6	3,155.5	2,004.4	2,079.4
V.	Benefit Cost ratio	2.65	2.25	1.93	1.76	2.1	2.84	2.0	1.81

Source: PATANAS 2001-West Java, Primary data calculated

*) West Java in 4 sample villages (Rajasinga, Sampalan, Pagelaran, and Nagrak)

Appendix 4.7. Labor Used per Hectare Soybeans and Mungbeans Farming Activities on Dry Season West Java, 2001 (Patanas' Sample Villages)

No.	Labor Used		Soybean	Mungbean
I.	Family Labor Used			
	1. Male	(Work Days)	28.9	26.3
		(Value-IDR)	202,300	184,100
	2. Female	(Work Days)	25.3	16.4
		(Value-IDR)	126,500	82,000
	Total Family Labor	(Work Days)	54.2	42.7
		(Value-IDR)	328,800	266,100
II.	Hired Labor Used			
	1. Male	(Work Days)	14.6	9.3
		(Value-IDR)	102,200	65,100
	2. Female	(Work Days)	10.2	14.8
		(Value-IDR)	51,000	74,000
	Total Family Labor	(Work Days)	24.8	24.1
		(Value-IDR)	163,200	139,100
III.	Total Labor Used	(Work Days)	79.0	66.8
		(Value-IDR)	492,000	405,200

Source: PATANAS 2001-West Java, Primary data calculated

Appendix 4.8. Household Income Structure per Year, West Java, 2001

Source of Income	Low land Sawah		Up land sawah		Average*
	%	N	%	N	
I. Agriculture	23.92		14.37		47.50
1.Farming Activites					
a. Rice	13.70	121	5.42	114	4.80
b. Vegetables, Palawija	0.37	13	0.13	7	4.80
c. Yard Up land	0.84	24	1.16	18	1.40
d. Livestock	2.57	107	4.13	80	8.20
e. Ponds	0.71	45	0.54	32	0.20
2.Labor (Hired labor)	5.10	90	2.99	59	3.40
II. Non Agriculture	76.08		85.63		52.50
1.Business					
a. Trade	15.40	57	25.85	69	16.60
b. Industry	10.76	37	2.88	12	2.80
c. Service/Transportation	8.91	45	6.08	21	4.90
2.Labor (Hired labor)	13.99	45	12.60	73	7.50
3.Professional/Employee	9.88	28	18.53	43	10.30
4.Others	0.18	4	0.46	6	0.20
III. Other Sources	17.63	80	19.25	72	10.20
IV. Total Income (%)	100.00	200	100.00	200	100.00
(IDR thousand)	7,017.90		7,363.50		10,341.30
V. Income/Capita					
(IDR thousand)	1,589.60		1,827.20		2,438.90
VI. Real Income/Capita					
(equivalent to kilograms of rice)	769.60		884.60		1180.70

Source: PATANAS 2001-West Java, Primary data calculated

(N) = number of households, *) Average:average of all villages including 6 off-share villages

Appendix 4.9. Household Income Structure per Year, West Java, 2001 (In % and in Thousand IR)

Source of Income	Low land Sawah		Up land sawah	
	Rajasinga	Sampalan	Pagelaran	Nagrak
I. Agriculture	22.60	19.10	18.00	10.60
1.Farming Activites				
a. Rice	15.00	15.00	7.50	3.70
b. Vegetables, Palawija	0.30	0.00	0.10	0.40
c. Yard Up land	0.20	0.00	2.80	0.70
d. Livestock	0.40	0.50	4.40	1.70
e. Ponds	0.40	0.00	0.20	0.60
2.Labor (Hired labor)	6.30	3.60	3.00	3.40
II. Non Agriculture	77.40	80.90	82.00	89.40
1.Business				
a. Trade	10.80	24.10	23.30	17.10
b. Industry	27.00	0.20	4.20	1.90
c. Service/Transportation	8.00	10.80	4.90	6.00
2.Labor (Hired labor)	18.00	13.00	8.80	24.20
3.Professional/Employee	0.20	5.40	17.10	22.50
4.Others	0.00	0.00	1.20	0.10
III. Other Sources	13.50	27.50	22.60	17.60
IV. Total Income (%)	100.00	100.00	100.00	100.00
(IDR thousand)	6,623.50	8,818.90	7,872.00	6,462.40
V. Income/Capita				
(IDR thousand)	1,498.50	2,070.20	2,093.60	1,648.60
VI. Real Income/Capita				
(equivalent to kilograms of rice)	725.10	1,001.70	1,013.10	710.64

Source: PATANAS 2001-West Java, Primary data calculated
Price of rice in 2000 = IDR 2.065.6 per Kg

Appendix 5.1. Import Volume, Import Price and Wholesale Price (MT): periode of Import Surge

Month/Year	Import Volume (MT)	Import Price (Rp/MT)	Wholesale Price (Rp/MT)
JAN 98	67	1,814,539	1,154,703
FEB 98	20,655	2,589,687	1,157,740
MAR 98	191,530	2,301,519	1,302,770
APR 98	54,231	2,269,400	1,359,438
MEI 98	215,705	3,071,042	1,460,462
JUN 98	287,101	4,429,669	1,801,083
JUL 98	717,582	3,966,554	2,021,730
AGU 98	219,473	3,355,434	2,318,699
SEP 98	220,676	3,239,589	2,630,007
OKT 98	196,014	2,275,132	2,512,269
NOV 98	287,598	2,150,524	2,519,357
DES 98	489,918	2,338,845	2,654,309
JAN 99	221,179	2,958,576	2,650,256
FEB 99	354,820	2,756,846	2,586,250
MAR 99	327,762	2,749,660	2,516,086
APR 99	315,273	2,760,773	2,583,878
MEI 99	250,528	2,482,724	2,618,276
JUN 99	383,373	1,691,611	2,609,109
JUL 99	549,444	1,656,431	2,529,530
AGU 99	590,801	1,881,300	2,468,856
SEP 99	797,048	2,197,481	2,480,429
OKT 99	444,054	2,241,161	2,403,881
NOV 99	196,154	1,787,933	2,364,578
DES 99	321,413	1,777,753	2,348,597
JAN 02	134,327	1,881,134	2,771,331
FEB 02	126,435	2,149,500	2,863,499
MAR 02	168,261	2,017,004	2,743,906
APR 02	199,839	1,642,366	2,690,891
MEI 02	175,530	1,743,045	2,715,730
JUN 02	106,030	1,630,495	2,705,574
JUL 02	172,009	1,658,989	2,678,274
AGU 02	142,760	1,704,652	2,584,428
SEP 02	72,605	1,812,964	2,546,747
OKT 02	152,704	1,641,993	2,553,135
NOV 02	220,503	1,736,046	2,638,339

DES 02	140,984	1,794,765	2,647,011
JAN 03	238,920	1,724,354	2,673,201
FEB 03	220,455	1,756,669	2,714,911
MAR 03	125,945	1,747,477	2,702,560
APR 03	145,967	1,808,506	2,672,097
MEI 03	135,034	1,796,923	2,626,507
JUN 03	126,777	1,743,181	2,598,767
JUL 03	50,257	2,007,296	2,588,954
AGU 03	45,206	1,588,909	2,603,894
SEP 03	80,222	1,743,353	2,589,940
OKT 03	72,173	1,788,848	2,587,512
NOV 03	63,187	1,834,536	2,587,512
DES 03	133,329	1,810,966	2,585,816

Note: import price is boarder price in local currency; wholesaler price is medium quality of rice
Source: CBS for import and import price; Bulog for wholeseler price.

Appendix 5.2. Cases of Falling of Farm Level Price under Floor/Procurement Price, by season and year: 1997-2006

Year	Main Harvesting Season			Secondary Harvesting Season			Leany Season			Total
	Cases	N	%	Cases	N	%	Cases	N	%	%
1997	46	2,285	2	5	2,288	0	0	1,631	0	0.81
1998	194	3,105	6	63	1,948	3	24	1,760	1	3.77
1999	163	2,674	6	121	2,304	5	309	1,664	19	8.26
2000	1,343	2,449	55	739	1,746	42	762	1,111	69	48.32
2001	1,063	2,345	45	478	1,859	26	83	1,540	5	30.63
2002	351	3,304	11	143	2,508	6	214	1,671	13	7.68
2003	1,098	2,676	41	971	2,166	45	932	2,199	42	42.94
2004	1,517	3,513	43	1,044	2,888	36	454	2,173	21	36.6
2005	1,432	3,633	39	1,067	2,902	37	3,387	9,945	34	15.21
2006	1,056	3,122	34	988	2,754	36	3,625	10,236	35	7.26

Note: For all Quality (GKP, GKS, GKG). Main Harvesting Season=Feb-May;
Secondary Harvesting Season=June -Sept.; and Leany Season=Oct-Jan.
Source: calculated from CBS data