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2016
"Small and Medium-sized Enterprises Competitiveness"

Agribusiness Development for Human Welfare

PROCEEDING

INTERNATIONAL CONFERENCE

Agribusiness Development for Human Welfare

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Department of Agribusiness, Faculty of Agriculture
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PROCEEDING INTERNATIONAL CONFERENCE

AGRIBUSINESS DEVELOPMENT FOR HUMAN WELFARE

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EDITOR FOREWORD

The economic integrations by ASEAN certainly have given a major influence on Small and Medium-sized Enterprises (SMEs). Beside economic integration in the form of free trade area (FTA) that has been going on since the early 2000s, economic integration in the form of ASEAN Economic Community (AEC) has been ongoing since the beginning of 2016. Through this integration, SMEs have opportunity to expand access to markets, technology, and capital. But at the same time SMEs are required to improve their competitiveness in order to survive in the market.

In order to explore ideas, concept, and innovations related to the competitiveness of SMEs, International Conference on Agribusiness Development for Human Welfare (ADHW 2016) was held in Yogyakarta on May 14, 2016. The conference organized by Department of Agribusiness Universitas Muhammadiyah Yogyakarta, in collaboration with Department of Agribusiness and Information System Universiti Putra Malaysia, Department of Agro-Industrial Technology Kasetsart University, Department of Agriculture Socio-Economics Universitas Gadjah Mada, Department of Agriculture Socio-Economics of Universitas Brawijaya, Indonesian Society of Agriculture Economics, Agribusiness Association of Indonesia. Hopefully proceedings of ADHW 2016 provide stimulus for increasing competitiveness of SMEs in ASEAN, especially in Indonesia.

Furthermore, we are grateful to Allah, the Sustainer of all word, who always makes it easy for our affairs. We would like to acknowledge with thanks to all the institution and individual who joined with resources and efforts in organizing the conference that resulted in the papers which are published in this proceeding. Special thanks to all authors and discussants who contributed with their intellectual capital and responded to our call papers. Thanks and acknowledgment are also due to all reviewers of the conference who helped in evaluating submitted papers; and to the members of the Organization Committee, who ensured smooth execution of the event.

May 30, 2016

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PREFACE

Assalaamualaikum, Warahmatullaahi., Wabarakaatuh.
Dear Honorable Governor of Yogyakarta Special Province
Dear respectable Prof. Dr. Zainal Abidin Mohamed
Dear respectable Asist. Prof. Pornthipa Ongkunaruk
Dear respectable Rector of UMY Prof. Dr. Bambang Cipto, MA.
Dear all invited Guests, Speakers, and Participants of International seminar of ADHW 2016.

Alhamdulillah, all praise be to the Almighty God, so that we can be gathering here today at Muhammadiyah University of Yogyakarta in order to attend the Conference on Agribusiness Development for Human Welfare (ADHW) 2016.

Ladies and Gentlemen,

On behalf of the committee, I would like to say welcome to this International Conference on ADHW 2016 and thank you for attending our invitation.

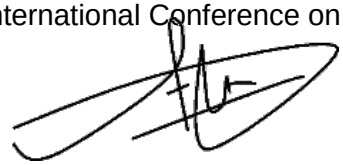
Especially, we are grateful to invited speakers, Prof. Zainal Abidin Mohamed and Asist. Prof. Pornthipa Ongkunaruk, for their willingness to share information and thoughts in this conference. As a bit report, that this conference has been attended by 85 speakers coming from five countries.

This conference entitled “Small and Medium-sized Enterprise Competitiveness”. ASEAN Economic Community is the largest economic integration that is going to be implemented at the beginning of 2016 (December 31, 2015). Through this integration, SMEs will have opportunity to expand access to markets, technology, and capital. But at the same time SMEs are required to improve their competitiveness in order to survive in the market. We expect that this seminar is capable of producing thoughts building SMEs within ASEAN, especially Indonesia, to face the free trade.

This event can be done by support and efforts from all sides. Therefore, I would like to say thank you to all committee members having worked hard to conduct this event. We, as the organizer commitee, do apologize when there is a shortage in conducting this event.

Wassalamualaikum, Warahmatullaahi., Wabarakaatuh.

Chairman
International Conference on ADHW 2016



Dr. Aris Slamet Widodo, SP., MSc.

WORDS OF WELCOME

Assalamu'alaikum warahmatullahi wabarakatuh

Alhamdulillah, all praise be to Allah SWT, who has given us His blessings so that this International Seminar of Agribusiness Development for Human Welfare (ADHW) 2016 entitled "Small and Medium-sized Enterprises Competitiveness" can be conducted. This International Conference is held in cooperation among Agribusiness Study Program of Muhammadiyah University of Yogyakarta with Putra University of Malaysia (UPM), Kasetsart University (KU), Association of Indonesian Agricultural Economy (PERHEPI), and Agribusiness Association of Indonesia (AAI), Universitas Gadjah Mada (UGM) and Universitas Brawijaya (UB).

Countries of ASEAN members like Indonesia, Malaysia, and Thailand have more than 90% Small and Medium-sized Enterprises (SMEs). In general, SMEs play important role in economic developments such as in terms of employment, added value, improve foreign exchange, and economic growth. For Indonesia, the role of SMEs is limited to employment and added value, while the foreign exchange from SMEs is still low. According to the General Director of SMEs of Industrial Ministry, in 2013 the total SMEs being able to pass through export market is just under 5 percent. For that required many breakthrough and innovation so that the role of SMEs becomes real economic development, especially in Indonesia, and generally in ASEAN countries.

On behalf of Agribusiness Department of Universitas Muhammadiyah Yogyakarta, we would like to express our gratitude Putra University of Malaysia (UPM), Kasetsart University (KU), Association of Indonesian Agricultural Economy (PERHEPI), Agribusiness Association of Indonesia (AAI), Universitas Gadjah Mada (UGM) and Universitas Brawijaya (UB) for all supports, sponsors, and all committee members having worked so hard that this International Conference can be conducted.

Hopefully, these sinergies coming from various parties can provide contribution for developing SMEs in Indonesia and other ASEAN countries as well.

Wassalamu'alaikum warhmatullahi wabarakatuh

Head of Agribusiness Department
Universitas Muhammadiyah Yogyakarta

Ir. Eni Istiyanti, MP.

Gubernur

Daerah Istimewa Yogyakarta

Sambutan
KONFERENSI INTERNASIONAL
"*AGRIBUSINESS DEVELOPMENT FOR HUMAN WELFARE*"
Yogyakarta, 14 Mei 2016

Assalamu'alaikum Wr. Wb.

Salam sejahtera untuk kita semua.

Yang Saya hormati :

- Rektor Universitas Muhammadiyah Yogyakarta;
- Para Narasumber;
- Hadirin dan Para Peserta yang berbahagia,

Puji dan syukur marilah kita panjatkan kehadirat Allah SWT karena hanya atas limpahan rahmat serta karunia-Nya, kita dapat hadir pada kesempatan acara **Konferensi Internasional "*Agribusiness Development For Human Welfare*"** ini dalam keadaan sehat wal'afiat.

Pada kesempatan kali ini, secara ringkas Saya akan menyampaikan mengenai industri kecil menengah nasional yang menjadi tema pada pembukaan Seminar Internasional "Agribusiness Development For Human Welfare" ini.

Hadirin dan Saudara-saudara sekalian yang Saya hormati,

Berdasarkan data BPS, pertumbuhan industri pengolahan nonmigas pada tahun 2015 secara kumulatif sebesar 5,04%; lebih tinggi dari pertumbuhan ekonomi (PDB) pada periode yang sama sebesar 4,79%. Pada periode Januari-Desember 2015, nilai ekspor produk industri pengolahan nonmigas mencapai USD 106,63 Milyar, dan nilai impor mencapai USD 108,95 milyar, sehingga neraca perdagangan insdustri pengolahan nonmigas pada periode yang sama sebesar USD 2,32 milyar (nerasa defisit).

Usaha pemerintah untuk memperkecil defisit di atas, salah satunya dengan cara memberdayakan Industri Kecil dan Menengah (IKM) yang merupakan bagian penting dalam perkembangan industri nasional. Sampai saat ini, Insutri Kecil dan Menengah

telah berkontribusi sebesar 34,82% terhadap pertumbuhan industri pengolahan nonmigas secara keseluruhan.

Angka ini dapat tercapai karena dukungan lebih kurang 3,6 juta unit usaha, yang merupakan 90 persen dari total unit usaha insutri nasional. Jumlah unit usaha tersebut telah mampu menyerap tenaga kerja sebesar 8,7 juta orang, yang tentunya berdampak pada meningkatnya ekonomi nasional serta mengurangi kemiskinan.

Industri Kecil dan Menengah (IKM) memiliki peran yang strategis dalam perekonomian nasional. Hal ini sejalan dengan Visi Pemerintah dalam Rencana Pembangunan Nasional Jangka Menengah (RPJMN) 2015-2019 yaitu *"Terwujudnya Indonesia yang berdaulat, mandiri, dan berkepribadian berlandaskan gotong royong".*

Untuk lebih meningkatkan peran tersebut, Penumbuhan dan Pengembangan Industri Kecil dan Menengah diarahkan untuk memiliki tujuan jangka menengah guna mewujudkan industri kecil dan industri menengah yang berdaya saing, berperan signifikan dalam penguatan struktur industri nasional, pengentasan kemiskinan dan perluasan kesempatan kerja, serta menghasilkan barang dan/atau jasa Industri untuk keperluan ekspor.

Hadirin dan Saudara-saudara sekalian,

Awal tahun ini, kita telah memasuki era Masyarakat Ekonomi ASEAN (MEA). Dengan demikan, perekonomian nasional akan langsung bersaing dengan para pelaku pasar di kawasan ASEAN. Produk dan jasa termasuk investasi negara-negara anggota telas bebas memasuki pasar di kawasan ASEAN.

Dalam rangka menghadapi hal tersebut, Pemerintah mengambil langkah-langkah strategis berupa peningkatan daya saing industri dan mendorong investasi di sektor industri; di mana peningkatan daya saing industri itu sendiri dilakukan melalui penguatan struktur industri dengan melengkapi struktur industri yang masih kosong serta menyiapkan strategi ofensif dan defensif dalam akses pasar.

Pemerintah telah melakukan Penguatan Sektor IKM dengan strategi ofensif dan defensifnya melalui beberapa program pelaksanaan, diantaranya antara lain: Penumbuhan Wirausaha Baru; Pengembangan IKM melalui Pengembangan Produk IKM serta Peningkatan Kemampuan Sentra dan UPT; Pemberian Bantuan Mesin dan Peralatan Produksi; Perluasan Akses Pasar melalui Promosi dan Pameran; Fasilitasi Pendaftaran Hak Kekayaan Intelektual; Fasilitasi Sertifikasi Mutu Produk dan Kemasan; serta Fasilitasi Pembiayaan melalui Skema Kredit Usaha Rakyat (KUR).

Saya berharap agar berbagai program-program pemerintah tersebut dapat didukung secara sinergis oleh seluruh komponen masyarakat. Untuk itu, Saya berpesan kepada Saudara-saudara sekalian agar semua program pemerintah dalam bidang

Industri, khususnya dalam program pemberdayaan Industri Kecil dan Menengah, didukung dengan sepenuh hati, agar dapat lebih bermanfaat bagi masyarakat dalam rangka pengembangan industri kecil menengah.

Hadirin dan Saudara-saudara sekalian yang Saya hormati,

Demikian beberapa hal yang dapat Saya sampaikan. Akhirnya dengan memohon ridho Allah Subhanahu Wata'ala, seraya mengucap "*Bismilahirrahmanirrahim*", **Konferensi Internasional "*Agribusiness Development For Human Welfare*"** dengan ini secara resmi Saya nyatakan dibuka. Semoga Allah SWT memberikan petunjuk, bimbingan, perlindungan dan kemudahan dalam setiap langkah dan upaya kita. Amien.

Sekian dan terima kasih.

Wassalamu'alaikum Wr. Wb.

Yogyakarta, 14 Mei 2016
GUBERNUR
DAERAH ISTIMEWA YOGYAKARTA

HAMENGKU BUWONO X

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GRANARY GROUP PERFORMANCE IMPACT TO THE PRICE AND FOOD SELF-SUFFICIENCY ON THE FARM HOUSEHOLDS

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ABSTRACT

This study aimed to analyze the impact of the granary group performance to the price of rice grain and food self-sufficiency of the farm households. The study was conducted in the province of D.I. Yogyakarta include Regency of Kulon Progo, Sleman, and Bantul. The number of samples in this study consisted of 112 groups granary and 112 farmer members granary. Analysis of the data used is the multiple linear regression model. The results of this study indicate that only in the first planting season (high season rice production), the granary group performance can affect the level of increase in the price of rice grain of 0.2948 percent. Thus, the higher the performance level of granary group, the more powerful bargaining position of farmers, thus increasing the price of rice grain at the farm level. Performance of the granary group can affect the improvement of food self-sufficiency of farm households, especially in the planting season with low production (second planting season).

Keywords: performance, granary, price of rice grain, food self-sufficiency

INTRODUCTION

Food is a basic need for human survival, so that at any moment the availability of food should always be fulfilled. Granary is an institutional form of food reserve communities with social and economic function. As a social function, institutional granary can overcome food insecurity and meet the food needs in the event of crop failure or natural disaster, while economically, granary could function as institutions selling delay and stabilizing food prices, especially in the local area.

Traditionally the people have built a system of food reserves villages and households, one in the form of institutional granaries. The existence of granaries in the community has been reduced, in line with an increase in the role of Bulog and the cheap food policy. The development of community food reserve systems both at the household level individually, groups and rural areas in areas identified as food insecure, considered strategic in order to reduce the risk of food insecurity in an abnormal situation (Rachmat, et al., 2010).

Irham (2006), states that during this time, granaries known as a storage place for food, which is useful for food production cycle which fluctuates due to the season, as well as to anticipate the crop failure due to natural calamities such as pests and diseases, floods, droughts, and others. Along with advances in technology, the function granaries are expected not only to accommodate a food reserve that can be used to help members who need to a local mechanism agreed upon, but more than that can be a rural economic institutions, which has the task of processing food reserves as a society. Granaries can also be used in control prices by selling delay system that is storing the harvest in the granary at harvest and when prices fall, then stored grains will be sold when the price stable.

One of the most serious threats to food security in the short run is the volatility of food prices in general and rice prices more specifically. Government efforts to stabilize rice prices are highly controversial in the donor and academic communities, but most Asian governments do it anyway. If successful, price stabilization programs can be an important stimulus to improving market efficiency while also protecting poor farmers and consumers from sudden price changes. (Glickman, et al., 2010).

Given the high costs of national price stabilisation schemes (Newbery and Stiglitz; Behrman; Williams and Wright *in* Timmer, 2004) and their effectiveness in stabilising prices in rural areas, alternative policies decreasing local price instability need to be considered. The most cost-effective method for increasing price stability probably is to remove.

Basri (2008) concluded that the factors that affect the role of the institutional community granary in improving food security in Sumbawa is age, land tenure, land ownership, access to food, and support assistants.

This study aimed to analyze the influence of the performance of granary toward the price of rice grain and food self-sufficiency of farm households. Through this research approach, it is expected that the institutional granaries can improve their performance, both as a social and economic function. Thus, local food self-sufficiency can be achieved and the welfare of farmers can be improved.

METHOD

This research was conducted in Daerah Istimewa Yogyakarta Province, covering Kulon Progo, Sleman, and Bantul Regency. Sampling was done by cluster random sampling. These samples were divided into two samples of institutions (granary) and a sample of rice farmers (members granary). Each institution granary represented by one sample farmer members, so that the overall sample was obtained institutions totaled 112 and as many as 112 samples of rice farmers.

The analytical method used in this study is multiple linear regression model. Analytical methods used are:

Equation for the Price of Rice Grain

To analyze the factors that affect the price of rice grain at the farm level, then use the following equation.

- Planting Season I (MT-I):

$$\ln HGB1 = \alpha_0 + \alpha_1 \ln PROD1 + \alpha_2 \ln HBR1 + \alpha_3 \ln SLP1 + \alpha_4 \ln KLP + \delta_1 DBS + \varepsilon_1$$

- Planting Season II (MT-II):

$$\ln HGB2 = \alpha_0 + \alpha_1 \ln PROD2 + \alpha_2 \ln HBR2 + \alpha_3 \ln SLP2 + \alpha_4 \ln KLP + \delta_1 DBS + \varepsilon_1$$

Description :

HGB	=	price of rice grain (Rp/kg)
α_0	=	intercept
α_{1-4}	=	regression coefficient
δ_1	=	coefficient of dummy variables
PROD	=	rice production (kg)
HBR	=	rice price (Rp/kg)
SLP	=	rice grain stocks in granary (kg)
KLP	=	granary performance (score)
DBS	=	dummy bansos (social grants) 1 = recipient of social grant; 0 = not recipient of social grant
ε	=	error term

Equation for Food Self-Sufficiency in the Farm Households

To analyze the factors that influence food self-sufficiency of the farm household for the first planting season and the second season, then use the following equation.

- Planting Season I (MT-I):

$$\ln TSP1 = \gamma_0 + \gamma_1 \ln LHN1 + \gamma_2 \ln HBR1 + \gamma_3 \ln UMR + \gamma_4 \ln PDIK + \gamma_5 \ln JTG + \gamma_6 \ln KLP + \varepsilon_3$$

- Planting Season II (MT-II):

$$\ln TSP2 = \gamma_0 + \gamma_1 \ln LHN2 + \gamma_2 \ln HBR2 + \gamma_3 \ln UMR + \gamma_4 \ln PDIK + \gamma_5 \ln JTG + \gamma_6 \ln KLP + \varepsilon_3$$

Description :

TSP	=	subsistence level of food (ratio)
γ_0	=	intercept
γ_{1-6}	=	regression coefficient
LHN	=	land area (ha)
HBR	=	rice price (Rp)
UMR	=	farmer age (years)
PDIK	=	formal education of farmer (years)
JTG	=	number of family members (person)
KLP	=	granary performance (score)
ε	=	error term

RESULT AND DISCUSSION

1. Factors that Affect the Price of Rice Grain

In principle granary serves as a food reserve and also the institutions delay selling. A phenomenon that occurs in general that the price of agricultural products greatly fluctuate with the seasons change. Similarly, the the price of rice grain, which tend to fluctuate, which at harvest time the price of rice grain down and then up in the dry season. If the granary able to play an important role in the delay selling system, then the tendency of the price of grain fluctuating can be minimized.

This is consistent with the statement of Timmer (1996) that the benefits of price stability, namely: (1) reduce the level of risk faced by farmers so that the investment more productive and encourage farmers to invest bigger through innovation and new technologies that increase farm productivity of rice, and (2) consumers benefited from stable prices. The advantage of consumers through price stabilization significantly from the side of justice, and (3) reduce poverty.

According to Blein and Longo (2009), the main factors underlying the instability on domestic markets are the following: (a) Supply-side variability due to the impact of natural factors on harvests; (b) The decrease in stocks' volumes; (c) The lack of organization of producers in the value chain; (d) The small share of marketed smallholder production; (e) Segmentation of regional and domestic markets; (f) Non-tradability of local foodstuff.

From the results of this research note that most of the existence of a granary is still relatively modest. Function granary which continues until the present time is a food reserve and savings and loans rice.

In the dry season which is now waiting for the harvest or during harvesting down production or crop failure, stocks of grain in the granary largely been borrowed by members. Moreover, a lot of farmers are also members of a granary deliberately borrow grain to granary at the time began to enter the first planting season (rainy season), with a reason to help finance their farming. Thus, the existence of a granary is very important for farmers to establish farming as well as address the food needs. Arguing that grain prices tend to fluctuate throughout the season, so in this study distinguished between the first planting season (MT-I) which is the rainy season (November to February), which is the growing season with high production, and the second planting season (MT-II), or also called the first dry season (March-June), which is the growing season, production tends to be blower.

In Table 1, the overall independent variable (rice production, rice price, stock granary, granary performance, dummy social grants) together can affect the dependent variable (the price of rice grain) either in the MT-I and MT-II, with the degree of influence of each of 81.09 percent and 90.28 percent, respectively, while the remaining 18.91 per cent and 9.72 per cent due to the influence of other factors outside of the model. In the first planting season (MT-I), each paddy production rose by one percent then it will be able to lower the rate of 0.011664 percent grain prices. Contradictory conditions that occurred in the second planting season (MT-II) which indicates that the production of rice increased by one percent then it will be able to raise the level of grain prices by 0.003218 percent. This phenomenon could logically happen, because in the second planting season (MT-II), the majority of rice production declined by an average of up to 13.42 per cent with a decrease in the range between 0.25 and 30.94 percent, so if there is an increase in production season rice is still in a state of optimal and rational. On the other hand, the price of grain on the MT-II is higher than the MT-I with an average rate increase of 9.63 percent.

In the MT-I each rice prices rose by one percent then it will be able to raise the level of grain prices by 0.028901 percent. In the MT-II each rice prices rose by one percent then it will be able to raise the level of grain prices by 0.506308 percent.

These symptoms are very realistic, because the MT-II grain production decreased, while consumer demand is relatively high. On the other hand, the majority of rice farmers in the study area as well as a producer and consumer.

Table 1. Factors that Affect the Price of Rice Grain at the Farm Level

Variables	MT I	
	Regression Coefficients	t-statistics
Rice production	-0,011664	-12,47172***
Rice price	0,028901	3,56398***
Stock of granary	0,002089	3,72000***
Granary performance	0,002948	2,52976**
Dummy of social grants	0,004715	4,84900***
Constants	7,969891	105,63100***
R^2	0,810912	
F statistic	91,128310***	

Variables	MT II	
	Regression Coefficients	t-statistics
Rice production	0,003218	2,05473**
Rice price	0,506308	26,24045***
Stock of granary	0,001579	1,50258^{ns}
Granary performance	0,000620	0,30900^{ns}
Dummy of social grants	-0,025109	-18,79785***
Constants	3,755947	22,28554***
R^2	0,902837	
F statistic	196,995200***	

***) : significant at the 1% error level
**) : significant at the 5% error level
*) : significant at the 10% error level
ns : not significant

Sources: Primary Data Analysis, 2013.

In the MT-I, granary stock has a positive regression coefficient (0.002089) and significant at the one percent level of alpha (α = 1%), whereas for MT-II is also a positive coefficient value (0.001579) but not proven significant effect on the price of grain. Presence status granary that most (52.68%) belonged to the group, and the group is dominated by a relatively simple granary (83.04%), then the stock of granary itself largely still relatively small, so that its influence on the stabilization of grain prices at the farm level is also relatively small. Although the level of influence granary stocks at the price of rice grain is still relatively small, but this condition indicates that the larger the stock of granary more it will affect the rise in grain prices at the farm level.

In the MT-I, granary organizational performance variables have a positive regression coefficient of 0.002948 and proved significant at the 95 percent confidence level (α = 5%), meaning that for every one percent increase in the performance of the granary will be able to raise the price of grain at 0.002948 percent. While the MT-II, although the barns performance regression coefficient is positive, but it proved not to significantly affect the price of grain at the farm level. This phenomenon occurs because the level of performance granary is still a relatively adequate or moderate. Nevertheless, although the effect is relatively small, this indicates that the higher the level of performance granary will be followed by increasing levels of grain prices. It also means that the better performance of the granary will further strengthen the bargaining position of rice farmers.

In the MT-I, the role of social grants proved to contribute to the increase in grain prices, because in the first planting season, all the farmers who have borrowed grain from the granary is obliged to return the grain with the addition of services that have been agreed (on average 10 percent of the total grain borrowed), but it can also save farmers grain was in the barn with the specified mechanism. Thus, the production of rice is being able to be absorbed by the abundant granary warehouse as stock or food reserves, so that in these conditions

the price of grain at the farm level is relatively stable and even tended to increase (although the effect is relatively small).

The opposite occurs in the MT-II, namely during the declining rice production and rice price increases, while it may take or borrow farmers back grain in the barn. In general, most farmers borrow grain to the barn on a bad season and ahead of the first growing season, with reason to finance farming, so that by the time the stock is also relatively little grain barns or even empty because all of them have been in the hands of farmers. In such circumstances, the relatively high price of grain on the MT-II tended to decrease. Keep in mind that the amount of rice granaries bansos has received only a fraction (16.07%), and liability for any social assistance recipients granary is a must have as an emergency stock of food reserves by 2.5 tons. Therefore, it is quite logical that the effect of the MT-II bansos proven to contribute in influencing the decline in the price of grain at the farm level.

2. Factors that Affect the Food Self-Sufficiency

In this study, the term farm households food self-sufficiency is the subsistence level of staple food which is the ratio of the farmer's own production of rice equivalent to the needs of rice equivalent. This is consistent with the theory proposed Darwanto (2005), that food commodities, especially rice can be classified as subsistence commodities, because the products are used to meet the consumption needs of family producers (farmers), and if there is excess product, then the farmer will sell to the market. Furthermore, to determine the factors that affect farm household food self-reliance, it is presented in Table 2.

Table 2. Factors that Affect Food Self-Sufficiency in Farm households

Variable	MT I	
	Regression Coefficients	t-statistics
Land area	0,979508	86,470900***
Rice price	0,268080	1,754886*
Farmer age	0,036552	0,898836^{ns}
Education	0,063255	2,103744**
Family members	-0,663069	-35,424950***
Granary performance	0,022547	0,932606^{ns}
Constants	1,326233	0,972648^{ns}
R^2	0,989108	
F statistic	1589,130000***	

Variable	MT II	
	Regression Coefficients	t-statistics
Land area	0,984706	87,703980***
Rice price	0,408266	2,192259**
Farmer age	0,081152	1,494495^{ns}
Education	0,035114	0,661255^{ns}
Family members	-0,671652	-22,193890***
Granary performance	0,051501	1,830326*
Constants	-0,156568	-0,088757^{ns}
R^2	0,978179	
F statistic	784,47890***	

***) : significant at the 1% error level
**) : significant at the 5% error level
*) : significant at the 10% error level
ns : not significant

Sources: Primary Data Analysis, 2013.

Both the MT-I and MT-II, each land area increased by one percent, it will result in increased food self-sufficiency rate of 0.979508 percent and 0.984706

percent. This fact is very rational, because the vast wet land ownership is directly proportional to the level of production of paddy (rice production), while the subsistence level of food (farm households food self-sufficiency) is the ratio of the farm's own production of rice equivalent to the consumption of rice equivalent. Thus, the more extensive wetland ownership, the higher the level of food self-sufficiency in farmer household.

The price of rice has a positive regression coefficient on the MT-I and MT-II, respectively 0.26808 and 0.408266, and a significant effect on the level of trust 90 percent and 95 percent. This means that if the price of rice rose one per cent, the level of household food self-sufficiency will rise by 0.26808 percent on MT-I, and 0.408266 percent in MT-II. This is consistent with the theory proposed Darwanto (2005) that, the higher rice prices relative to prices of other goods, the less amount of rice sold. The reason, by selling less rice, the farmers become better able to buy other goods. Thus, the farmer-owned reserve rice will be more, so the food subsistence level will also be higher.

In the first planting season (MT-I), indicating that the higher the level of education of farmers, the higher the level of household food self-sufficiency. This phenomenon is quite reasonable, because of the relatively high level of education means farmers have a mindset that is more advanced, better farming management, and more diverse patterns of food consumption, thus decreasing the level of rice consumption, and subsequently household food self-sufficiency will increase.

Family size has a negative regression coefficient on the MT-I and MT-II, respectively -0.663069 and -0.671652, and has a significant effect on the error rate of one percent ($\alpha = 1\%$). This indicates that, the greater the number of family members, it could lead to the decline in food self-sufficiency rate of farmer household. This fact occurred because, the more the number of family members, the amount of rice consumed also increased, while the number of its own rice consumption is inversely related to the level of subsistence food. This condition is also difficult to deny, because the dependence of consumption of rice at the farm level is very high, although many government programs that have supported the diversification of food.

Granary performance has a positive coefficient on the MT-I (0.022547) and MT-II (0.051501), but which have a significant effect only on the MT-II, ie, the 90 percent confidence level. This has the meaning that the higher the level of performance granary, the higher the level of food self-sufficiency of farmer household.

This situation can occur, because the granary function as food reserves, and indirectly also function as a delay selling, most of which has gone well. Thus, if the farmer granary members facing capital constraints or constraints fulfillment farm food consumption, then the existence granary able to overcome these obstacles. Thus, the level of household food self-sufficiency of farmers granary members will be relatively high.

CONCLUSION

Performance granary has positive influence on the price of rice grain only on the first planting season (MT-I), so it is expected to strengthen the bargaining position of farmers, as well as in the stock unhulled rice granary also has the same influence. In the first planting season (MT-I) and second planting season (MT-II), the price of rice grain positively influenced by the price of rice, and negatively by paddy production. Bansos has positive influence on the price of rice grain on the MT-I (high harvest season), and negatively affect the the price of rice grain on the MT-II (low harvest season). Thus, it is expected bansos capable of functioning stabilization of the price of grain at the farmer level.

Performance granary has positive influence on food self-sufficiency of farm households in the MT-II. Food self-sufficiency of farm households also positively influenced by land area and the price of rice, and negatively by the number

of family burden, either when the MT-I and MT-II. The level of formal education of farmers have a positive impact on food self-sufficiency of farm households in the MT-I. Thus, the performance of granary expected to influence the improvement of food self sufficiency of farm households during the harvest season low/shortage.

Important factors that relate directly to the granary organization and affect the increase in the price of rice grain is granary stocks, social grants, and overall -granary performance. Therefore, follow rationally and realistically done is increase in the granary stocks, either through increased activity delay selling system, increasing the number of deposits (main/voluntary), and others, according to the ability of each group granary. The provision of bansos from the government, has a positive effect (although still relatively small) to stabilize grain prices at the farm level, so that the program needs to be expanded location. The provision of bansos properly targeted, according to the granary performance. Strengthening performance of granary is also important to follow up, especially in the context of strengthening the bargaining position of farmers, increasing farm income and household food self-sufficiency.

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DISCUSSION FROM PARALLEL SESSION

PAPER TITTLE	Granary Group Performance Impact to The Rice Price and Food Self-Sufficiency on The Farm Household
AUTHOR	Sri Mardiyati, Jamhari, Jangkung Handoyo Mulyo, Dwidjono Hadi Darwanto
DISCUSSION	
QUESTION	- Use instrumental variable. Granary farming is indigenous variety or not?
ANSWER	
SUGGESTION	- Need to revise the model - I suggest to use IV models - The presentation is good so the written is enough - That is the good for the proceeding international and also it is a little suggestion - The method is very complex - There is no comparison between group and non group forward - Granary farming = effect to price - The sample is hard to remember and spend many time for research

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