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How to Ease the Burden of Poor Household ? : The Role of Raskin Program

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How to ease the burden of poor household ? : The Role of Raskin Program

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Abstract

The aims of this study is to investigate whether Raskin program can ease the burden of rice expenditure of poor household. The investigation are based on expenditure analysis. This research uses the *National Socio-Economic Survey (Susenas)* data on households with 15,852 observations. Regression in all region indicates that Raskin program are significant to ease the burden of rice expenditure but the effect is relatively small. In the regions where the percentage Raskin was lower than rice expenditure, Raskin expenditure can ease the burden of rice expenditure but the efeect is very small so we did not found significant evidence. Nevertheless in the province of Maluku, Papua and Papua barat, where the percentage Raskin was higher than the rice expenditure, the role of Raskin actually increase rice spending. However, the effect is relatively small so that there the effect is not significant. In addition, the Raskin program also consequently causes the households' total expenditures to increase. One of such causes is increased expenditures for foodstuffs containing meat and non-meat, and fruits.

JEL Classifications: H30, H53, H55

Keywords: raskin program, in-kind transfer, household, consumption

1. Introduction

Indonesia is the country with high rice consumption in the world. 95percent of the population consume rice as their main staple food with the rice consumption of 113.7 kg/capita/year on average (BPS, 2011). This consumption level is much higher than the world's average consumption level of only 60 kg/capita/year. This indicates that rice has become the national very strategic commodity.

Rice for the poor program (*Raskin*) is the policy of providing food subsidy in the form of sale of rice to the targeted households (RTS) at a price affordable to low-income community members. The birth of the rice subsidy program for poor community members (*Raskin*) in Indonesia is inseparable from the monetary and food crisis hitting the nation in 1997-1998. This crisis caused increased difficulty for poor households in meeting their needs for staple foods, especially rice. Through the *Raskin* program, the government provides access to food, physically or economically to poor households. At the price lower than the market price, poor households enjoy over 70 percent rice subsidy. This program is expected to fulfill 39.5 percent of poor households' needs for rice.

Most of the poor households' expenditures are spent for food consumption. This is reflected from the role of food commodity to the Poverty Line which is better than the role of non-food commodities (housing, clothing, education and health). The contribution of poor food to the Poverty Line is around 73 percent. The food commodities that have significant influence on the value of poverty line are among

others rice, cigarettes, broiler chicken eggs, instant noodle, cane sugar, *tempe* (soybean cake) and shallot. Among those commodities, rice is the foodstuffs most purchased by households. BPS records around 29 percent of the expenditures for food are allocated to buy rice.

Thus far, the studies carried out related to the *Raskin* program still concentrate on evaluation of the *raskin* related to its implementation process (Hastuti, et al, 2012; North Sumatra Provincial BPP, 2011; Unggul et al, Panjaya, 2011; Bafita and Sujianto, 2013). These studies generally found a number of weaknesses in the program organization, ranging from inaccurate beneficiaries, selling price beyond the provision, inaccurate total rice for poor households, poor rice quality, complicated administration to inaccurate distribution.

In particular, as incorporated in the General Guidelines on *Raskin*, the purpose of *Raskin* is to ease the expenditures of the targeted households (the poor) through fulfillment of some of their needs for rice. The weaknesses of the program organization cause fear of failure to reach the expected program purpose. To this day there have yet been studies undertaken to analyze the influence of *Raskin* on the expenditures of poor households. Sasongko (2009) conducted a study to see the causal relation between the *Raskin* program and households' consumption. However, this study has yet to examine whether the *Raskin* has or not successfully eased the households' burden.

The study has the purpose to examine the achievement of the objective of the *Raskin* program through the benefits earned by households from the program. In particular, the questions to be addressed in this research are:

1. Is the *Raskin* program able to ease the expenditures of households for rice? Lots of studies that report non-optimum organization of the *Raskin* program in several regions leave us to predict that the *Raskin* program can lower the need for rice, despite its relatively insignificant impact.

2. Compared to the impact of income, which aid can ease the households' expenditures for rice, the *Raskin* aid or the aid that has the nature to augment income (cash transfer)? Income has the flexibility to be allocated to meet all kinds of households' needs, while the *Raskin* aid is in particular intended to meet the need for rice. Therefore, our hypothesis is that the *Raskin* can better ease the poor households' expenditures than the policies that augment incomes.

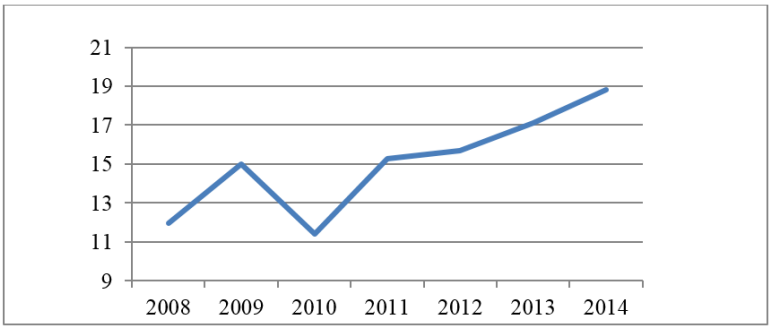
3. What is the impact of *Raskin* to the households' total expenditures? As it has the nature of special, small and limited in amount, we predict the impact of *raskin* to the households' total expenditures is low.

The study covers all provinces in Indonesia using the *susenas* data 2010. This writing consists of several parts namely research questions, literature studies related to evaluation on the *Raskin* program, research methodology, result and conclusion.

2. Rice for the Poor (*Raskin*) Program

The program of Rice Subsidy for Low-income Community Members (*Raskin*) is a food subsidy intended for poor and vulnerable households as an effort by the government to enhance food resilience and provide social protection to poor and vulnerable households. The *Raskin* Program is a Program for Eradicating Poverty that is included in Cluster 1 of the Social Protection Program.

The *Raskin* Program has the purpose to ease the expenditures of the Targeted Households (RTS) through fulfillment of parts of their need for staple food in the form of rice and prevent decrease of energy consumption. Through the *Raskin* program, the government provides aid in the form of rice to poor households. The channeled *Raskin* is not free of charge. The *Raskin* must still be bought but at low price.



Source: The Coordinating Ministry for People's Welfare.

Figure 1: Budget Allocation for the Rice for the Poor Program 2008 - 2014

The Raskin program provides rice aid in the amount of 15 kg/month to poor households. Rice is sold at low price (below the market price) namely Rp 1,600/kg.

Table 1: Budget for the Program of Social Protection Acceleration & Expansion (P4S) and Special Compensation Program Year 2013

Type of Aid	Jumlah (Trilyun)
Cash Transfer	27,324
BSM	12,076
BLSM	11,648
PKH	3,6
In-kind Transfer	27,497
Raskin	21,497
P4-IP	2
P4-SPAM	2
P4-ISDA	2
Total	54,821

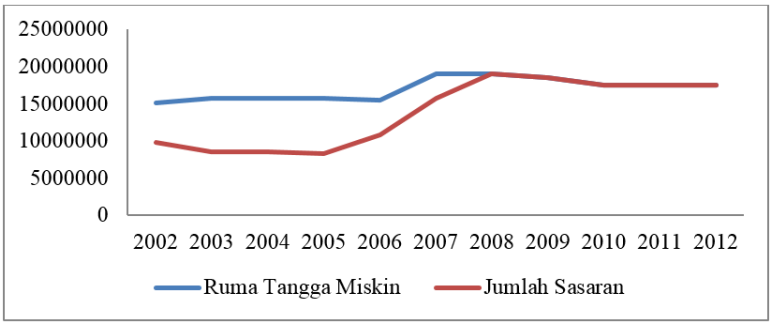
Source: Handbook on Dissemination and Implementation of Compensation Program, the policy for adjusting the subsidy of fuel oil 2013, processed

The *Raskin* budget is one of the components in the budget of Social Protection Acceleration & Expansion Program (P4S) and the Special Compensation Program which in year 2013 is allocated at 54.821 trillion. 89 percent of the total budget is household-based social aid such as the *Raskin*, Aid for Poor Students (BSM), Family of Hope Program (PKH), and Public Health Security (Jamkesmas). Only Rp 6 trilyun are distributed for 3 infrastructure program that is Accelaration and Expansion of housing infrastructure program (P4-IP), Accelaration and Expansion of water resources infrastructure program (P4-ISDA), Accelaration and Expansion of social security program (P4-IP) and Accelaration and Expansion of water supply system program (P4-ISDA).

In channeling the aids, the government apparently prefers non-cash form (in-kind). Table 1 indicates that compared to other social aid programs, non-cash aids (in-kind) in the form of *Raskin* program has the largest allocation namely 21.497 trillion or over 39 percent of the total budget.

The allocation of the budget for *Raskin* continues to increase from year to year. Figure 1 indicates that the budget for Raskin in year 2014 reaches almost 19 trillion which means an increase by 1.6 times from the budget for year 2008. On average, the budget for the *Raskin* program per year is over 15 trillion or around 1 percent of the government's averaged expenditures.

By virtue of Law No. 23 Year 2013 regarding State Budget and Expenditures Fiscal Year 2014, the fund for *Raskin* year 2014 is taken from the central government budget and regional budget. The central government budget



Source: The Coordinating Ministry for People's Welfare

Figure 2: Total poor households and targeted households

is used for procurement and distribution of rice up to distribution points, while regional budget is used to distribute *Raskin* from distribution points to the targeted households (poor households).

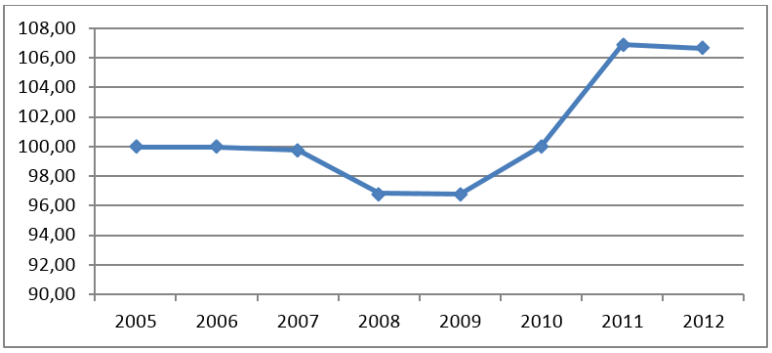
The budget provided by the region is utilized to finance the operational cost, *Raskin* transportation cost from Distribution point to allocation point up to RTS-PM, subsidy for the *Raskin* redemption price, *Raskin* bridging fund, additional allocation for *Raskin* to RTS-PM outside the stipulated ceiling or additional allocation for *Raskin* for RTS-PM in the stipulated ceiling.

The beneficiaries of the *Raskin* program continue to increase each year. The Government endeavors that all poor households can be the targeted households in the program. Figure 2 indicates that in the period of 2002 - 2007 the government could not subsidy all poor households. During the period the total number of households that were the targets in the *Raskin* program was lower than the poor households. In 2002, only 52.56 percent of poor households were the targeted households. Since year 2008 all poor households were the targets in the program. This means that the government has been able to subsidy all poor households.

Determination of the targeted households for the program is sometimes difficult to do. Even though the government has targeted the total of targeted households, the mechanism to determine in the field is often not congruent. Determination of poor households in the field is performed through deliberation process at village and sub district levels. The decision in the deliberation sometimes overestimates or underestimates the total number of *Raskin* beneficiaries. Figure 3 shows realized *Raskin* distribution during the period of 2005-2012. The realization is seen sometimes lower (underestimate) or higher (overestimate) than the stipulated ceiling. During the period of 2007 up to 2010 the realized *raskin* slightly decreased namely around 2 percent. However, in years 2011 and 2012 the *raskin* realization exceeded the stipulated ceiling.

3. In-kind Transfer and their effect on household expenditure

The aid from the government to poor households can be in the form of cash aid or non cash (in-kind). In-kind transfer can be in the form of food, health, housing, health services and so forth. In-kind transfer plays an important role in the policy on poverty. First, the policy of in-kind transfer plays an important role in the distributive policy. The Government can ensure that the subsidized goods or services can be immediately consumed by poor households. Second, the policy of in-kind transfer can reduce or avoid occurrence of welfare fraud. It is often found people pretending to be poor in order to benefit from the aid. By providing goods that



Source: The Coordinating Ministry for People's Welfare

Figure 3: Percentage of realized *raskin* to the *raskin* ceiling

are the main need for poor households and disliked by well-off households, inaccuracy in the determination of targets for distribution can be avoided.

Third, the government can control the poor households' expenditures pattern. Poor households can buy goods that they really need not other (luxury) goods. Fourth, the government can control inflation. Giving out money can increase demand for goods and encourage inflation. Fifth, the policy of in-kind transfer would not only help poor households but also the producers of the transferred commodity. The *Raskin* Program can boost demand for rice and benefit rice producers.

What is the impact of policy of in-kind transfer on households' expenditures? The following is the explanation. Suppose that a household with income, I, consumes 2 kinds of goods namely rice (R) and other goods (L). The rice price is PB and the price of other goods is P_L. The utility function of the household becomes: U(R,L). The function of the household's budget: $I_o = R.PR + L.PL$. The budget line of the household is AF.

The rice aid to households is illustrated as shift of budget curve to the distance of AB. If the aid is given free of charge to poor households the budget curve faced is ABE. The total rice that can be bought is maximum until point D.

However, if the price of rice aid is lower than the market price such as in the Raskin program, the budget curve faced by households is ABD. The total rice that can be bought is maximum until point E. The ABC triangle area is the consumption area that is obtained not under the policy of in-kind transfer. Change in households' consumption occurs because lower prices have substitution and income effects. If the substitution effect is higher than the income effect, the rice consumption increases compared to other goods, causing the utility of poor households increases from U_1 to U_o. The total rice consumed increases from R_o to R_1.

There are no as yet studies carried out in Indonesia analyzing the extent of impact of the in-kind transfer policy on the consumption of poor households in Indonesia. Similar studies have been carried out by many in the US related to the program of in-kind transfer from the government such as food aids (food stamp), housing, health et cetera. As predicted in the theory, the in-kind transfer policy has the impact to lower households' expenditures related to subsidized goods and increase the households' expenditures as a whole. Study by Hoynes and Schanzenbach (2009) establishes that food stamp from the government causes a decrease in the households' expenditures while the total expenditures for food increase. Ninno and Dorosh (2002) compared the impact of in-kind transfer and cash transfer. The result of

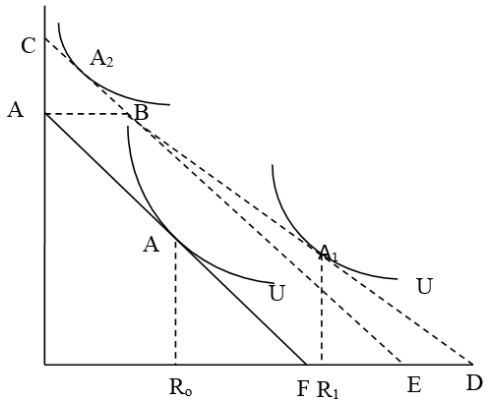


Figure 4: Households' rice Consumption

study indicates that the impact of wheat transfer on increased consumption of wheat is higher than the impact of cash transfer (income).

Study by Slesnick (1996) explains that the policy of in-kind transfer significantly help poor households. However, the capacity of the said policy depends on the accuracy of the targeted households and how they assess the aid. Large in-kind transfer to poor households in the form of food, housing, and consumer services is an effective means to help out poor households.

4. Method

The data used is the *susenas* data 2010 consisting of 15,852 households receiving *raskin*. As the *Raskin* program is the program intended for poor households, all households receiving *raskin* should be poor households. However, several studies prove that in several cases there are oftentimes leaks in the *Raskin* distribution. Therefore, identification process is needed to ascertain whether all *Raskin* beneficiaries are poor households. We use the poverty line to determine whether a household receiving Raskin is poor or not. The households receiving *Raskin* which incomes (estimated from the total expenditures) per capita is under the poverty line is categorized as poor households and become the samples to be analyzed. The data used in this study is the *susenas* data year 2010.

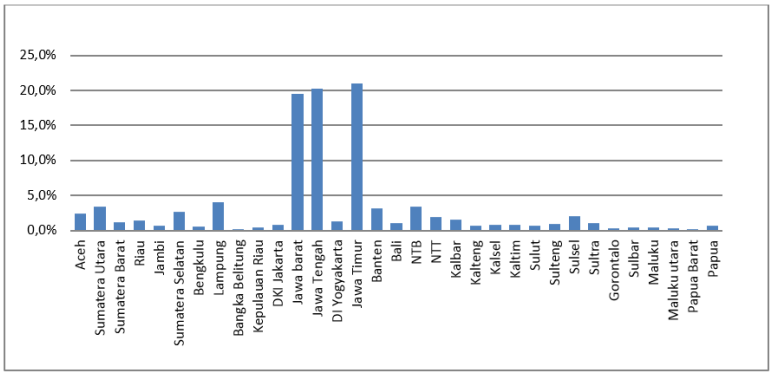
The empirical model used is as follows:

$$\ln R = a_o + a_1 \ln I + a_3 \ln Raskin + a_4 X + D + e_i \quad (1)$$

$$\ln Exp_i = b_o + b_1 \ln Raskin + b_3 X + D + e_i \quad (2)$$

Equation 5.1 is the model on the households' expenditures for rice. Variable ln R is the natural logarithm of rice expenditures. Variable ln R reflects the amount of the households' expenditures for rice in the last one week (in rupiah). In I is the natural logarithm of income. Income is estimated from the total expenditures after expenditures for *raskin*. Variable lnRaskin is the natural logarithm of *raskin* expenditures. Raskin expenditure is calculated by multiplying the total *raskin* bought at the *raskin* selling price. Equation 5.2 is the model of households' expenditures. Variable ln EXP is the natural logarithm of the type of households' expenditures. i denotes the type of food expenditures.

X Variable is the control variable that describes the household's characteristics namely sex, age, classification of residential area (urban or rural), total number of household members, education, and credit program from the government. D is the dummy variable for the region. Dummy variables are divided into 4 namely Java, Sumatera, Kalimantan, and Sulawesi. a_1 is the elasticity of demand for rice to the income. If income augmentation causes an increase to rice expenditures, the rice is clas-



Source: Susenas 2010, processed

Figure 5: Distribution of Raskin Beneficiaries in Indonesia, 2010

sified as a normal commodity. Whereas, if it is negative, the rice is categorized as inferior goods.

5. Result

a. Who is the beneficiaries?
The majority of Raskin beneficiaries are male (84.2 percent) and generally live in rural areas (68.8 percent). The education level of most *Raskin* beneficiaries (83 percent) is relatively low. They generally attended primary education (primary/secondary). These households have 4 up to 5 members on average. The poor households receiving *Raskin* generally do not receive business credit from the government or other agencies, and only 11 percent of which receives business credit.

Table 2 indicates that there are still households categorized poor out of 31 million Raskin beneficiaries based on the poverty line in provinces. 3.4 million (11 percent) are classified as poor households, and the remaining 89 percent are not poor households. The proportion of poor households can still change depending on the criteria of poverty used. The more the number and the stricter the poverty criteria the less the number of households categorized as poor. This means that the potency of not poor households to enter the category of poor is higher.

Distribution of the *Raskin* beneficiaries are concentrated in Java island especially in regions where the total poor population is high namely in East Java Province, Central java and West Java. The percentage of *Raskin* beneficiaries in East Java reaches 29 percent, Central Java 20.2 percent and West Java 19.5 percent. Raskin beneficiaries in east province such as Kalimantan, Sulawesi, Maluku and Papua are very low that is less than 1 percent.

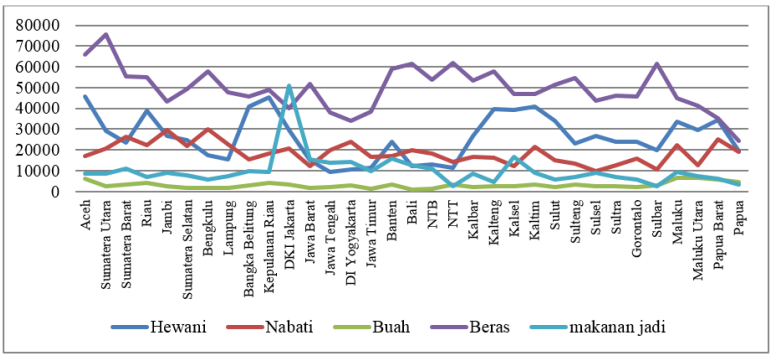
b. The pattern of poor household expenditure
Figure 5 shows that the rice is still a major food consumption of poor households. Data show that 46 percent of food expenditure allocated to buy rice. Expenditure of rice in the province of North Sumatra highest compared across provinces. However specialized in Jakarta food expenditure much higher than the expenditure of rice. Whereas in other areas so food expenditure is relatively low.

In general, the average expenditure of food containing animal protein by 24 percent. Consumption of fish, meat, eggs and milk in Bangka Belitung, Riau Islands and Province in Kalimantan and the relatively

Table 2: Total Raskin Beneficiaries

Beneficiaries	Amount	percent
Poor	3.412.759	11
Non Poor	27.672.968	89
Total	31.085.726	100

Source: Susenas 2010, processed



Source: Susenas, processed

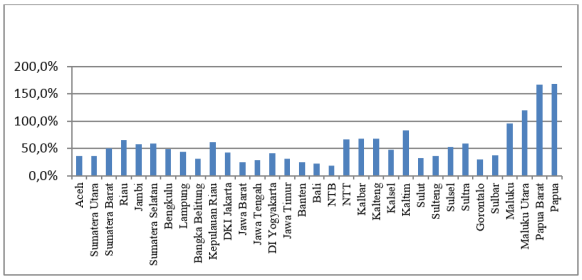
Figure 6: Composition of poor household food expenditure

high compared to other regions. As for expenditure of vegetable and fruits are relatively low in all regions with an average of 17 percent and 3 percent of total food expenditure

Rice consumption of poor households varies between regions. This is shown by the difference between the amount of expenditures rice area. The average expenditure of poor households rice Raskin recipients of Rp 50 thousand per month. rice Expenditure in North Sumatra province is high that is more than USD 75,000 a month. While the expenditure of rice in the province of Maluku, North Maluku, Papua and Papua barat are low.

Raskin average expenditure varies between regions and generally far below the needs of rice needs. Raskin expenditure in Java is relatively lower than other provinces. Raskin expenditure in Java just less than USD 14,000. While on the island of Sumatra, Nusa Tenggara, Kalimantan are relatively high that is more than USD 35,000. Raskin expenditure is highest in the Maluku and Papua, the average of it reached Rp 46,000. Figure 6 shows that Raskin role in meeting the needs household is still relatively low. In most areas Raskin meet 36.5 percent of household need. In some areas reached more than 66 percent (Riau, South Sumatra, Riau, East Nusa Tenggara, West Kalimantan, Central Kalimantan, East Kalimantan). In the eastern region, Maluku Province, Raskin can fulfill more than 90 percent of household need. However, there are irregularities in the province of Maluku Utara, Papua and Papua Barat. The number of Raskin beneficiaries are relatively low (less than 1 percent) but Raskin expenditure are higher than their rice expenditure. percentage of Raskin Expenditure to rice expenditure are 153 percent.

According to the Raskin program, ev-



Source: Susenas, processed

Figure 7: Percentage of total expenditure Expenditure Raskin rice for poor households

ery household gets Raskin as much as 15 kg per household at Rp 1600 per kg. It means that the Raskin expenditure amount are only 24,000 per household. However Raskin expenditure generally exceed that number. The reasons are, first, the average Raskin purchased by poor households exceeds the defined terms. There are more than 90 percent of the area where Raskin sold more than 15 kg per household. Second, the selling price of Raskin in most areas is higher than Rp 1600. There are 33 percent area that sell Raskin above USD 1600 per kg and more than 63 percent sold Raskin are less than regulatory price.

c. The effect of *Raskin* and Income to expenditures for rice
The result of estimation indicates significant evidence on the existence of influence of *Raskin* on rice expenditures. The *Raskin* Program is effective in reducing the rice expenditures of poor households. Households substitute their rice with cheaper poor rice. Hence the money they spent (out of pocket) for rice lessens. Table 4 indicates that increase in raskin expenditure by 1 percent will lower the expenditures for rice by 0.026 percent. If the regional characteristic is included, the expenditure for rice will lower even higher namely by 0.03 percent.

Table 4 shows that increased income has significant impact on increased expenditure for rice. In this case rice is a normal commodity. Every increase of income by 1 percent causes 0.67 percent increase in the poor households' expenditure for rice. However, the influence of income to expenditure for rice decreases if the model introduces the influence of regional characteristics. The elasticity value of rice of below 1 percent indicates that the rice is normal commodity and is the main commodity consumed by poor households.

Comparing the influence of expenditures for *Raskin* and income on the expenditures for rice is similar to comparing the influence of aids in the form of non cash transfer (in-kind) and cash transfer. Granting of cash transfer causes an increase to the household income. The Household buys rice at the market price hence the burden of rice expenditures increases. Unlike in-kind transfer namely poor rice where the burden of rice expenditures decreases because the household buys it at the subsidy price (lower than the market price).

By including the regional characteristic into the model, it is found that rice expenditures in Java, Sumatera and Sulawesi islands are relatively higher than in other regions. The influence of regional characteristic on rice expenditures is consistently significant in the three models, except for sex, and age which are not significantly

Table 3: Result of estimation using the model of households' rice expenditures

Variabel	Model 1	Model 2	Model 3	Model 4
Income	0,673**	0,647**	0,709**	0,249**
Raskin expenditure	-0,026**	-0,031**	-0,0009	0,034
Gender	-0,017	-0,011	-0,0135	0,008
City	-0,121**	-0,118**	-0,130**	-0,054
Age	0	0	-0,000	0,0045**
Basic education	0,040**	0,033**	0,008	0,12**
Number of family member	0,076**	0,081**	0,071**	0,11**
Credit Loan	-0,069**	-0,062**	-0,047**	0,058
Regional				
Jawa		0,052**		
Sumatera		0,130**		
Kalimantan		-0,080**		
Sulawesi		0,081**		
Constant	1,340**	1,658**	0,684**	
R squared	0,4906	0,4954	0,517	0,27
observation	15.852	15.852	1463	1216

Model 1: all
Model 2: all
Model 3: w/o Maluku dan Papua
Model 4: khusus Maluku dan Papua
** alpha significance: 5 percent.
Source: Susenas, processed

influenced. The households living in rural areas are relatively higher in term of their rice expenditures as compared to those living in urban areas. Meanwhile, male heads of households have lower expenditure for rice as compared to female heads. The rice consumption of households with high education level is relatively lower compared to those with lower education. The more the total members of a household the higher their rice consumption. Age is not proven to have significant influence, except in model 2. However, the influence is very insignificant as evident from its marginal effect.

In regions where the percentage Raskin was lower than rice expenditure, Raskin role is very small so we didnt found significant evidence that Raskin can ease the burden on poor households (model 3). Significant variables and the large role increasing rice expenditure is revenue. Household characteristics are significant regional classification, number of household members and credit assistance. Households who live in the city of rice expenditure lower than living in the village. The influence of age is directly proportional to the expenditure of rice. while the effect of credit assistance actually reduce consumption of rice

d. The effect of Raskin on the expenditures of poor households
The result of estimation in Table 5 column 2 indicates that the Raskin program has positive and significant influence on the expenditures of households including the total expenditures. However the influence is relatively low. If the expenditure for Raskin increases by 1 percent, the house-

hold's total expenditure increases by 0,028 percent, ceteris paribus. Why does the total expenditure only slightly increase? One of the reasons is because the impact of Raskin on expenditures for food is relatively low (column 3). 1 percent increase in the expenditures for Raskin will only increase the expenditures for food by 0.047 percent, ceteris paribus.

For poor households, when the expenditures (consumption) for Raskin increase the most important is to increase the consumption for foodstuffs that contain animal proteins (fish, meat, eggs and milk) and fruits rather than the stuffs that contains plant proteins (vegetables and leguminous plants). Columns 4 and 6 shows that every increase by 1 percent in the rice expenditures, the expenditures for fish, meat, eggs and milk will increase by 0.238 percent and the expenditures for fruits by 0.159 percent, ceteris paribus. This indicates that rice and foodstuffs that contain animal proteins are complementary. Consuming both will give high utility for poor households. The same holds true for the relation between rice and fruits.

Table 4 column 5 shows that consumption of *Raskin* has negative relation to consumption of vegetables and leguminous plants. If the expenditures for raskin increase by 1 percent, the consumption of vegetables and leguminous plants will decrease by 0.06 percent, ceteris paribus. However, the portion of declining consumption is relatively small. It can be said that for poor households, vegetables and leguminous plants are still the main foodstuff accompanying rice.

Sex has significant and positive influence on the total expenditures and expenditures for food and expenditures for non-meat foods. Meanwhile there is sufficient evidence of the influence of residential area on the expenditures. The households that live in urban areas have higher total expenditures. However, the portion of expenditures of poor households in urban areas for food is relatively lower than in rural areas. The influence of the region is not evident on the expenditures for meat and non-meat food and fruits.

The influence of age is proven to be positively significant on all types of expenditures. The older the age of the household's head the lower his expenditures, except the expenditures for fruits that increasingly increase but in a very small amount (close to zero). The influence of credit aid is only significant in the household's total expenditures. The education level also has significant and positive influence on the total expenditures and expenditures for food. The total number of the household's members is also the variable that plays an important role in increasing the household's expenditures including the expenditures for food, meat and non-meat foodstuffs, except fruits.

6. Conlusion

The estimation results support the theory that government aid can improve the welfare of poor households. However, the magnitude of the marginal welfare is strongly influenced by their expenditure pattern. The influence of *Raskin* to the consumption of poor households can be directly observed through the buying pattern on rice and indirectly through the buying pattern on other foodstuffs related to rice. The *Raskin* Program is proven to significantly ease the poor households' expenditures for rice. Meanwhile, the provision of cash aid which has an impact on increased income will instead increase the expenditures for *raskin* rice.

The *raskin* Program causes the total expenditures of households increased. The increase mainly stems from consumption of goods that are complementary in nature to rice namely ex-

Table 4: Result of Estimation using the model of households' expenditures

Independent Variable	Dependent variable				
	Total Expenditure	Food Expenditure	Animal Protein Expenditure	Plant Protein Expenditure	Fruits Expenditure
Raskin expenditure	0,028**	0,047**	0,238**	-0,060**	0,159**
Gender	0,065**	0,077**	-0,122**	0,025	-0,029
City	0,032**	-0,023**	0,014	0,019	-0,036
Age	-0,002**	-0,003**	-0,006**	0,003**	-0,000
Basic Education	0,041**	0,031**	0,021	0,020	-0,015
Number of family member	0,194**	0,197**	0,230**	0,127**	0,118**
Credit Loan	0,015**	0,000	-0,023	0,057	0,061
Constant	12,382**	10,333**	6,402**	9,373**	6,270**

** alpha significance: 5 percent.

penditures for foods that contain animal proteins such as fish, meat, eggs and milk and expenditures for fruits. The influence of *Raskin* program on the expenditures for foods that contain plant proteins (vegetable and leguminous plants) is instead negative. However, the amount of decrease in the expenditure is relatively low (0.06) hence we can still say that non-meat foodstuffs are still complementary to the rice.

In regions where the percentage Raskin was lower than rice expenditure, Raskin role is very small so we didnt found significant evidence that Raskin can ease the burden on poor households (model 3). Significant variables and the large role increasing rice expenditure is revenue. In regions where the percentage Raskin was higher than the expenditure of rice (model 4), the role Raskin rice actually increase spending. However, the effect is relatively small so that there is no significant evidence Raskin expenditure rice can reduce spending. in the province of Maluku, Papua and Papua barat is precisely the role of income is very low compared with other regions.

7. References

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Appendix

Regression Model 1

Linear regression — Number of obs = 15852; F(8, 15843) = 1213.79; Prob > F = 0.0000; R-squared = 0.4906; Root MSE = .43161

lnpengeluaran_beras	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
lnPendapatan_woRaskin	.6725867	.0201065	33.45	0.000	.6331758	.7119977
lnPengeluaran_raskin	-.0256285	.006326	-4.05	0.000	-.0380281	-.0132289
gender	-.0165572	.0128918	-1.28	0.199	-.0418267	.0087122
kota	-.1205888	.0111576	-10.81	0.000	-.142459	-.0987186
umur	.000444	.0003321	1.34	0.181	-.000207	.001095
pendidikan_dasar	.0396777	.0118946	3.34	0.001	.0163629	.0629926
jart	.0761751	.0045052	16.91	0.000	.0673444	.0850058
bantuan_kredit	-.0690737	.0153459	-4.50	0.000	-.0991534	-.0389941
_cons	1.339628	.2600573	5.15	0.000	.8298858	1.84937

Regression Model 2

Linear regression — Number of obs = 15852; F(12, 15839) = 826.34; Prob > F = 0.0000; R-squared = 0.4954; Root MSE = .42963

lnpengeluaran_beras	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
lnPendapatan_woRaskin	.6471135	.0212034	30.52	0.000	.6055525	.6886745
lnPengeluaran_raskin	-.0310462	.0079364	-3.91	0.000	-.0466025	-.0154899
gender	-.0107345	.0129391	-0.83	0.407	-.0360966	.0146275
kota	-.117969	.0112907	-10.45	0.000	-.1401	-.0958379
umur	.0003252	.0003372	0.96	0.335	-.0003358	.0009862
pendidikan_dasar	.0329295	.0118917	2.77	0.006	.0096205	.0562386
jart	.0812359	.0047336	17.16	0.000	.0719574	.0905143
bantuan_kredit	-.0616739	.0153771	-4.01	0.000	-.0918148	-.0315331
Jawa	.0521431	.0167938	3.10	0.002	.0192253	.0850608
sumatera	.1303663	.0159348	8.18	0.000	.0991323	.1616003
kalimantan	-.0801177	.0247097	-3.24	0.001	-.1285516	-.0316838
sulawesi	.0813923	.0183193	4.44	0.000	.0454843	.1173002
_cons	1.657708	.2799758	5.92	0.000	1.108923	2.206492

Regression Model 3

Linear regression — Number of obs = 14636; F(8, 14627) = 1232.72; Prob > F = 0.0000; R-squared = 0.5178; Root MSE = .41683

lnpengeluaran_beras	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
lnPendapatan_woRaskin	.709951	.0207355	34.24	0.000	.6693068	.7505953
lnPengeluaran_raskin	-.0009646	.0065447	-0.15	0.883	-.013793	.0118638
gender	-.0135527	.013043	-1.04	0.299	-.0391187	.0120132
kota	-.1308543	.0112518	-11.63	0.000	-.1529092	-.1087994
umur	-.0000314	.0003372	-0.09	0.926	-.0006923	.0006294
pendidikan_dasar	.0085567	.0121863	0.70	0.483	-.0153299	.0324433
jart	.0710097	.0046572	15.25	0.000	.0618811	.0801383
bantuan_kredit	-.0475325	.0159126	-2.99	0.003	-.0787232	-.0163417
_cons	.6846722	.2691326	2.54	0.011	.1571382	1.212206

Regression Model 4

Linear regression — Number of obs = 1216; F(8, 1207) = 45.55; Prob > F = 0.0000; R-squared = 0.2785; Root MSE = .55583

lnpengeluaran_beras	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
lnPendapatan_woRaskin	.2498177	.0633353	3.94	0.000	.1255583	.3740772
lnPengeluaran_raskin	.0347436	.0265796	1.31	0.191	-.0174038	.086891
gender	.0083182	.0751985	0.11	0.912	-.1392161	.1558526
kota	-.0543389	.0738697	-0.74	0.462	-.1992661	.0905884
umur	.0045236	.0018196	2.49	0.013	.0009537	.0080935
pendidikan_dasar	.1205947	.0473814	2.55	0.011	.0276356	.2135537
jart	.1103782	.0143181	7.71	0.000	.0822871	.1384693
bantuan_kredit	.0584378	.0525592	1.11	0.266	-.0446797	.1615552
_cons	5.51525	.8787154	6.28	0.000	3.791271	7.239229