

IMPROVING FOOD ACCESS FOR POOR HOUSEHOLDS IN INDONESIA: CASH TRANSFERS AND THE RASKIN PROGRAM REFORM



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ACRONYMS

BAPPENAS	Ministry of National Development Planning
BLSM	<i>Bantuan Langsung Sementara Masyarakat</i> (Unconditional Cash Transfer Program)
BPR	Business Process Review
Bulog	<i>Badan Urusan Logistik</i> (National Logistics Agency)
GOI	Government of Indonesia
Kemenkoskera	Coordinating Ministry of Social Welfare
KKS	<i>Kartu Keluarga Sejahtera</i> (Family Welfare Card)
KPK	State Audit Agency
KPPU	Business Competition Supervisory Commission
KPS	<i>Kartu Perlindungan Sosial</i> (Social Assistance Card)
MOE	Ministry of Economy
OPK	<i>Operasi Pasar Khusus</i> (special market operations for rice)
MOF	Ministry of Finance
PKH	<i>Program Keluarga Harapan</i> (Conditional Cash Transfer Program)
Raskin	<i>Beras untuk Rakyat Miskin</i> (subsidized rice for the poor program)
RTS-PM	Targeted Households Beneficiaries
SOE	Ministry of State-Owned Enterprises
SUSENAS	<i>Survei Sosio-Ekonomi Nasional</i> (National Socio-Economic Survey)
TNP2K	National Team for the Acceleration of Poverty Reduction
UNCSD	United Nations Conference in Sustainable Development Program

EXECUTIVE SUMMARY

Although Indonesia has more than enough resources to ensure food availability for all its population, many Indonesians still do not have enough to eat, ranking 73th out of 109 countries in food affordability. Moreover, the current government program to guarantee food access for the poor (Raskin, Rice for the Poor) is costly and low effective. Raskin represents 53 percent of all household-targeted social assistance spending (2.15 billion USD in 2013) and is quite poorly targeted so that the benefits which accrue to the poor are minimal (17% of the total costs) and most of the subsidy goes into the National Logistics Agency (Bulog) operating costs¹.

Policy Recommendations

1. **Replace in-kind transfers (Raskin) for cash transfers. Reducing costs and improving effectiveness.** Cash transfers have a greater impact on beneficiaries' diet diversity, lower administrative and operational costs, and prevent discretionary misallocation of benefits. Being politically feasible and strongly supported by the central government it would be effortlessly implemented by using the current system of the unconditional cash transfers program currently distributed in Indonesia.
2. **Review, redesign, and keep Raskin in highly food insecure and remote areas: Improving effectiveness.** Raskin in-kind transfers are better fitted for remote areas where food supply is scarce, markets are not well developed and distribution costs are high. Narrowing in-kind transfers to food insecure regions would diminish logistics costs. Moreover, improvements in oversight and evaluation could avoid misallocation of rice, low quality, and price manipulations, increasing the program's cost-effectiveness.

An implementation strategy for each of these recommendations is also provided. Some of the steps required to be followed are: i) assessment of market conditions; ii) improve the targeting mechanism; iii) estimate the cash transfer amount; iv) evaluate distribution systems; and, v) implement a Business Process Review (BPR), among others.

It is in the interest of the Government of Indonesia (GOI) to move from a very costly and low effective in-kind transfers program to one that will bring significant savings for the government budget while the poor will get the full amount of the intended benefit.

¹ (The World Bank, BLT Temporary Unconditional Cash Transfer Social Assistance Program and Public Expenditure Review 2, 2012)

1. INTRODUCTION

To achieve Indonesia's food security, food should be available, accessible, and properly utilized by people at all times. On this regard, Indonesia's main challenge is not to produce enough food for the whole country population but rather to provide the poor with economic access to the available food.

Food security in Indonesia depends strongly on rice as it is the most important commodity for Indonesian households, particularly for the poorest who spend about a quarter of their average monthly expenditures in purchasing rice². Based on this, the GOI currently implements the Raskin program, to ensure continued access among the poor to affordable rice, the basic staple food for the majority of Indonesians. Raskin is one of the few programs with national scope, getting to around 80% of the targeted households.

Raskin, which aims to provide food security to poor households, is the largest social assistance program in Indonesia, representing almost 53 percent of all targeted social assistance expenditures³. However, several studies have pointed out that this program has some weaknesses. In practice, eligible households receive only one-third (~5 kg) of the amount of rice they are eligible to receive (~15 kg) and at a cost that is 25 percent higher (2,000 Rupiah) than their entitled subsidy (1,600 Rupiah). Regarding leakages, nearly 70 percent of households that purchase subsidized rice are non-poor. Although it should be mentioned this is due to village and community decisions.

Given the importance of rice for poor Indonesian households, and the costs and ineffectiveness of the Raskin program, there is an increasing pressure for the government to improve the efficiency of the current policy or implement better designed mechanisms for Indonesia's context. Efforts to improve the Raskin program are under way, mainly led by the Vice President's National Team for the Acceleration of Poverty Reduction (TNP2K), the State Ministry of National Development Planning (BAPPENAS) and the World Bank. Given that the government is opening an opportunity to make a huge impact on Indonesia's food security policy and willing to contribute to this journey, this document presents an analysis of different feasible policy alternatives that could improve food access for the poor in Indonesia.

Based on the literature review, there seem to be three major policy interventions. The first interventions influence food availability through changes in domestic production, production subsidies, imports, or exports. The second intervention is reducing prices to consumers (some or all)

² (Timmer P. , 2004)

³ (The World Bank, Raskin Subsidized Rice Delivery. Social Assistance Program and Public Expenditure Review 3, 2012)

without altering prices to producer (i.e. consumption subsidies). Third, increasing income by different means other than reducing prices, e.g. cash and in-kind transfers.

Particularly for the third category of interventions, it is possible to find a large number of studies for different countries although only a few for Indonesia. Most of these studies are based on experimental and quasi-experimental techniques conducted in different contexts such as natural disasters, emergencies, social protection systems etc. For instance, Cunha (2014) uses the experimental *Programa de Apoyo Alimentario* (PAL) in Mexico data to estimate the impacts between the cash and food transfers finding that food transfer had a higher impact in calorie intake compared to cash transfers. Another example is a randomized study comparing impact and cost-effectiveness of cash, vouchers, and food aid for Colombian refugees in Ecuador which found that impact of food on per capita caloric intake is significantly larger than that of a cash transfer (Hidrobo, 2014).

For the purposes of this document, a comparative analysis of different program evaluations case studies (See **Box 1. Case Studies Analyzed and Appendix 1**) was conducted to evaluate three different policy options. First, continue with the status quo which means keep Raskin under current operations guidelines; second, replace Raskin for food vouchers; and, third, replace Raskin for unconditional cash transfers. The criterion used to evaluate these alternatives is basically, their technical correctness (impact on food consumption, calorie intake, and nutritional impact), cost-effectiveness, political supportability, and administrative feasibility.

As a result, two policy recommendations are presented: i) replace in-kind transfers (Raskin) for cash transfers as a way to reducing costs and improve effectiveness; and, ii) review, redesign, and keep Raskin in highly food insecure and remote areas.

The evaluation showed that although in-kind transfers work better to increase food consumption and calorie intake, unconditional cash transfers result considerably less costly and therefore most cost-effective. In addition, transferring cash to households prevent discretionary (mis)allocation of the benefit, allow beneficiaries for greater choice, and also help develop local markets. Moreover, implementing cash is administrative feasible in Indonesia as they already run an unconditional cash transfer program (BLSM) and it will also be politically supportable (although probably facing some concern on Village Heads who use Raskin as a mechanism to keep cohesion). Moreover, some people opposing cash transfers tend to believe that people uses cash for other purposes and not food. However, “experience gained by governments, NGOs and other actors in implementing and evaluating cash transfers shows that cash is overwhelmingly spent on food (50-

60%), basic essentials, agricultural inputs and loan repayment. There are few anecdotes on cash diverted to undesirable uses”⁴.

Furthermore, the analysis presented shows that cash transfers are not well fitted for highly food insecure areas where food supply is scarce, markets do not work well, and private sector participation is low due to difficulty on accessing and high distribution costs. On these cases, in-kind transfers such as the Raskin program would be better suited, conditional to an increase of oversight and evaluation to increase Raskin effectiveness.

It is in the interest of the GOI to focus its efforts and resources on implementing the policy changes suggested as this will actively contribute to move from a very costly and low effective program to one that will bring significant savings for the government budget while the poor will get the full amount of the intended benefit for them. Moreover, savings coming from the lower operational and administrative costs of cash transfers (relative to Raskin) could be allocated to new or existing program that would bring a larger benefit for Indonesian households and for the country as a whole.

The remainder of the document proceeds as follows. Section 2 provides background on food security and policy in Indonesia as well as details on the Raskin program operations; Section 3 describes the problems that motivated the analysis; Section 4 presents the primary policy recommendations and implementation strategy; Section 5 explains why the other policy alternatives analyzed were not appropriate; and Section 6 concludes.

⁴ (World Food Programme, 2006)

Box 1. Case Studies Analyzed

For the purposes of this study a comparative analysis of five case studies was conducted. The selection of the cases was based on similarities with the Indonesian context and availability. For instance, Bangladesh, Mexico, and Cambodia are evaluations of cash and food transfers implemented as part of social protection systems. On the other hand, even though Ecuador and Democratic Republic of Congo are the only cases available that evaluate food vouchers, although transfers are implemented as crisis response more than social assistance.

Bangladesh

Ahmed et al. (2010) examined the efficacy of four different programs envisioning food-only, cash-only, and combined cash and food transfers. Two 'pure' cash and food transfer interventions were considered: the food-based Income Generating Vulnerable Group Development and the cash-based Rural Maintenance Program. The first one targeted poor women who receive a monthly food ration over 24 months. The second one targeted divorced, widowed, separated or abandoned women with 4 years of employment to maintain rural roads, and they received a monthly salary of 30 USD. (Ahmed, et al., 2010)

Cambodia

This is a pilot implemented as an extension to an existing food for education program. Food was given either as early morning meals or take home rations. The expansion included a cash scholarship to test relative efficacy of take home rations (10 kg of unfortified rice per month) and cash scholarships (60 USD per year). (Barker, et al., 2014)

Ecuador

A cash, food, and transfer program was installed to attend Colombian refugees into Ecuador. The value of the transfers was standardized to 40 USD per household. Cash was transferred monthly and could be used via ATM cards, being able to withdraw at most 10 USD per transaction. Vouchers had the value of 20 USD and were redeemable at specific authorized supermarkets. (Hidrobo, 2014)

Mexico

The Programa de Apoyo Alimentario gives unconditional food transfers to most target households. However in 2004-2005, cash transfers (13 USD per month) were provided to approximately 5 percent of beneficiaries living in isolated communities (experiment). No adjustments were made in terms of family size to the transfer. The transfer is delivered bimonthly through stores in case of food, and biometric debit cards for cash transfer. The experiment was carried out in 208 villages, which were divided into four groups: in-kind transfer plus educational classes, in-kind transfer without classes, pure cash transfer plus classes, and a control group. (Cunha, 2014) (Skoufias, et al., 2008) (Leroy, et al., 2010)

Dem. Rep. Congo

Unconditional cash transfer and voucher program as part of a humanitarian response to internally displaced people living in informal camps. Cash transfers and vouchers (130 USD in total) were provided over 7 months in 3 installments. (Aker, 2013)

Source: Gentilini (2014)

2. CONTEXT

2.1. FOOD SECURITY AND POLICY IN INDONESIA

Food security as defined by the United Nations Conference in Sustainable Development Program Secretariat, “exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life⁵”. Based on this definition, the literature identifies three pillars of food security: availability, access, and utilization⁶.

Food availability is the physical presence of food in the area through all forms of domestic production, imports, and food aid. Food access is a household’s ability to acquire adequate amounts and diversity of food, through own production, stocks, purchases, gifts, borrowing and food aid⁷. Finally, food utilization refers to appropriate nutrition and hygiene⁸.

Although Indonesia has more than enough resources to ensure food availability for all its population, over 9.1 percent of the population is currently undernourished while around 20 percent of children under 5 years were underweight in 2010⁹. As a result, Indonesia ranks 63th out of 109 countries based on the food availability index and drops 10 places (73th) when talking about food affordability. Likewise, when comparing Indonesia to similar countries in the Asia and Pacific region in food security, it is ranked 15th out of 22nd¹⁰.

Indonesia’s food security depends strongly on rice as it is the most important commodity for Indonesian households, particularly for the poorest. A representative Indonesian household gets nearly half of its food energy from rice and spends 10 percent of its income procuring it. On the other hand, poor households allocate 20 - 25 percent of their total expenditures to rice¹¹.

As a result, the GOI has implemented several programs looking to secure access to rice for the poor, either by stabilizing rice prices in the market or providing in-kind rice transfers to the poor. Trade policy, government procurement, reserves stock, and direct market operations such as *Operasi Pasar Khusus* (OPK) are some of the policies intended to stabilize market prices, while there is only one program targeted for low-income households which aims to reduce the economic burden of rice prices volatility by providing in-kind transfers at a subsidized price: Raskin (Rice for the Poor).

⁵ (Rio 2012 Issues Brief, 2011)

⁶ (World Summit on Food Security, 2009)

⁷ (World Food Programme, 2009)

⁸ (Warr, 2014)

⁹ (Global Food Security Index, 2015)

¹⁰ (Global Food Security Index, 2015)

¹¹ (Timmer P. , 2004)

2.1.1. RASKIN (RICE FOR THE POOR)

2.1.2. OBJECTIVE

Originally called OPK, Indonesia's Raskin (Rice for the Poor) subsidized rice program first provided food consumption assistance to households suffering the effects of the Asian Financial Crisis¹². Currently, Raskin aims to reduce the expenditure burden of targeted households through the partial fulfilment of basic food needs and to prevent a decrease in the consumption of energy and protein through the delivery of rice transfers¹³. For 2013 each eligible household was entitled to receive up to 15 kg per month of Raskin rice, paying Rp 1,600 per kg at Raskin distributions points

2.1.3. ELIGIBILITY¹⁴

Households eligible to receive Raskin, also called Target Households Beneficiaries (RTS-PM), are determined in accordance with results of the Integrated Database for Social Protection Programmes¹⁵, which is managed by TNP2K and endorsed by Kemerkokesra.

All households included in the Integrated Database have been ranked using objective welfare index methods specific to each city (*kabupaten*). For 2013, TNP2K identified around 15.5 million households with the lowest levels of welfare, submitting names and addresses of the RTS-PM to the Central Raskin Team Coordinator who establishes quotas by province and city.

It is important to add that changes to the RTS-PM list can be done to accommodate the dynamics of targeted households in villages (*kelurahan*). In these cases, the Raskin Coordination Team must hold village meetings (*musdes*) with village officials, community groups, RTS-PM representatives, and local neighborhood units¹⁶.

Social Assistance Cards (KPS or KKS for the current administration) are sent directly to eligible households by postal service. This is required for accessing Raskin assistance. In addition, a list of names and addresses of RTS-PM is printed and posted by the Raskin Central Coordination Team on the village offices.

2.1.4. DISTRIBUTION MECHANISM

Raskin rice stocks are acquired through Bulog's purchase of wholesale quantities from domestic producers at fixed prices (usually higher than market prices). Bulog together with the Raskin Coordination Team creates a monthly distribution plan and delivers agreed quotas of rice to over

¹² (The World Bank, Raskin Subsidized Rice Delivery Social Assistance Program and Public Expenditure Review 3, 2012)

¹³ (TNP2K, Raskin - Subsidised Rice for the Poor)

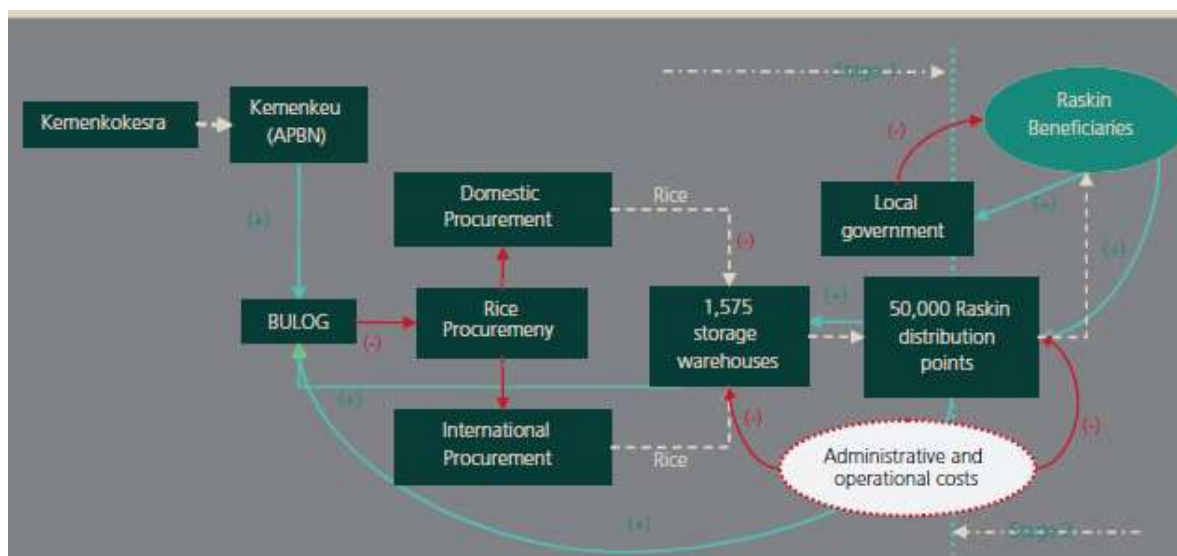
¹⁴ (TNP2K, Raskin - Subsidised Rice for the Poor)

¹⁵ The Unified Database contains information (by name and address) on the 25 million households living in the lowest socio-economic conditions. Its main source of information is the 2011 Integrated Database for Social Protection Programmes (PPLS 2011), a database created by the Central Statistics Agency (BPS) and managed by the National Team for the Acceleration of Poverty Reduction (TNP2K).

¹⁶ After verifying and updating the list of RTS-PM in a village/*kelurahan*, the quotas will remain unchanged. The results of *mudes/muskel* and *muscam* will be entered in Substitution Summary Form (FRP) RTS-PM and sent to TNP2K.

50,000 regional distribution points (Stage 1) where targeted households may purchase fixed quantities at subsidized prices. In some cases, local governments are responsible of the last mile delivery, bringing Raskin rice from Distribution Points to Allocation Points, where Raskin is distributed to eligible households (Stage 2).

Figure 1 Raskin Procurement and Delivery Process



Source: (The World Bank, 2012) based on Raskin technical manuals and conversations with GOI officials.

3. THE PROBLEM: RASKIN AS A COSTLY AND LOW EFFECTIVE PROGRAM

Although beneficiaries seem to be satisfied with the implementation of Raskin (except for the quality of rice and waiting time)¹⁷, concerns about the Raskin programme are mainly related to its high administrative cost and somewhat to its inefficient delivery. While Raskin is very expensive and costs around 2.15 billion USD in 2013, it is quite poorly targeted. Consequently, the benefits which accrue to the poor are minimal; most of the subsidy goes into Bulog's operating costs.

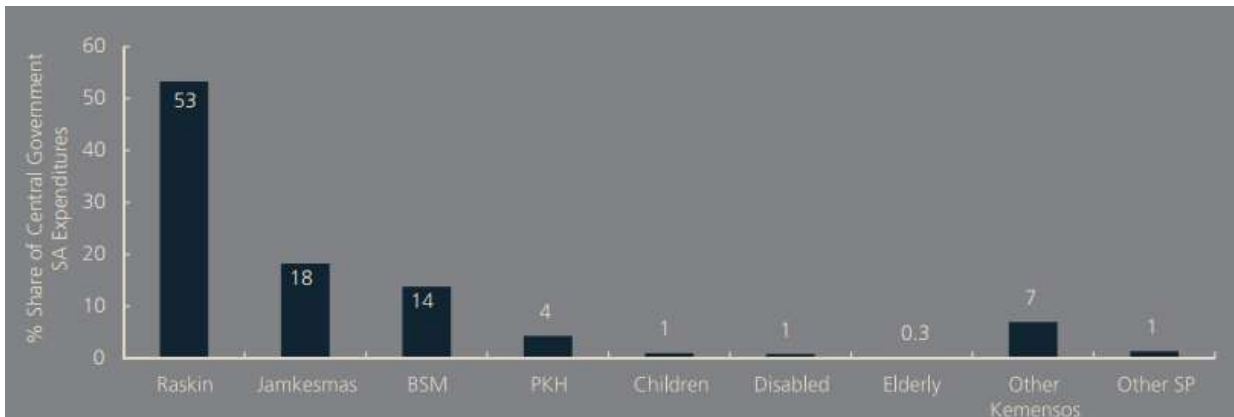
3.1. RASKIN COSTS

As stated before, Raskin is a very expensive program implying costs of around 2.15 billion USD in 2013 (0.25 percent of GDP) and representing 53 percent of the targeted social assistance program expenditure¹⁸. The second largest program in terms of expenditure only accounts for 18% of (Jamkesmas health insurance program) (Figure 2).

¹⁷ Based on interviews to 10 households in Jakarta, Indonesia (Jakarta Households Interviews, 2015).

¹⁸ (J-PAL)

Figure 2 Social Assistance Program Expenditure Shares, 2010



Source: (The World Bank, Raskin Subsidized Rice Delivery Social Assistance Program and Public Expenditure Review 3, 2012) based on Raskin technical manuals and conversations with GOI officials

The majority of this budget goes to operational costs such as procurement, storage and transportation costs, while only 17% goes to the poor¹⁹. According to the World Bank²⁰ Raskin budgeted operating and management costs are higher than other programs. This is mainly because physical management and transportation of perishable rice is particularly costly in a country like Indonesia where road density (25 km of road per 100 sq.km of land) is among the lowest in the region²¹.

In addition, when comparing administration and operation costs with actual benefits delivered to the poor, it is clear that Raskin consumes more resources to deliver a smaller benefit²². In theory, the official annual value of the benefit was Rp 720,720 per household per year (2009) while based on household records, the benefit value was only Rp 125,250 per year. Therefore, of the total Bulog budget, only 17 percent goes to the poor. Likewise, the administrative cost per official target beneficiary as budgeted (2009) is 30 percent higher (Rp 162,703, US\$16) than the actual benefit value per beneficiary²³.

¹⁹ (The World Bank, 2012)

²⁰ (The World Bank, 2012)

²¹ (Ash Center for Democratic Governance and Innovation, 2014) According to the World Bank's 2012 Logistics Performance Index Indonesia is ranked 59th out of 155 countries, behind Thailand's 38th place and Malaysia's 29th place. Likewise, Indonesia ranked 90th for the quality of its roads and 103rd for quality of port infrastructure.

²² (The World Bank, 2012)

²³ (The World Bank, 2012)

Figure 3 Raskin Spending Efficiency Indicators, 2005-2009

	2005	2006	2007	2008	2009
Unit Cost (Total spending/no. beneficiaries, Rp)	576,577	417,323	395,210	633,508	702,703
Administrative costs per beneficiary (Non-benefits/No. beneficiaries, Rp)	252,793	91,226	84,107	161,008	162,703
in US\$	26	10	9	17	16
Administrative overhead ratio (Non-benefits/Total spending)	44%	22%	21%	25%	23%
Cost of delivering benefits ratio (Non-benefits/Benefits)	78%	28%	27%	34%	30%
Memo items:					
Official Number of target beneficiary households (Million)	11.1	12.7	16.7	19.1	18.5
Official Value of annual benefits (Rp)	397,830	405,632	382,890	517,650	720,720
Total spending (Rp bn)*	6,400	5,300	6,600	12,100	13,000
o/w benefits	3,594	4,141	5,195	9,025	9,990
o/w Admin	2,806	1,159	1,405	3,075	3,010

Source: (The World Bank, 2012)

As a particular example to illustrate excessive operational costs of the Raskin program, in July 2007, in the Bojonegoro subregional division in East Java, the total Raskin operation costs reached Rp 280.8 million (to distribute 2,456 tons of rice to 1,232 distribution points) and 43 percent of this amount was allocated only to transportation while other costs at the distribution point accounted for 25 percent. (Figure 4).

Figure 4 Raskin Operational Costs in the Bojonegoro Subregional Division, July 2007

Component	Total Cost (rupiah)	Cost (rupiah)	
		Cost per Unit (Rp per kg)	Percentage of Total Costs
A. Distribution costs	189,933,390	77	68%
- Transporting costs	120,349,390	49	43%
- Distribution point expenses	69,584,000	28	25%
B. Supporting costs	90,832,990	37	32%
- Administration costs	18,502,530	8	7%
- Honorariums and official travel	45,052,800	18	16%
- Meetings and coordination	27,277,660	11	10%
Total operational costs	280,766,380	114	100%

Source: (Hastuti, 2008)

3.2. RASKIN EFFICIENCY

Several studies in recent years have highlighted some weaknesses of Raskin in terms of coverage, quantity, quality, and price of rice allocated. However, only a few have actually focused on the impact of Raskin in food consumption. Nevertheless, it should be mentioned that Raskin is actually getting to around 80% of the targeted households²⁴ and that even though the amount of rice allocated to each households is less than the intended, this is a result of a community decision. Moreover, Raskin is one of the few programs with national scope and its organizational infrastructure plays an important role in cases of extreme food insecurity where in-kind transfers perform better.

3.2.1. IMPACT ON FOOD CONSUMPTION

The evidence of impact of Raskin in food consumption is mixed. On one hand, Sumarto, Suryahadi and Widiyanti (2005)²⁵ reported that participation in Raskin increased household consumption by 4.4 per cent and that recipient households are 3.8 per cent less likely to be poor compared to their counterparts. On the other hand, Pangaribowo (2012) found that the program has no impact on both 'total' food and non-food consumption and consumption change, but it indeed helps the program recipients in smoothing within food consumption, particularly for them to afford meat, fish and dairy products²⁶.

3.2.2. COVERAGE, QUANTITY, AND PRICE

Raskin is intended for poor and near-poor households but it has been extended to non-poor households based on community decisions. As rice is distributed to more households, eligible households receive only one-third of the amount intended and pay 25 percent more than the official subsidized price; this is mostly to pay for delivery costs from distribution points to villages, not funded by central government.

As explained before, selecting beneficiaries is a two-stage process that includes village-level consultation while the current Raskin manuals do not mandate that the list of poor households should be used in the village meetings and does not state that beneficiaries must in fact be poor²⁷. Therefore, although Raskin coverage among the targeted group of households is around 70 to 80 percent which is high relative to other programs, around 50 percent of the next four deciles also

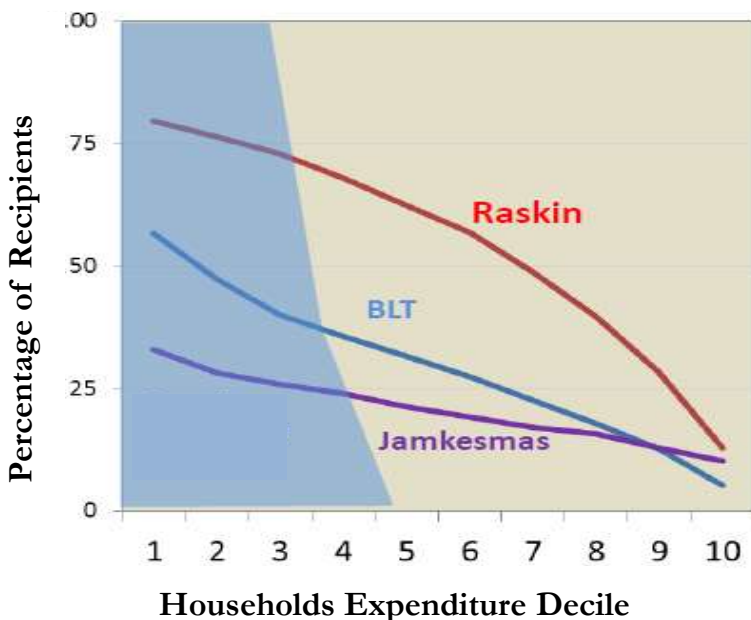
²⁴ (The World Bank, Raskin Subsidized Rice Delivery Social Assistance Program and Public Expenditure Review 3, 2012)

²⁵ (Sumarto S. e., 2004)

²⁶ (Pangaribowo, 2012)

²⁷ (The World Bank, 2012)

Figure 5 Raskin Coverage by Subgroup and Decile Compared to that of Other Programs



Source: (Widiyanto, 2013)

participate, and even 23 percent of the second richest decile, leading to nearly 70 percent of all beneficiaries being non-poor and getting over half of all program benefits²⁸ (Figure 5).

In practice, eligible households receive only one-third (around 5 kg) of the amount of rice they are eligible to receive (15 kg) and at a cost that is 25 percent higher (around 2,000 Rupiah/Kg) than their entitled subsidy (1,600 Rupiah/Kg)²⁹.

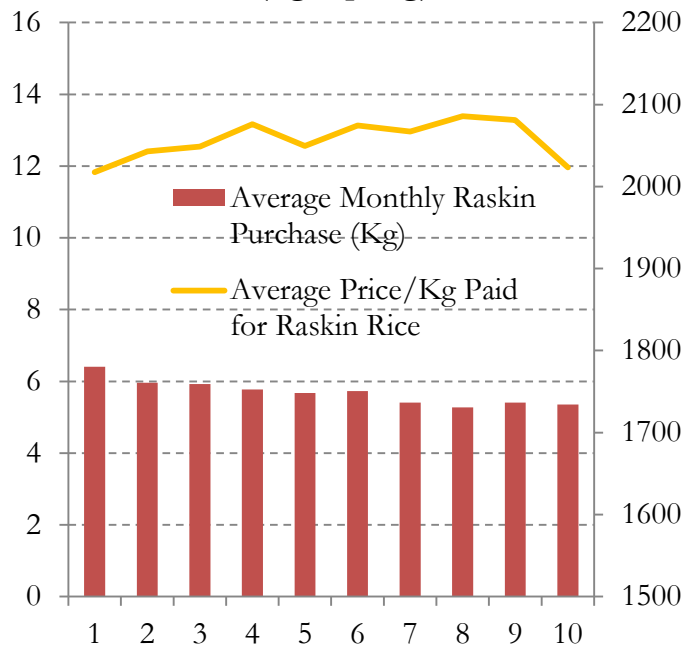
The main reason for people getting less than 15 kg of rice are the decisions made at village meetings or *musdes* to split the rice equally (Figure 7). On the other hand, Raskin General Guidelines encourage the community to contribute towards the cost of distributing the rice from the distribution points to beneficiaries³⁰ given that Bulog vehicles cannot intern in certain villages. This is realized in the form of payments for the rice that are higher than the official price at the distribution points (Figure 6).

²⁸ (The World Bank, 2012), (Widiyanto, 2013), and SUSENAS September 2013 data.

²⁹ (J-PAL)

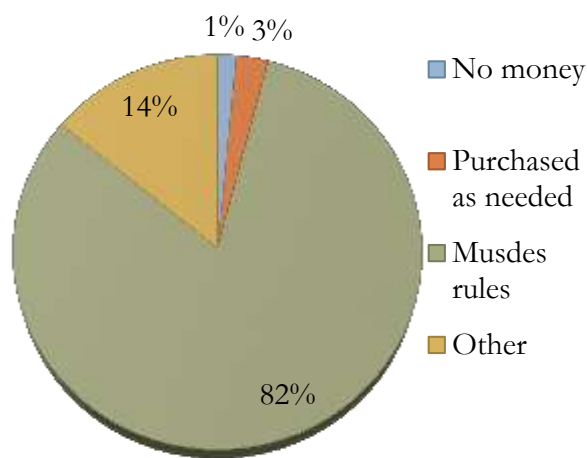
³⁰ (Hastuti, 2008)

Figure 6 Raskin Purchases and Price (Kg, Rp/Kg)



Source: SUSENAS September 2013

Figure 7 Why Did you Buy Less than 15 kg?



Source: SUSENAS September 2013

4. POLICY RECOMMENDATIONS TO IMPROVE POOR HOUSEHOLDS ACCESS TO FOOD

There are three major policy interventions when addressing food security. First, influencing food supply through changes in domestic production through production subsidies or imports and exports, with a market wide effect on consumer and producer prices; second, reducing only consumer prices through subsidies; and, third, increasing income by providing cash or in-kind transfers.

Three different policy options belonging only to the third category were evaluated. First, continue with the status quo which means keep Raskin under current operations guidelines. Second, replace Raskin for food vouchers (value based or commodity based). Third, replace Raskin for unconditional cash transfers. The criterion used to evaluate these alternatives is basically, their technical correctness (impact on food consumption, calorie intake, and nutritional impact), cost-effectiveness, political supportability, and administrative feasibility (See **Appendix 2** for further detail on the methodology and evaluation).

This evaluation showed that although in-kind transfers work better to increase food consumption and calorie intake, unconditional cash transfers result considerably less costly and therefore most cost-effective. In addition, transferring cash to households prevent discretionary

(mis)allocation of the benefit, allow beneficiaries for greater choice, and also help develop local markets. Moreover, implementing cash is administrative feasible in Indonesia as they already run an unconditional cash transfer program (BLSM) and it will also be politically supportable (although probably facing some concern on Village Heads who use Raskin as a mechanism to keep cohesion).

Furthermore, the analysis showed that cash transfers are not well fitted for highly food insecure areas where food supply is scarce, markets do not work well, and private sector participation is low due to difficulty on accessing and high distribution costs. On these cases, in-kind transfers such as the Raskin program would be better suited, conditional to an increase of oversight and evaluation to increase Raskin effectiveness.

4.1. RECOMMENDATION 1. REPLACE IN-KIND TRANSFERS (RASKIN, RICE FOR THE POOR) FOR CASH TRANSFERS: REDUCING COSTS AND IMPROVING EFFECTIVENESS

Replacing Raskin for the provision of unconditional cash transfers will result on a more cost-effective mechanism to guarantee food access for the poor under particular conditions. Although it is not clear that cash will increase beneficiaries' food consumption more than in-kind transfers, they will contribute to diversify diets, and lower administrative and operational costs, were food supply is enough, and well developed markets. Moreover, this policy would be politically supported by the President and central government, while administratively; it would be effortlessly implemented by using the current system of the unconditional cash transfers program (BLSM).

4.1.1. TECHNICAL CORRECTNESS

In order to evaluate the technical correctness of the policy proposed, both the theoretical framework and empirical evidence are considered. The economic theory as well as necessary conditions for the implementation of cash is reviewed, while for the empirical analysis, technical correctness is measured based on the impact of each policy alternative on two food access indicators: food consumption and calorie intake of beneficiaries.

Definitions and Theoretical Framework

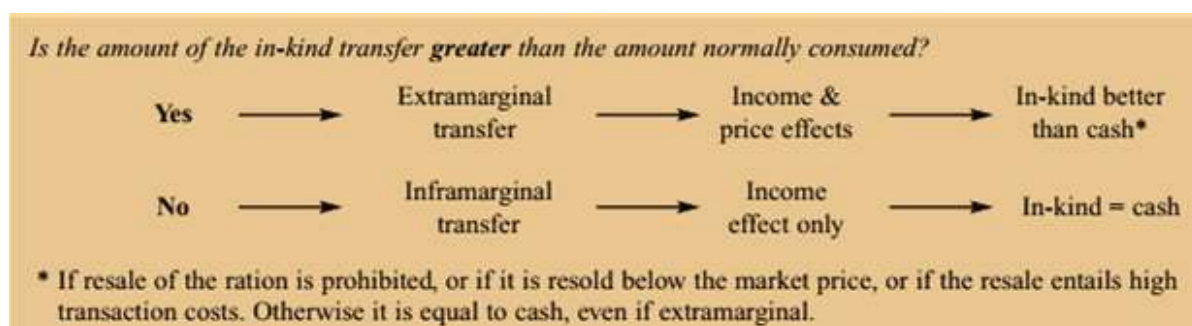
An unconditional cash transfer consists on the provision of assistance in the form of cash to the poor or to those vulnerable to become poor in the absence of that transfer. Advocates of cash transfers argue that if the program is well designed and implemented, cash transfers can improve beneficiary satisfaction and reduce program costs, contributing to general economic development³¹.

According to the literature and economic theory, if the amount of rice provided is smaller than the amount consumed by beneficiaries (inframarginal) then in-kind transfers and a cash

³¹ (Magen M., 2009)

transfers of equal value would have the same effect in bolstering household food consumption. However, if in-kind transfers exceed the amount consumed (extramarginal), then, food consumption out of in-kind transfers would be larger than for an equal cash transfer due to the price effect³² (see **Appendix 3** for a more detailed explanation). However, as stated by Gentilitni (2004), the empirical evidence usually rejects the model's predictions and shows that even for inframarginal in-kind transfers, these would increase food consumption more than cash transfers. The existence of this cash-out puzzle is an accepted empirical fact, although the reasons behind remains unclear.

Figure 8 Economics of Cash and Food Transfers



Source: (Gentilini H. , 2007)

Context for Cash Transfer Use

According to (Magen M., 2009), for cash transfers to be appropriate and successful as a response to food insecurity, the following preconditions should be met:

- a) Supply of food is enough and the main problem is households ability to purchase food;
- b) Markets functioning well and are able to meet an increased demand for food with sufficient supply to avoid inflation;
- c) Cash is useful to obtain food;
- d) Administrative and financial systems function well enough to prevent fraud; and
- e) Households are safe from theft and violence if they receive transfers.

Impact on Food Consumption

One of the most used indicators when looking at the empirical evidence on evaluations of food access policies is food consumption, measured in terms of the value of food consumed during a period of time or the money spent on food. Based on the case studies considered for this study (See **Box 1. Case Studies Analyzed**), it seems that the evidence is not conclusive about which mechanism (cash or in-kind) has a higher impact on food consumption.

³² (Gentilini H. , 2014)

For instance, when looking at the case studies of Mexico and Ecuador, impact on food consumption after providing cash is 7 percent higher than that of providing food (in-kind) in the case Mexico, 13.40 percent for Cambodia, and 3.40 percent for Bangladesh while for Ecuador, food consumption increased 4 percent more when providing in-kind transfers than when providing cash. However, any of these differences are statistically significant. (**Figure 9**)

Impact on Calorie Intake

Another common indicator used to measure the impact of policies on households food access is calorie intake which helps to complement the non-conclusive information coming from the food consumption indicator shown above. In this case it is observed that food transfers had a larger impact on calorie intake relative to cash both for Mexico and Ecuador. In the case of Mexico, the impact of food transfers on calorie intake was 4.9 percent higher than that of cash transfers, while for the case of Ecuador the impact was even greater, 10 percent higher relative to cash³³. On the other hand, for the case of Bangladesh, cash resulted on a lower calorie intake than food transfers; although it can be explained by a change from highly caloric foods to higher quality food.

Nutritional Impact: Diet Diversity

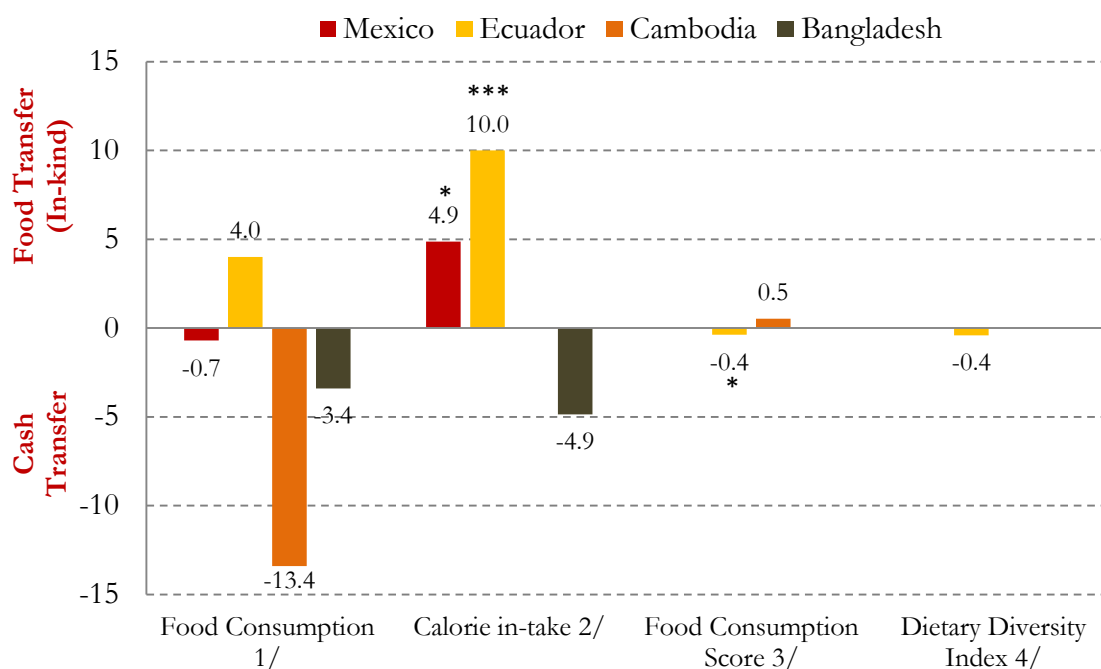
Effectiveness of a policy to improve food access for the poor should not only take into account quantity but also the quality of the food they can afford. For this purpose, diet diversity is one of the common indicators used on impact evaluations when comparing food to cash transfers. Some of the common measures used evaluate diet diversity are: Food Consumption Scores (FCS) and Dietary Diversity Index (DDI)³⁴.

For the case of Ecuador, the difference in the impact between food and cash transfers in the FCS is -0.4, which means that cash had a greater impact on diet diversity. However, when looking at the case of Cambodia, the food transfers' impact on FCS was higher (difference of 0.5). Therefore, the evidence is mixed. As pointed out by Gentilini (2014), one of the reasons why cash led to less diverse diets is because it allows buying greater amounts of grains which are the cheapest option to get more calories. Finally, for the DDI indicator, in the case of Ecuador, the impact of cash on the index was much higher than that of food transfers leading to a difference of -0.4. In this case, cash was not only used to buy a large share of food but to purchase various foods.

³³ This could be a result of a larger consumption of cereals

³⁴ According to (Gentilini H. , 2014), the Food Consumption Scores (FCS) index is a frequency-weighted diet diversity score and is calculated using the frequency of consumption of 8 food groups consumed by a household during the seven days before the survey (staples, pulses, vegetables, fruit, meat and fish, milk and dairy, sugar and honey, oils and fats). It is calculated by multiplying the number of days by the food group's weighted frequencies, and summing across categories to obtain a single proxy indicator. Households are then categorized as having poor to borderline consumption if their FCS score is 35 or less. The Dietary Diversity Index (DDI) is the number of different foods or food groups consumed over a given reference period.

Figure 9 Summary of Differences in Impacts by Transfer Modality and Indicator



Note: Level of significance in differences is indicated by the asterisks (* at 90 percent level, ** at 95 percent level, *** at 99 percent level).
 Source: (Gentilini H. , 2014) with data from (Cunha J. , 2014), (Skoufias, Unar, & Gonzalez-Cossio, 2008), (Leroy, Gadsden, Rodriguez-Ramirez, & Gonzales de Cossio, 2010), (Hidrobo, 2014), (Barker, Filmer, & Rigolini, 2014), (Ahmed, Quisumbing, Nasreen, Hoddinott, & Bryan, 2010)
 1/ Difference in impact between food and cash transfers on food consumption (food impact minus cash impact, percentage points)
 2/ Difference in impact between food and cash transfers on per capita calorie in-take (food impact minus cash impact, percentage points)
 3/ Difference in impact between food and cash transfers on Food Consumption Scores (food impact minus cash impact, indicator values)
 4/ Difference in impact between food and cash transfers on the Dietary Diversity Index (food impact minus cash impact, indicator values)

Effectiveness: Coverage, Quantity, Quality, and Price

Direct distribution of cash transfers to beneficiaries would prevent local officials’ discretionary misallocation of the benefit to the non-poor, minimizing leakage and therefore, improving the effectiveness of the program in terms of coverage, quantity, quality, and “price” (as beneficiaries get the full amount of the benefit). BLSM, the current unconditional cash transfers program in Indonesia represents empirical evidence of this increase in effectiveness given that over 90 percent of households receive full entitlements of cash³⁵ and beneficiaries report being highly satisfied³⁶. Additional advantages of cash transfers are the fact that beneficiaries get a larger opportunity to exercise choice and access their preferred rice type and quality level, while cash also helps to stimulate local markets due to a higher demand.

³⁵ (Sumarto S. , 2012)

³⁶ (Jakarta Households Interviews, 2015) 10 out of 10 households reported being highly satisfied about allocation of cash

4.1.2. COST-EFFECTIVENESS

As described before in Section 3.1, Raskin is a very expensive program implying costs of around 2.15 billion USD in 2013 (0.25 percent of GDP). Consuming around 53 percent of the social assistance budget, only 17 percent of it makes it to the poor. In contrast, running a program of unconditional cash transfers is considerably less costly as it does not require incurring in costs to procure, store, and physically distribute millions of tons of rice, while in addition, beneficiaries' waiting and transportation costs to get the benefit are also lower.

The administrative cost per cash transfer ranges between 0.31-2.99 USD³⁷ with food-cash ratios ranging from 3.8 to 7.3³⁸ (Figure 10). Particularly for the case of Mexico, Cunha (2012) estimated that providing food transfers is around 7.3 times more costly than providing cash transfers, while in the case of Ecuador providing food is about 3.8 times more costly than providing cash. For the case of food transfers, the highest administrative costs comes from expenditures on logistics such as storage, transportation, etc. which account for 30 percent of the total administrative cost in Ecuador³⁹. On the other hand, for the case of cash transfers, transactions fees represent only around 3 percent of the total administrative cost⁴⁰.

Figure 10 Costs (USD) per Transfer and Transfer Ratios

Country	Food	Cash	Vouchers	Food-cash ratio	Food-vouchers ratio	Vouchers-cash ratio
Dem. Rep. of Congo	-	11.34	14.35	-	-	1.2
Ecuador	11.46	2.99	3.27	3.8	3.5	1.09
Mexico	2.29	0.31	-	7.3	-	-

Source: (Gentilini H. , 2014) based on (Cunha J. , 2014), (Margolies, 2014), and (Aker, 2013).

Additionally, there are other costs such as beneficiaries' waiting time and transportation costs that should be taken into account when evaluating the cost effectiveness of food transfers versus cash transfers. On this regard, for the particular case of Ecuador, the time for travel and waiting to get food transfers was

Figure 11 Beneficiary Time and Transportation Costs to Obtain Transfers

Cost	Ecuador		
	Food	Cash	Vouchers
Time for travel and waiting (hours)	2.2	1.2	1.8
Transport costs (% of transfer value)	5.3	3.7	4.1

Source: (Gentilini H. , 2014) based on (Margolies, 2014)

³⁷ (Gentilini H. , 2014)

³⁸ The numbers do not include the actual value of transfers.

³⁹ (Hidrobo, 2014)

⁴⁰ (Margolies, 2014)

around 2.2 hours while that for cash transfers was almost half (1.2 hours). Likewise, when looking at beneficiaries' transportation costs, those for food transfers, these costs were 5.3 percent of the transfer value, while in the case of cash transfers they represented only 3.7 percent (**Figure 11**).

Finally and the most informative information is a cost-effectiveness measure which compares relative costs to outcomes. However, this indicator is only evaluated for the case of Ecuador (**Figure 12**) showing that improving an indicator by 15 percent costs, on average, around twice for food transfers relative to cash transfers⁴¹. Particularly, the cost of increasing food consumption by 15 percent through food transfers is almost 3 times than the cost of increasing the same 15% through cash transfers (10.78 USD and 3.79 USD, respectively). When talking about increasing calorie intake in 15%, the cost of food transfers is around 1.5 times the cost of cash. Additionally, in order to increase diet diversification by the same 15%, the gap in costs is even larger; increasing the DDI costs almost 5 times more through food than by cash transfers. In summary, based on the previous evidence, cash transfers result as a more cost-effective alternative.

Figure 12 Cost (USD) of increasing a given indicator by 15 percent in Ecuador

Indicator	Food	Cash	Voucher
Consumption	10.78	3.79	3.81
Calories	10.78	7.58	4.50
Food consumption score	17.25	4.13	3.09
Dietary diversity index	15.68	3.25	2.91
Household dietary diversity score	28.75	11.36	8.25

Source: (Gentilini H. , 2014) based on (Hidrobo, 2014)

4.1.3. POLITICAL SUPPORTABILITY

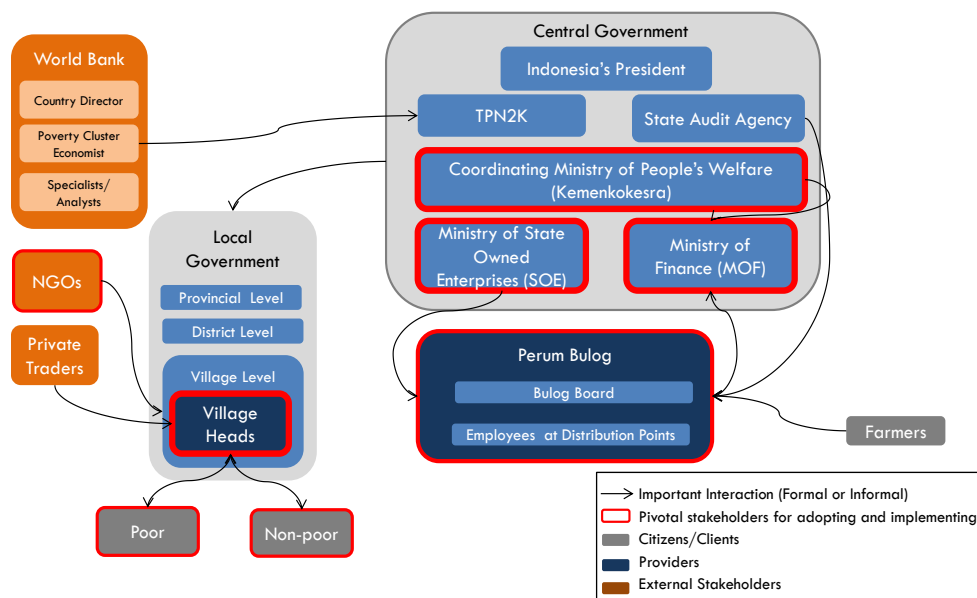
A policy recommendation must be politically feasible and should go accompanied by a political strategy to overcome the opposition of any stakeholder involved. The alternative of replacing Raskin for cash transfers would be politically feasible and strongly supported by the central government, and other agencies such as the State Audit Agency (KPK), although it is probable that local governments would express concerns about conflicts within the communities as Raskin helps to keep cohesion⁴². Moreover, even though some studies have mentioned that given the high level of politicization of Raskin it would be difficult to change the program without some kind of popular

⁴¹ (Hidrobo et. al 2014)

⁴² (J-PAL)

protest⁴³, it is clear by looking at beneficiaries' preference for cash that the policy proposal will gather enough political support to make it happen. For this purpose communications and campaigns should be targeted effectively.

Figure 13 Stakeholders Map



Source: Author's elaboration.

In order to determine the political feasibility of the proposal of replacing Raskin for cash transfers, the interested parties were first identified (Figure 13), and personal interviews were conducted to understand their interactions, preferences, and constraints (See **Appendix 4**).

The stakeholders involved are mainly Kemenkoskera (determines Raskin policy guidelines), Bulog (state-owned and revenue-generating company in charge of Raskin's stage 1) and supervised by SOE, farmers (providers of Raskin rice receiving payment above the market price), MOF (channels central government's Raskin budget to Bulog after agreement with Kemenkoskera); Viillage Heads (in charge of implementing and funding last mile Raskin delivery, Raskin stage 2 as well as coordinating village meetings and rice allocation decisions), KPK (monitors transparency), poor households (beneficiaries), non-poor households (some getting Raskin due to village decisions), and finally local retail rice traders (also affected by any change on rice supply or market prices).

Pivotal stakeholders who can affect adoption of policies are the President, Kemenkokesra, MOF, and SOE while those affecting implementation of the policy are mainly Bulog and local

⁴³ (Banerjee, A. et. al., 2014)

government officials. NGOs and citizens are also important to mobilize social support and ensure compliance, legitimacy and enforcement of new policies⁴⁴

Based on the review of previous studies, documents, news, and interviews it is possible to conclude that the policy alternative of moving from Raskin to cash transfers would be mildly politically supportable. The proposal would be backed up by the central government and beneficiaries, Bulog seems to not represent and opposition, while there would be probably some unrest or concern of rice farmers, local rice traders, and a few Village Heads.

According to recent quotes in the news, the central government (President, Kemenkoskera, MOE, SOE) is willing to replace Raskin with cash transfers while Bulog is waiting for the government instruction to stop Raskin (See **Box 2 News Quotes**).

Beneficiaries which are another important part of the political support, are expected to be enthusiastic about receiving cash instead of rice. In general, as the poor suffer from more significant cash constraints, most poor groups tend to express preferences for cash. In the case of Indonesia, a short survey of 10 households in Jakarta showed that households prefer cash over Raskin, although some mentioned their preference would depend on the amount of the cash transfer⁴⁵ (**Figure 14**).

Box 2 News Quotes

“Raskin will be replaced with money; the system will be improved so that it is targeting those who has the right to receive it. No more commodity-based subsidy”

Sofyan Djalil, the Coordinating Minister for Economy¹

Bulog is still waiting for the technical guidelines for that elimination plan.

Regional head of Bulog, South & West Sulawesi²

“This year we have been distributing rice for Raskin. Moving forward, the people will not receive rice, but e-money on their account [...] With the e-money, people can decide the quality of rice that they want to consume [...] The President would like to see social assistance targets those who really need them, with good utilization, not for consumptive purpose but to be optimum and productive”

Rini Soemarno, Minister of SOE³

1/ (Liputan6, 2014)

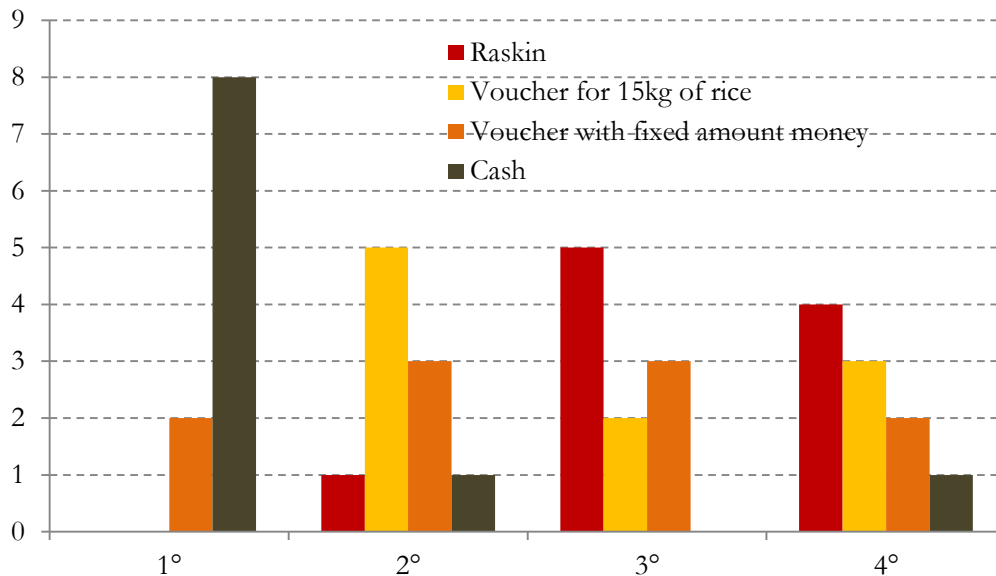
2/ (Koran Tempo, 2014)

3/ (Fajar, 2014)

⁴⁴ (The World Bank, 2012)

⁴⁵ (Jakarta Households Survey, 2015)

Figure 14 Policy Alternatives Ranked by Beneficiaries



Source: (Jakarta Households Interviews, 2015)
 Participants were asked to rank the following options from more preferred to less preferred (1...4): Raskin as it is now; Card that allows you to get same 15 kg of rice/month but directly in the closest market; Card with a fixed amount of money per month (eg. 130,000 Rp., equivalent to current price of 15 kg of rice) that you can only spend in rice and other types of food; and cash to be spent freely (eg. 130,000 Rp., equivalent to current price of 15 kg of rice).

On the other hand, when looking for potential discontent, if Olken (2006)⁴⁶ argument about Village Heads being involved in intercepting rice from warehouses to villages and reselling it secretly on the private market is true, then some unrest coming from these Village Heads as well as local rice traders would be expected. However, Olken (2006) acknowledges that 60 percent of the missing rice came from just 10 percent of the villages. Therefore, resistance would be minor. Also, it has been said that Raskin equal distribution has kept cohesion on communities⁴⁷. Therefore, there is chance that removing Raskin some unrest would emerge in some of the communities. In this sense, targeted communication should be focus on addressing the particular interests of villagers as well as to reframe problems and objectives in a way that facilitates support from the parties involved.

Finally, some of the people opposing cash transfers tend to believe that people uses cash for other purposes and not food. However, “experience gained by governments, NGOs and other actors in implementing and evaluating cash transfers shows that cash is overwhelmingly spent on

⁴⁶ (Olken B. , 2005)

⁴⁷ (Banerjee A. , 2014)

food (50-60%), basic essentials, agricultural inputs and loan repayment. There are few anecdotes on cash diverted to undesirable uses^{48,49}.

4.1.4. ADMINISTRATIVE FEASIBILITY

The last criterion that supports our policy recommendation of replacing Raskin with unconditional cash transfers is the fact that the GOI possess the administrative capacity in terms of monetary, material, and human resources to implement the change. However, highly food insecure and remote areas do not meet the necessary conditions for making cash a successful mechanism (See Section 4.1.1, *Context for Cash Transfer Use*). Therefore, in these areas, Raskin should be continued after going through a deep business process review and reform.

Regarding monetary sources, it is clear from Section 4.1.2 that cash transfers' implementation would require much less monetary resources than the Raskin program. Savings derived from lower operational costs would be available to fund any additional cost that could emerge to make the new program feasible and successful, such as communication campaign, socialization, or any other related expenditure.

Moreover, as the GOI already successfully implements both an unconditional (BLSM) and conditional cash transfers programs (PKH), the initial arrangements, physical infrastructure, and know-how to run a cash transfers program are already in place. Currently, cash transfers are distributed mostly through postal offices, although the government started to pilot digital financial services in 19 cities a couple of months ago. Therefore, the proposed policy change would technically only represent an increase in the current amount of cash received by BLSM beneficiaries (19 million households⁵⁰) who are also eligible for Raskin. For those that do not receive BLSM, it will be needed to add them to the system but getting the Raskin cash transfer amount.

4.1.5. IMPLEMENTATION STRATEGY AND NEXT STEPS

The successful implementation of the proposed policy change, requires some steps to be followed: i) assess the market conditions at a district level to identify areas where cash transfers would be effective; ii) complement this first stage of geographical targeting with the current Raskin targeting mechanism subject to improvement; iii) estimate the cash transfer amount; iv) evaluate different distribution systems; and, v) design communication and socialization campaigns, among others.

⁴⁸ (World Food Programme, 2006, pág. 5)

⁴⁹ In Mexico, more than half of the cash transfer was spent on food, out of which a quarter was devoted to nutritious food items such as fruits and vegetables. (Gentilini H. , 2014)

⁵⁰ (Humanitarian News and Analysis, 2015)

i) Assess local markets conditions and food supply

As mentioned before, a critical requirement for cash transfers to be successful is to effectively identify whether markets work well and the current supply meets the required quantity and quality of commodities and services demanded. On the other hand, in-kind transfers are better suited for those highly food insecure and remote areas where food intake is prioritized, prices are excessively high, markets are distant or do not function well, goods are not available and cannot be brought from distant markets because of conflicts or difficult access, as well as areas subject to natural disasters. All these cases where supply cannot meet increased demand and where it may be appropriate to maintain the provision of food transfers motivate our second policy recommendation explained in more detail in Section 4.2.

Although there are guides such as *Emergency Market Mapping and Analysis* tool kit⁵¹ and the *Market Information and Food Insecurity Response Analysis*⁵² intended to provide directions on how to proceed with markets assessment, it will be very costly in terms of time and budget to conduct this assessment in each of the 500 districts in Indonesia. Therefore, the strategy proposed is to identify first those districts where cash would not be appropriate (i.e. highly insecure and remote areas) and provide cash elsewhere.

Two different mechanisms are presented based in the rich information provided by the *Food Security and Vulnerability Atlas of Indonesia 2009*⁵³ for 346 districts in rural areas to determine which are the most highly food insecure and remote districts in Indonesia. This Atlas has proved to be an important tool for implementing geographical targeting as it presents information on per capita consumption to cereal availability ratio, people below the poverty line, underweight rate of under 5 children, and villages with inadequate roads connectivity, among other indicators⁵⁴.

Mechanism 1: The Atlas' Composite Food Security index

The Atlas uses its own Composite Food Security Index to classify and map districts in 6 categories, going from Priority 1 to Priority 6. Based on this classification, there are 100 districts ranked as higher priority that would not be appropriate for a cash transfer program and that would justify the continuation of Raskin: 30 districts of Priority 1 (located in Papua, NTT, Papua Barat, and other 5

⁵¹ (EMMA, 2015)

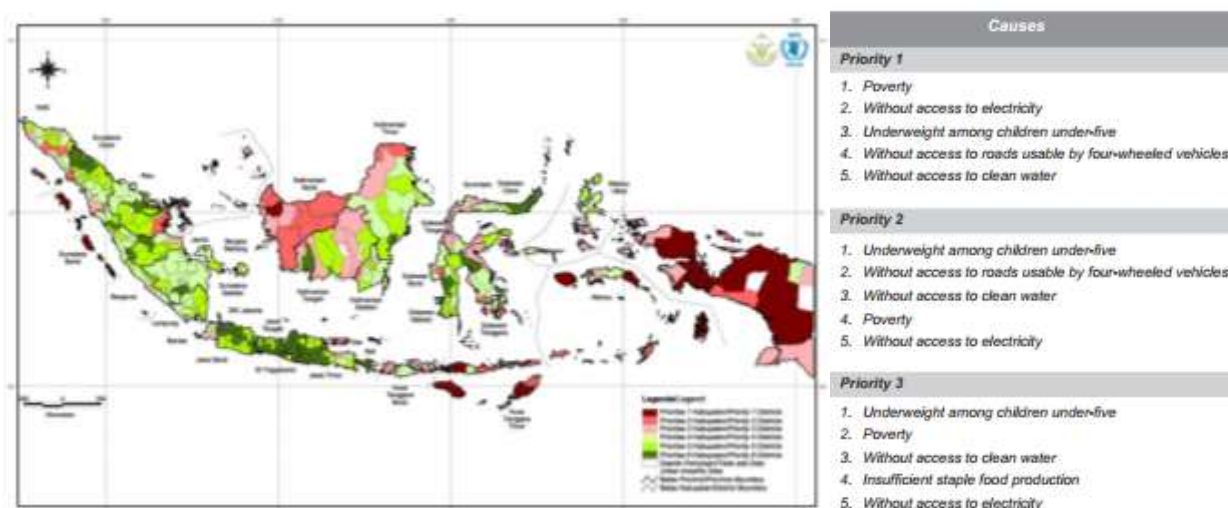
⁵² (Barrett, 2009)

⁵³ (World Food Programme, 2009)

⁵⁴ Based on the Atlas information we found that those districts found in deficit in cereal production are mainly located in Papua Riau, Kepulauan Riau, Jambi, Kalimantan Tengah, Maluku and Maluku Utara provinces. Regarding nutrition, 45 out of 346 districts had a very high prevalence of underweight (>30percent) mainly in NTT, Maluku, Kalimantan Selatan, NAD, Sulawesi Barat and Gorontalo provinces. Likewise, 65 districts had more than 30percent of people living below the national poverty line and more than 12percent of all Indonesian villages do not have access to roads connected by four wheeled vehicles as in Jambi, Riau, Sumatera Selatan, Kalimantan Barat, Kalimantan Tengah, Selatan and Timur, Papua and most of Papua Barat, parts of NTT and Maluku.

provinces, 5.3 million people), 30 districts of Priority 2 (located in Kalimantan Barat, NTT, NAD, Papua and other provinces, 7.7 million people), and 40 districts of Priority 3 (located in Kalimantan Tengah, Sulawesi Tengah, NTB, and other 16 provinces, 12 million people).

Figure 15 Composite Food Security Index



Source: (World Food Programme, 2009)

Mechanism 2: Suggested Food Insecurity Index

As mentioned before, the Atlas ranks and maps Indonesia's districts based on several indicators such as per capita consumption to cereal availability ratio, underweight rate, and villages with inadequate roads connectivity, etc. It is proposed that a tailored index could be built based on relevant indicators identifying areas where cash would not be appropriate. Thus, I suggest that in-kind transfers should continue in those districts that meet the following three characteristics (See **Appendix 5**):

- a) Deficit on the ratio of per capita consumption to cereal production (Low, medium or high)
- b) Underweight children (Serious or critical)
- c) More than 20 percent of villages not accessible by four wheel vehicles

Cash transfers should be implemented in all the remaining districts not falling in these categories.

ii) Improve Targeting

Once the geographical targeting is defined, the original Raskin targeting mechanism based on the Integrated Database (see Section Section 2.1.3) should be followed for each of the districts. However, as part of the intended reform and improvement of the program, the process of changing and updating RTS-PM should be reformed to better accommodate the deliberations coming from village meetings. Lists of RTS-PM as well as total rice allocation should be updated in a continuous

basis based on the village deliberations, helping to better target the actual poor (reducing leakage) and to guarantee adequate rice quotas.

iii) Estimate Cash Transfer Amount

The actual subsidy that households receive from the Raskin program is the difference between the rice subsidized price (1,600 Rp/Kg for the recent years) and the market price (10,600 Rp, average of 2012-2013⁵⁵) which is ~9,000 Rp/kg, meaning an intended subsidy of ~135,000 Rp/month/household (based on 15 kg allocation). The easiest estimation of the monthly cash transfer amount is this amount (135,000 Rp) adjusted accordingly to local retail rice inflation.

iv) Evaluate Alternative Cash Distribution Systems

The appropriateness of each distribution system depends on opportunities and constraints in each context: beneficiary preference, risks of exclusion (ie. child-headed households), existing financial infrastructure, access to financial infrastructure, security, connectivity, literacy, regulation, cost-effectiveness, available technology, corruption, intra-household roles, etc.

For the case of Indonesia, the government currently distributes cash transfers for the BLSM and PKH programs through postal offices while it is piloting digital financial services (SIM Cards) in 19 cities (1 million people). It is recommended that in the short run, the replacements of Raskin for cash transfers is done through the current mechanism (postal offices and eventually SIM cards).

Alternative systems such as SIM cards (plastic cards with a chip in them used to verify the beneficiaries' identities and the money balance) will become possible in the medium term if the GOP's piloting works well. Cards can be used with Point-of-Sale (PoS) devices to withdraw money, purchase commodities directly, or both. PoS devices may be fixed (e.g. bank machines) or may be portable (battery-operated or solar charged), making card accessible even in remote areas⁵⁶.

Although not possible in the short run given certain constraints⁵⁷, mobile money should be also evaluated as the gap between those with telecommunications access and those with formal financial services is increasing rapidly the potential of mobile money is huge (**Box 3. Mobile Money**).

⁵⁵ (J-PAL, 2014)

⁵⁶ This mechanism requires some preconditions that seem to be there as the government already decided to migrate from "giro pos" to smart cards., "such as a local card delivery provider/account provider (a bank or another financial service) beneficiaries an infrastructure that can read and authenticate the card, and can debit/credit payments from/to the card (ATMs, Point-of-Sale devices within merchants, etc.); Point-of-Sale (PoS) devices or ATMs in place in locations or shops accessible to beneficiaries; some connectivity (to telephone or internet) is usually required, although there are exceptions; depending on the card provider and the system established, formal identification may be required.

⁵⁷ (USAID, 2011, pág. 14)

Figure 16. Distribution Systems Comparison

	Direct Cash	SIM Cards	Mobile Money
Current Situation in Indonesia	<ul style="list-style-type: none"> • In the short run, easiest and least costly distribution system • Currently used for BLSM and PKH • By December 2014, 14.5 million people received funds through “giro pos” 	<ul style="list-style-type: none"> • GOI currently undertakes efforts to distribute digital financial services and SIM cards (Family Welfare Card, KKS) • By December 2014 1 million households received money through these cards • According to TNP2K website, during 2015 remaining families will gain access to digital services and SIM cards⁵⁸ 	<ul style="list-style-type: none"> • The gap between those with telecommunications access and those with formal financial services access is increasing rapidly →Potential of mobile money is huge although not in the short term given the existence of some barriers⁵⁹
Advantages	<ul style="list-style-type: none"> • No training of beneficiaries is required • Can be operated on a large scale • Payments level can be varied • Does not require equipment • Postal offices are close to beneficiaries • Works on rural and urban areas 	<ul style="list-style-type: none"> • Do not need a telephone or internet connection • Authenticated digitally by a PIN number or digital fingerprint (no other ID is required) • Quick to set up as arrangements with financial service providers are already in place • Cards are in stock • No transportation of money • Small withdraws and/or leave money on the card is possible, promoting savings • Reduces data collection costs 	<ul style="list-style-type: none"> • Low costs • Can be arranged at a large scale (if traders are available, have enough cash flow, and there is a method to transfer cash to traders) • No transportation of money
Disadvantages	<ul style="list-style-type: none"> • Security and corruption risks for distributors and beneficiaries • Time for counting and distributing money in envelopes • Crowd must be control • Requires monitoring while distribution • Waiting time 	<ul style="list-style-type: none"> • Beneficiaries must be trained • Banking regulation may limit the flexibility of use • Scale and access depends on card reading infrastructure and connectivity • Costs of producing or replacing cards • Bank account and transfer fees • Some individuals (elderly, illiterate) may have difficulty operating ATM, forgetting PIN, and may be more vulnerable to fraud 	<ul style="list-style-type: none"> • Beneficiaries must be trained • Costs of SMS • Requires a formal ID and minimum literacy/education • Limitations due to agent coverage • Difficulties in assessing traders’ cash flow

Sources: (TPN2K) and (DG ECHO Partner) (TNP2K Programmes to Create Productive Families)

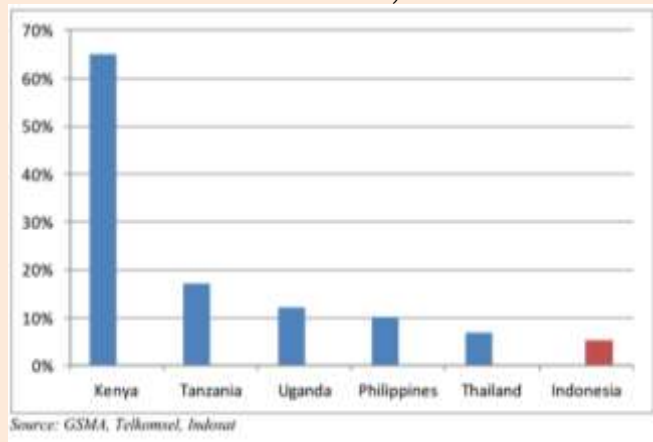
⁵⁸ (TNP2K, Family Welfare Deposit)

⁵⁹ (USAID, 2011, pág. 14)

Box 3. Mobile Money

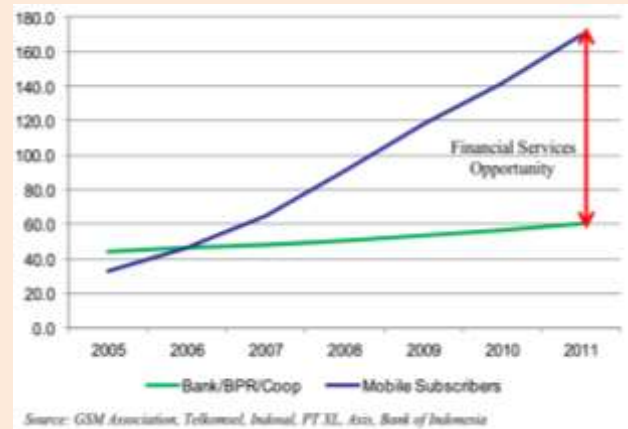
Mobile money is an innovative modality to transfer cash based on SMS codes sent to the beneficiary mobile phone that can be cashed out at particular shops. In the case of Indonesia, mobile money penetration is very low (~15% of mobile subscribers) compared to countries in Africa and even lower than in Thailand or Philippines (Figure 17). However, although not possible in the short run, the potential of developing this modality is huge as the gap between those with telecommunications access and those with formal financial services access is increasing rapidly (Figure 18). Given that only 21 percent of poor households in Indonesia have access to formal financial services (40 percent have access to informal services and 39 percent are underserved)^{1/}, mobile money access could result a modality with a larger scope than other means such as deposits in bank accounts.

Figure 17 Mobile Money Penetration
(mobile money subscribers as percentage of mobile subscribers)



Source: (USAID, 2011)

Figure 18 Mobile Telephone and Bank Penetration



Source: (USAID, 2011)

^{1/}Source: (USAID, Accelerating Mobile Money in Indonesia, 2011)

v) **Monitoring, evaluation, and measuring success**

Frequent, rapid, and efficient monitoring is important to verify that the new cash transfers program and the distribution system selected is appropriate, to understand how cash is being used, and to enable adjustments to the operational design. A results-based management approach should be followed, collecting information and data during monitoring to judge outcomes and results.

Thus, based on the objectives of the policy proposed, the suggested outcome indicators to measure its success are mainly, food consumption, calorie intake, dietary diversity, and administrative costs in order to better track the cost-effectiveness of the program. Moreover, there are other factors that in the case of cash transfers should be monitored, such as prices and supply of

all basic goods on the market. Price increases above an acceptable threshold or lack of supply may be used to trigger remedial actions such as OPK⁶⁰.

vi) Political Implementation Strategy: Authorizers

A crucial step in the implementation strategy is to obtain the authorization to intervene in the abovementioned areas. For this purpose, multiple parties should be involved besides Kemenkoskera: Council of Food Security (chaired by the President), Ministry of Home Affairs (mandate village councils), SOE (supervises BULOG), BAPPENAS, TPN2K, and Bulog's Director. Engaging broad sets of actors is important to ensure that reforms are viable, legitimate and relevant (politically supportable and practically implementable)⁶¹.

4.2. RECOMMENDATION 2. REVIEW, REDESIGN, AND KEEP RASKIN IN HIGHLY FOOD INSECURE AND REMOTE AREAS: IMPROVING EFFICIENCY

Our second recommendation is to review, redesign, and keep Raskin in those areas where cash transfers are not recommended. Raskin in-kind transfers are better fitted for remote areas where food supply is scarce and the private sector participation in the supply is very low due to high distribution costs. In Indonesia, 13 percent of all districts are food insecure⁶² and not able to consistently produce enough calories for their populations. Narrowing in-kind transfers to food insecure regions would diminish total costs as in-kind transfers would be required only in a reduced number of districts. Moreover, improvements in oversight and evaluation will make local administrators face adequate incentives to avoid misallocation and low quality of rice, as well as quantity and price manipulations. Although keeping Raskin as it is now would not reduce administrative costs significantly, the review and redesign of its procedures would improve the program efficiency, and consequently, its cost-effectiveness as whole.

4.2.1. IMPLEMENTATION STRATEGY AND NEXT STEPS

i) Assess local markets conditions and food supply

As mentioned previously, in-kind transfers are better suited for highly food insecure and remote areas where food intake is prioritized, prices are excessively high, markets are distant or do not function well, goods are not available and cannot be brought from distant markets because of conflicts or difficult access, as well as areas subject to natural disasters. For all the districts where supply cannot meet increased demand, Raskin rice transfers should be provided. The mechanisms

⁶⁰ (DG ECHO Partners, 2015a)

⁶¹ (Andrews, 2012)

⁶² (The World Bank, 2012, p. 9)

proposed to easily target the geographic areas where Raskin should be kept was explained with more detail before, please refer to Section 4.1.5.

ii) Improved Targeting

The same targeting procedure for cash transfers would be applied to Raskin transfers and as mentioned before, the geographical targeting based on market assessment would be the first stage, followed by the original Raskin targeting mechanism. However, looking to improve the program's coverage, the process of changing RTS-PM should be changed to better accommodate the deliberations coming from village meetings regarding eligible households. Lists of RTS-PM and total rice allocation should be updated in a continuous basis based on village deliberations, helping to better target the poor and guarantee adequate rice quotas.

iii) Business Process Review: Procurement, Storage, and Distribution

As it was explained in Section 3.2, Raskin has somehow been described as an ineffective program. According to SMERU (2008) findings “the Raskin program is relatively low effective, many problems emerge in the distribution of the rice from the primary distribution point to the beneficiaries [...] The low effectiveness [...] is indicated by the lack of program socialization and transparency; inaccurate targeting, amount, and frequency of rice received by beneficiaries, as well as price of rice; high cost of program management, ineffective monitoring and evaluation; and ineffective complaint mechanism”. In April 2014 the KPK alleged that Raskin was plagued by cartel practices, invalid data of targeted households, fictitious distribution of rice, rice-price hikes despite subsidies, unfair distribution, and poor rice quality. The KPK Chief claimed that the funds used to run the program exceeded the allocated budget in the last 3 years⁶³. More recently, given the recent 30 percent increase in rice prices (January 2015), the Trade Minister also signal the presence of cartels while the KPPU Head mentioned this is an issue of lack of government supervision and not necessarily of cartels crime.

News Quotes

“there was rice cartel playing the price around by piling stocks. Officials from the Trade Ministry have discovered some warehouses mix Raskin rice with other brands at their disposal. In addition, some rice from Bulog had reportedly been found in markets that were not within the agency's distribution remit”

Trade Minister, Rachmat Gobel¹

“This is a crime. The government should not switch the issue of its supervision to existence of cartel”

KPPU head M.Nawir Messi^{1/}

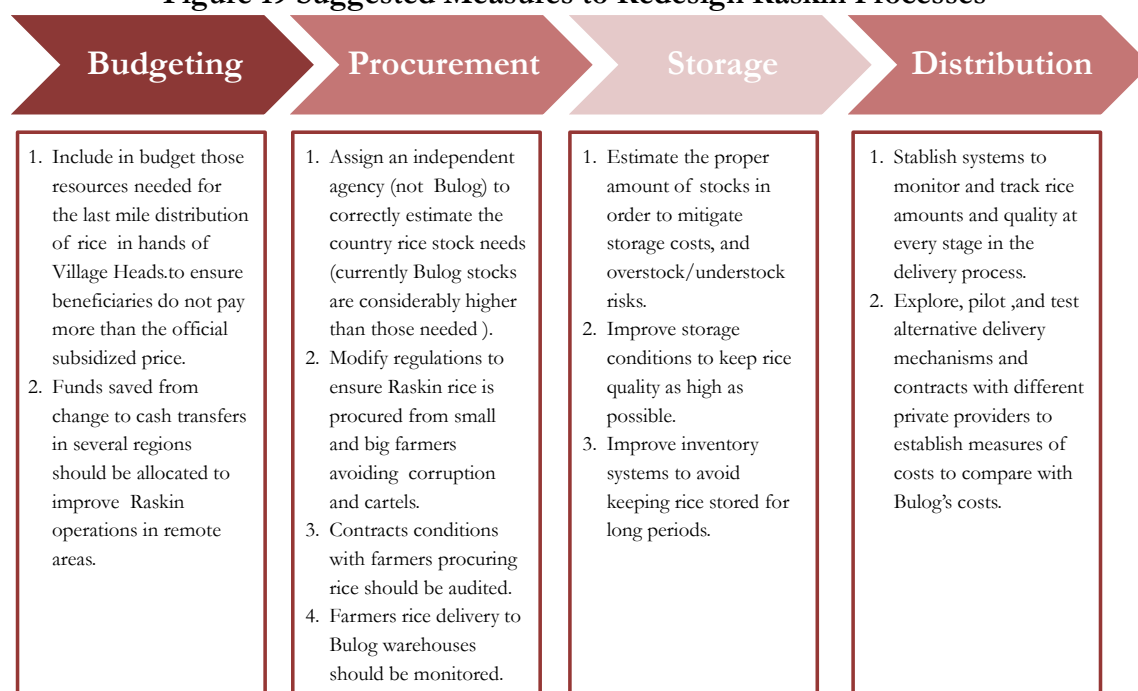
1/ (The People's Gazete, 2015)

⁶³ (Oryza.com, 2014)

Based on the above, a year ago in April 2014, the government committed to come up with an action plan to start a redesign of the Raskin⁶⁴ and several reforms and pilot projects have recently been initiated by TPN2K and BAPPENAS partnered with the World Bank and Poverty Action Lab to evaluate different policy alternatives such as introducing identification cards and allowing outsiders to bid at the village for the right to distribute Raskin⁶⁵.

However, there is a prevailing need to perform a thorough review of Raskin program's processes and operations in Stage 1 (procurement, storage, packaging, transportation, and distribution to Distribution Points) and Stage 2 (local governments distribution from Distribution Points to Allocation Points in villages) in order to identified further opportunities for improvement⁶⁶. The redesign of the program will come out from the findings of this BPR. However, some general recommendations must be implemented in each of the stages as suggested in Figure 19:

Figure 19 Suggested Measures to Redesign Raskin Processes



Source: Author's own elaboration.

⁶⁴ (Asia News Network)

⁶⁵ (Sumarto S. , 2014) The ID cards have been scaled up and distributed to 15.5 million poor households nationally as the pilot shows that cards increased monthly purchases of Raskin rice by 1.20 kg and decreased price mark-ups by Rp. 60/kg (increasing the monthly subsidy received by eligible beneficiaries by Rp 7,136, 25 percent). On the other hand, allowing for bidding did not result on large impacts on distribution given that only certain types of individuals could bid.

⁶⁶ As far as is known, a recent review of the Raskin program was conducted by Deloitte Jakarta. However, it was not possible to interview the Head of the project about the results due to confidential constraints. (Timmer & Dethloff, 2015)

iv) Monitoring, evaluation, and measuring success

As mentioned before, lack of transparency combined with poorly publicized changes in the program rules have provided substantial opportunity for corruption⁶⁷. Therefore, monitoring and evaluation performed by independent and credible external institutions will help to guarantee the appropriate implementation of Raskin. Based on (Hastuti, 2008), suggested actions are;

- i. Enforce process guidelines and regulations by an external auditing agency.
- ii. Introduce an incentive and penalty system to ensure that the program is implemented in accordance with the guidelines (i.e, awards, media announcements, demotion of officials).
- iii. Monitoring results must be presented to various parties including the public and used for the improvement of the program's implementation.
- iv. Require Bulog to publicly present a yearly business plan and quarterly financial statements.
- v. Make regular inspections to procurement points, warehouses, distribution and allocation points, as well as to transportation vehicles. Regular analysis of rout optimization.
- vi. Computerized mechanisms to monitor and inspect rice distribution must be established to keep track of amounts and quality of rice leaving warehouses, arriving to distribution points, to allocation points, and finally to households. These mechanisms should provide regularly with data and metrics to evaluate performance.

5. FOOD VOUCHERS: WHY NOT?

Also known as food stamps or near-cash transfers, food vouchers represent an intermediate policy between in-kind and cash transfers. There are different modalities of vouchers: i) commodity-based vouchers, which give access to a pre-defined quantity of food (e.g. 15 kg of medium quality rice). It can be only one staple or a food basket; and, ii) value-based vouchers, which provide access to food for a given monetary amount (130,000 Rp). It can be used to buy only one staple or a food basket and can be provided as paper vouchers or mobile vouchers (similar to mobile money)⁶⁸.

Although food vouchers represent lower administrative costs compared to those of the Raskin program, its superiority over cash in terms of effectiveness and administrative feasibility is not clear based on the available empirical evidence.

⁶⁷ (Olken B. , 2005)

⁶⁸ Fair vouchers are also possible, which mean papers or coupons that can be exchanged for goods from approved sellers only during a fair. However, this would increase costs as beneficiaries and suppliers will need to get to the fairs and transport the commodities which make this option not a cost-effective one.

5.1. TECHNICAL CORRECTNESS

As in previous sections, when evaluating the technical correctness of food vouchers, the relative impact of vouchers on beneficiaries' food consumption, calorie intake, and nutritional impact is analyzed. However, given that there are few case studies that evaluate vouchers relative to cash and food transfers (Ecuador and the Democratic Republic of Congo) results are not conclusive.

For the case of Ecuador, when looking at the impact on food consumption of in-kind transfers, it was three percentage points larger than that of vouchers, although not statistically significant. Regarding per capita calorie in-take, it is found that providing in-kind transfers had an impact 6 percentage points larger than that of providing food vouchers. However, this larger effect from food was mainly due to larger increases in consumption of cereals⁶⁹.

Regarding nutritional impact, vouchers resulted more effective than in-kind transfers improving the Food Consumption Score and the Dietary Diversity Index of beneficiaries. However, when looking at Household Dietary Diversity Scores, although results show that vouchers had a higher impact than cash for both Ecuador and DRC, none of the results is statistically significant.

Therefore, vouchers impact on food consumption or calorie intake seems to be lower than that of in-kind transfers, while regarding diet diversity, results differ depending on the indicator used.

5.2. COST-EFFECTIVENESS

Costs relative to effectiveness were also analyzed finding that the cost (USD) per transfer of food vouchers relative to in-kind is lower, but not as low as the cost of cash transfers. In the case of Ecuador, while the cost per transfers through vouchers was 3.27 USD, it was only 2.99 USD for cash transfers. Moreover, beneficiaries that received vouchers spend more time traveling and waiting, and money on transportation to obtain the benefit than those receiving cash. Likewise, in the case of DRC, vouchers are 1.2 times more expensive than cash (14.4 USD, and 11.3 USD respectively).

To end, when talking about cost-effectiveness it seems that increasing food consumption in 15 percent by providing vouchers costs 3.81 USD while the same increase costs only 3.79 USD when providing cash in the case of Ecuador. On the other hand, improving calories and diet diversity seemed to be cheaper through voucher than through cash.

⁶⁹ (Gentilini H. , 2014)

5.3. POLITICAL SUPPORTABILITY

In terms of gathering political support, vouchers and cash seem to have the same support from the stakeholders involved (central and local government, Bulog, private traders, etc.) except for the preference of beneficiaries. Based on the small survey to 10 households in Jakarta, eight of them preferred cash over vouchers⁷⁰.

5.4. ADMINISTRATIVE FEASIBILITY

Administrative feasibility is the main criterion that makes the implementation of food vouchers less plausible than that of cash transfers. While an unconditional cash transfer program is currently being run in Indonesia at a national level and the infrastructure and capacity needed is already in place, the implementation of food vouchers will require incurring in additional costs to set up the system.

For a successful voucher transfer program, there must be enough number of local traders to avoid overcrowding and minimize the risk of monopolies. Shops must be easily and safely accessible and with sufficient goods in quantity and quality. Local traders must be able to deal with the increased demand and cash flow needs, as well as willing to participate in the program. Finally, a secure and reliable way of paying traders must be available too⁷¹.

Vouchers Difficulties

- Costs of acquiring printing technology (paper vouchers) and to implement payment system for local providers.
- Local traders will need enough inventories to meet the new demand. Probably difficult in some regions and seasons.
- Costs for local traders to grow their facilities to meet new demand.
- Costs and time to negotiate agreements with local traders.
- Beneficiaries and traders are unfamiliar and may be hesitant to participate.
- Socialization and capacity building is needed.
- Given that diet habits and available food crops differ per region, a commodity based voucher would require to be adapted to each region. conditions

⁷⁰ (Jakarta Households Interviews, 2015)

⁷¹ (DG ECHO Partner, 2015)

6. CONCLUSION

In this study, three different policy options were evaluated based on the empirical evidence coming from different case studies and program evaluations. The first option, keep Raskin under current operations guidelines. Second, replace Raskin for food vouchers. Third, replace Raskin for unconditional cash transfers. As a result, two policy recommendations are suggested: i) replace in-kind transfers (Raskin) for cash transfers to reduce costs and improve effectiveness; and, ii) review, redesign, and keep Raskin in highly food insecure and remote areas where cash is not appropriate.

The evidence available shows that although in-kind transfers work better to increase food consumption and calorie intake, unconditional cash transfers result considerably most cost-effective by reducing operational costs, preventing discretionary allocation of the benefit, allow beneficiaries for greater choice, and also help develop local markets. Administratively, implementing cash transfers is feasible by using the available infrastructure for running the current unconditional cash transfer program (BLSM). Moreover, cash transfers are also politically supported by the central government, although probably Village Heads could express some concern given that Raskin is used as a mechanism to keep cohesion in communities.

However, , the study showed that cash transfers are not well fitted for highly food insecure areas where food supply is scarce and markets do not work well. For these cases, Raskin should continue conditional to an increase of oversight and evaluation to raise its effectiveness.

These policy recommendations are also accompanied by an implementation strategy that includes next steps such as assessment of the market conditions, estimation of the monetary transfer amount; and, evaluation of different distribution systems, among others. For the suggestion of reforming Raskin, a deep business process review should be implemented.

Moreover, there are still some questions that should be answered to complement the current analysis. If possible, an experimental study comparing Raskin, food vouchers, and cash should be piloted in Indonesia to validate the empirical evidence presented here. Also, it is necessary to estimate the impact of eliminating Raskin on households food security and retail prices. Finally, what would be Bulog's role after the reform should also be considered.

It is in the interest of the GOI to focus its efforts and resources on implementing the policy changes suggested as this will actively contribute to generate significant savings for the government budget while the poor will get the full amount of the intended benefit. Moreover, savings coming from the lower administrative costs of cash transfers could be allocated to new or existing programs that would bring a larger benefit for Indonesian households and for the country as a whole.

APPENDIX 1. CASE STUDIES AND IMPACT EVALUATIONS SUMMARY

Figure 20 Summary of Impact Evaluations Description

Program	Country	Program type ^a	Modality	Cash size (USD)	Food basket	Size as % of HH exp.	Transfer frequency	HH Size	Exposure	Year of data	Delivery mechanism	sample size (HHs at endline)	Evaluation method	Reference
PAL	Mexico	CT, UT	Cash, Food	13	F ¹	11.5	Monthly (cash), bi-monthly (food)	4.2	trial 1 year	2004-2005	Biometric debit cards	(a) 5,028 (b) 5,851 (c) 5,823	DD DD DD	(a) Cunha (2014) (b) Skoufias et al. (2008) (c) Leroy et al. (2010)
Zinder project	Niger	PW, UT	Cash, Food	50	F ²	11.5	Bi-weekly	7	6 months	July - October 2011	Mobile ATMs, smart cards	2,209	SD	Hoddinott et al. (2014)
PSNP	Ethiopia	PW, UT	Cash, Food	162	F ¹	N/A	Monthly	5	6 months per year	2006-2008	N/A	960	SD	Sabates-Wheeler and Devereux (2010)
Early Childhood Development	Uganda	CT	Cash, Food	102	F ¹	12.7	6-8 week cycle	6.2	12 months	October 2010 - April 2012	Mobile money cards	2,481	ANCOVA	Gilligan and Roy (2013)
Colombian refugees project	Ecuador	CT	Cash, Food, Vouchers	40	F ¹	10	Monthly	3.8	6 months	April - November 2011	ATM card	2,122	ANCOVA	Hindoo et al. (2014)
IDP's project	Democratic Republic of Congo	UT	Cash, Vouchers	185	V ^a	18.96	Bi-monthly	5.5	7 months	September 2011 - March 2012	Bank accounts	252	Fixed effects	Aber (2013)
Unconditional safety net	Yemen	UT	Cash, Food	49	F ¹	N/A	Bi-monthly	7.9	6 months	2011-2012	ID card via Postal Savings Corporation	1,881	SD, ANCOVA, DD, DDD	Schwab (2013)
Scholarship pilot program	Cambodia	CT	Cash, Food	5	F ¹	2.5	Monthly	6	10 months	August 2011 - August 2012	On-site manual distribution	4,091	DD	Baizer et al. (2014)
CTPP	Sri Lanka	UT	Cash, Food	9.8	F ¹	26.3	Bi-weekly (cash), bi-monthly (food)	3.8	3 months	November 2005 - February 2006	Samurai Bank	1,357 s	DD	Sharma (2006)
IGVD, FMP	Bangladesh	UT, PW	Cash, Food	19.7	F ¹¹	30 (cash), 15.5 (food)	Bi-monthly (cash), monthly (food)	4.6	2-4 years	2006	Public banks	1,200	PSM	Almeid et al. (2010)

¹ Seven basic items — enriched corn flour, rice, beans, dried pasta soup, biscuits, fortified milk powder, and vegetable oil—and two to four supplementary items (including canned sardines, canned tuna fish, dried lentils, chocolate, breakfast cereal, or corn starch; 3.5 kg of grain (primarily maize in the first transfer period and sorghum in the second), 0.71 kg of pulses (cowpeas, red beans, or lentils), 0.14 kg of vegetable oil, and 0.035 kg of salt; 3 kgs of cereals, plus pulses and oils; Food basket of approximately 1,200 calories, includes corn soy blend ("CSB" — highly fortified with iron among other nutrients), vitamin-A fortified oil, and sugar. The food basket was valued according to regional market prices at USD 40 and included rice (24 kilograms), vegetable oil (4 liters), lentils (3kilograms), and canned sardines (8 cans of 0.425 kilograms) (voucher). The list of approved foods consists of cereals, tubers, fruits, vegetables, legumes, meats, fish, milk products, and eggs). ^a three food items, wheat participants could get palm oil, sugar, cassava flour, beans, rice, vegetable oil, dried fish, salt, potatoes and peanuts. ⁷ For an average household size of seven persons is 50 kg of wheat flour and 5.0 liters of vegetable oil, ¹⁰ kg of rice per month, ¹ 1.4 kg Rice, 1.4 kg Wheat flour, 0.42 kg Pulses, 0.14 kg Oil, 0.14kg Sugar, 0.14 kg Corn soy blend, ¹¹ up to 20 kilograms (kg) of wheat or 16 kg of rice per month. *CT= conditional transfer, UT = unconditional transfer, PW = public works.

Figure 21 Summary of Impact Evaluations on Food Consumption and Calorie In-take

Food Consumption		Impact			Percentage Change			Relative impact compared to baseline (percentage points)	
		Cash	Food	Voucher	Cash	Food	Voucher	Food - cash	Food - voucher
(Ahmed et al. 2010)	Bangladesh	113	89	taka	21.24%	17.84%		-3.40	
(Skoufias et al. 2008)	Mexico				18.30%	17.60%		-0.70	
(Hidrobo et al. 2014a)	Ecuador				12.00%	16.00%	13.00%	4.00	3.00
(Sharma 2006)	Sri Lanka	754.87	650.68	Rs.	66.22%	52.60%		-13.62	
<i>Reported relative impact (food vs cash)</i>									
(Barker et al. 2014)	Cambodia		-33.64	USD.				-13.40	
(Schwab 2013)	Yemen							-12.00	
Calorie In-take									
(Hidrobo et al. 2014a)	Ecuador				6.00%	16.00%	11.00%	10.00	5.00
(Cumha 2014)	Mexico	61.4	103.16	kcal	7.42%	12.27%		4.86	
(Ahmed et al. 2010)	Bangladesh	271	164	kcal	12.80%	7.94%		-4.86	
(Schwab 2013)	Yemen							4.00	
<i>Reported relative impact (food vs cash)</i>									
(Sharma 2006)	Sri Lanka		-37.4	kcal				-1.47%	

Source: (Gentilini H. , Our Daily Bread: What is the Evidence on Comparing Cash versus Food Transfers?, 2014)

Figure 22 Summary of Impact Evaluations on Diet Diversity

Food Consumption Score		Impact			Relative impact compared to baseline (difference in index values)				
		Cash	Food	Voucher	Food - cash	Food - voucher	Voucher - cash		
(Hidrobo et al. 2014a)	Ecuador	6.48	6.1	9.41	-0.38	-3.31	2.93		
(Barker et al. 2014)	Cambodia				0.52				
(Hoddinott et al. 2014)	Niger (October)				3.53				
(Hoddinott et al. 2014)	Niger (July)				3.91				
(Schwab 2013)	Yemen				-4.52				
Dietary Diversity Index									
(Hidrobo et al. 2014a)	Ecuador	2.39	1.98	2.89	-0.41	-0.91			
(Hoddinott et al. 2014)	Niger (October)				0.38				
(Hoddinott et al. 2014)	Niger (July)				0.56				
(Schwab 2013)	Yemen				-0.63				
Household Dietary Diversity Score									
(Hidrobo et al. 2014a)	Ecuador	0.4	0.51	0.51	0.11	0	0.11		
(Aker 2013)	Republic of Congo	0.13		3.36			3.23		
(Schwab 2013)	Yemen				-0.41				
Food Gap									
(Gilligan and Roy 2013)	Uganda	-0.36	-0.58		-0.23				
(Sabates-Wheeler and Devereux 2012)	Ethiopia	0.42	1.25		0.83				

Source: (Gentilini H. , Our Daily Bread: What is the Evidence on Comparing Cash versus Food Transfers?, 2014)

APPENDIX 2. POLICY ALTERNATIVES, EVALUATION METHODOLOGY, AND CRITERIA

Policy Alternatives

From the literature review it was found that food security interventions could be categorized in: those that influence food supply (reduce producer's and therefore consumer's prices), those that reduce prices only to consumers, and those that increase income. This way, this analysis will only focus on interventions that could help to improve the affordability of poor households by increasing household's income. Therefore, the policy alternatives evaluated are:

1. **Food Vouchers:** Also known as food stamps or near-cash transfers, food vouchers could be an intermediate policy between in-kind and cash transfers that can be distributed to poor targeted households. These stamps could be restricted to one particular food staple or a basket of food items. However, this mechanism is efficient when markets exist and have a reliable source of supplies (Kramer, 1990). Two types of vouchers were considered:
 - **Commodity-based** vouchers. Giving access to a pre-defined quantity of given foods.
 - **Value-based** vouchers. Providing access to rice for a given monetary amount.
2. **Cash Transfers:** Accordingly to the World Bank⁷², cash transfers consist on the provision of assistance in the form of cash to the poor or to those vulnerable to become poor in the absence of the transfer. The main objective of this mechanism is to increase poor and vulnerable households' real income. One of the advantages of cash transfer programs is the amount of choice given to beneficiaries in using this cash compared to other transfers and also stimulates local markets. In addition, cash transfers imply lower operating costs. However, the challenge is to define the appropriate level and to avoid elite capture and inefficient use of the funds.

Methodology and Evaluation Criteria

Since the purpose of the current research is exploratory, descriptive, and analytical, both qualitative and quantitative analysis was performed in order to evaluate the convenience of the different policy alternatives described before.

Based on the literature review, most of the policy evaluations of in-kind versus food vouchers, versus cash transfers conducted for other countries are based on experimental methodologies such as randomization control trials. However, given the time and budget limitations, this strategy is not feasible for this study. Therefore, the evaluation methodology used was mainly based on documents review, comparative case studies, and personal interviews.

⁷² (The World Bank, Cash Transfers, 2015)

Document Review: A broad range of documents such as laws, program guidelines, news, program's performance evaluations and other research papers were reviewed to better understand the current conditions of food security and policy in Indonesia as well as the political and administrative context.

Comparative Case Studies: Based on the literature review, there are several studies available for countries like Mexico, Ecuador, Bangladesh, Cambodia, Congo, etc. in which the authors evaluate in-kind transfers and vouchers relative to cash transfers. The results of those with the most similar context to that of Indonesia (where the policy was implemented as a social protection system) are used as reference and compared to the benchmark which is the Raskin Program as currently implemented.

Interviews: During a field trip to Indonesia (January 2015), a series of structured and unstructured interviews were conducted in order to capture the perceptions of local stakeholders such as central government officials, research centers, government policy advisors, Raskin and cash transfers' beneficiaries, as well as food security experts. Although intended, it was not possible to interview members of the local government, ministers, Bulog staff and private consultants conducting Raskin Business Process Review. By this approach, their perspectives on issues related to the effectiveness and convenience of either in-kind, vouchers or cash were examined.

Field Visits: In depth observation of the distribution of Raskin rice as well as cash transfers was not possible given that during the field trip, neither Raskin nor cash were distributed (indeed, Raskin distribution was delayed for a month). Moreover, based on personal communications it seems there is no way to know when Raskin distribution will occur⁷³.

Based on the information obtained from these sources, the assessment of the different policy alternatives will take into account five different criteria: technical correctness, cost-effectiveness, political supportability, and administrative feasibility.

⁷³ (Khadijah, 2015).

Figure 23 Policy Alternatives



Source: Author's elaboration.

Figure 24 Methodology and Criteria for Policy Selection

	Evaluation Methodology	Evaluated Criteria
Qualitative and Quantitative Analysis	<p>Documents Review:</p> <ul style="list-style-type: none"> Research Indonesia's political context and administrative capabilities, etc. through the study of documents such as laws, guidelines, news, performance evaluations, etc. <p>Comparative Case Studies:</p> <ul style="list-style-type: none"> Analyze different impact evaluations of policy alternatives proposed for different countries and for different staples with a similar context as Indonesia. <p>Interviews (structured and unstructured):</p> <ul style="list-style-type: none"> Intended to capture perceptions of local stakeholders. Central government: TNP2K Research centers/Policy Advisor: JPAL, SMERU, World Bank Beneficiaries: Raskin and unconditional cash transfers urban beneficiaries Food security experts 	<p>Technical Correctness (Food Consumption, Calorie Intake, Nutritional Impact)</p> <p>+</p> <p>Cost Effectiveness</p> <p>+</p> <p>Political Feasibility</p> <p>+</p> <p>Administrative Feasibility</p>
	<p>INTENDED BUT NOT POSSIBLE</p> <p>Field visits</p> <ul style="list-style-type: none"> In depth observation of the implementation of Raskin and cash transfers. <p>Interviews (unstructured)</p> <ul style="list-style-type: none"> Local government Central government ministries involved (Social Affairs, State Owned Enterprises) Bulog Staff Private consultants (Business Process Review) 	

Source: Author's elaboration.

Figure 25 Policy Alternatives Evaluation Summary Figure 25 shows the policy alternatives evaluation summary. In order to calculate the average score, values of 1, 2, and 3 were allocated to Low, Medium and High categories.

Figure 25 Policy Alternatives Evaluation Summary

Criteria	Status Quo Raskin	Option 1A (Rice vouchers) Commodity Based	Option 1.B (Food vouchers) Value Based	Option 2 Unconditional Cash Transfer
Technical Correctness	High	High	High	High
Nutritional Impact	High	Medium	Medium	Medium
Cost Effectiveness	Low	Medium	Medium	High
Political Feasibility	High	Medium	Medium	Medium
Administrative Feasibility	Low	Medium	Medium	High
Average (L=1, M=2, H=3)	2.2	2.2	2.2	2.6



POLICY RECOMMENDATION

1. **Replace in-kind transfers (Raskin, Rice for the Poor) for cash transfers.**
2. **Review, redesign, and keep Raskin in highly food insecure and remote areas.**

Source: Author’s elaboration.

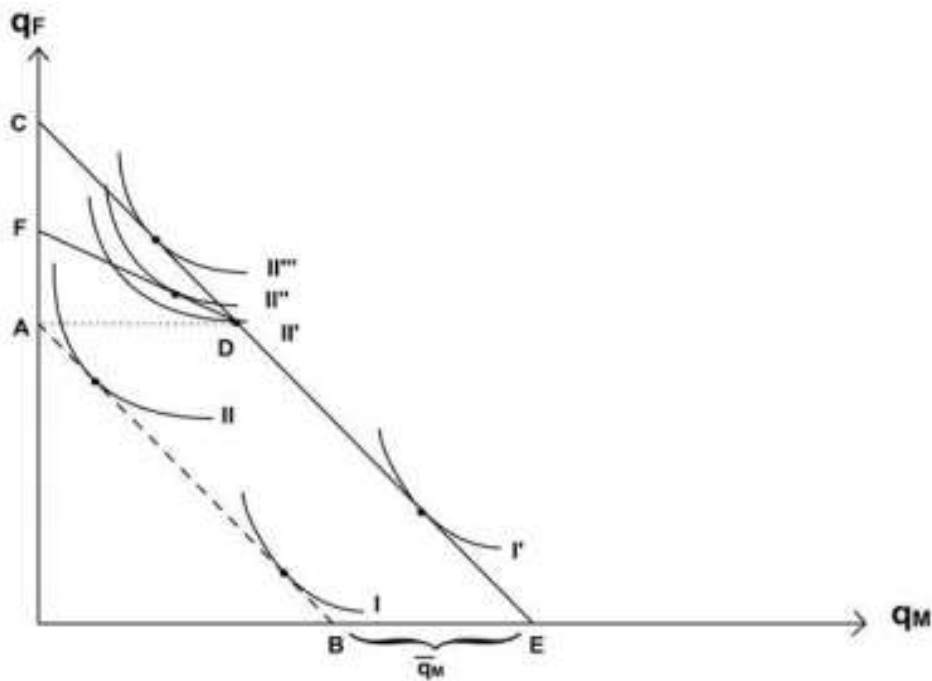
APPENDIX 3. THEORETICAL FRAMEWORK

This section follows closely (Gentilini H. , Our Daily Bread: What is the Evidence on Comparing Cash versus Food Transfers?, 2014) and (Cunha J. , 2013) almost verbatim.

Following (Gentilini H. , Our Daily Bread: What is the Evidence on Comparing Cash versus Food Transfers?, 2014), consider a simple model with food (horizontal axis) and cash (vertical axis). A cash transfer shifts the budget constraint from AB up to CE, while an equal in-kind transfer (e.g., rice of a size of QM) leads to a kinked budget ADE (Figure 26).

Then suppose there are two households, I and II. Household I is indifferent between transfer type, moving from indifference curve I to I' under either transfer. Household II, instead, is weakly worse off under the in-kind transfer, consuming at point II' (the kink) if resale is prohibited (or at II'' if resale is costly). Note that the household would have chosen II''' under a cash transfer program. If resale is not possible, the in-kind transfer of QM is extramarginal for household II as it consumes more rice than it would have under a cash transfer. Conversely, the in-kind transfer is inframarginal for household I and its effects are equivalent to cash''.

Figure 26 Microeconomic Effects of Cash and In-kind Transfers



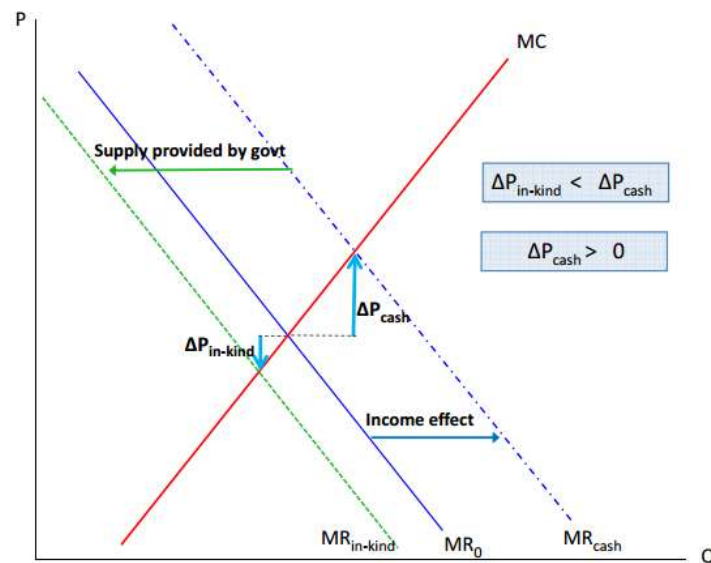
Source: (Gentilini H. , 2014)

If we also want to think on the effect on prices, we can follow Cunha (2013) framework. What they do is that they depict the market of a normal good (we can think rice as a normal good) (Figure 27 Figure 26). The demand curve represents the aggregate demand faced by local suppliers. The Figure shows the following:

Cash transfer effect: The demand curve shifts to the right via an income effect, and the equilibrium price, p , increases. Denoting the amount of money transferred in cash by $XCash$, our first prediction is that a cash transfer will cause prices to rise.

In-kind transfer effect: In-kind transfers also generate an income effect, so demand will again shift to the right. We define the in-kind transfer amount $XInKind$ in terms of its equivalent cash value. Thus the demand shift caused by a transfer amount X is by definition the same for either form of transfer. With an in-kind transfer, however, some of consumers' demand is now provided to them for free by the government so the residual demand facing local suppliers shifts to the left by the amount provided in-kind.

Figure 27 Effect of Cash and In-kind Transfers on Prices

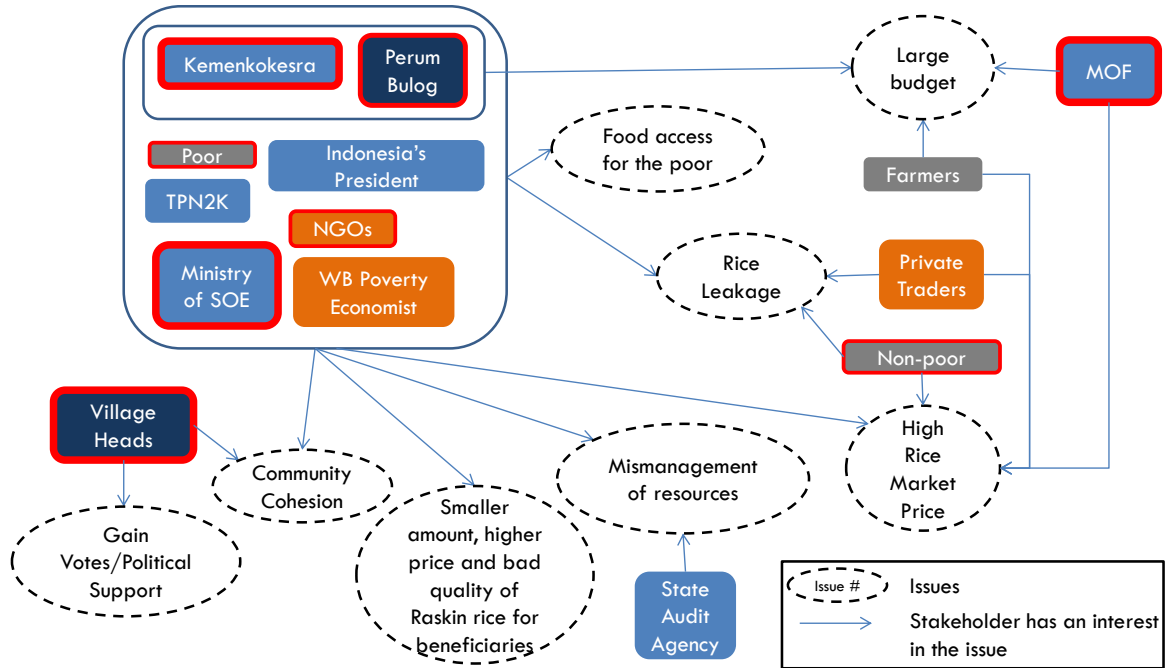


An in-kind transfer has two effects, an increase in the demand facing local suppliers due to an income effect, and a decrease in demand facing local suppliers because the government meets some of consumers' demand via its transfer. The net effect is that the marginal revenue curve shifts from MR to $MR_{in-kind}$. A cash transfer has only the income effect, and the marginal revenue curve shifts to MR_{cash} .

Source: (Cunha J. , 2013)

APPENDIX 4. STAKEHOLDERS MAPPING

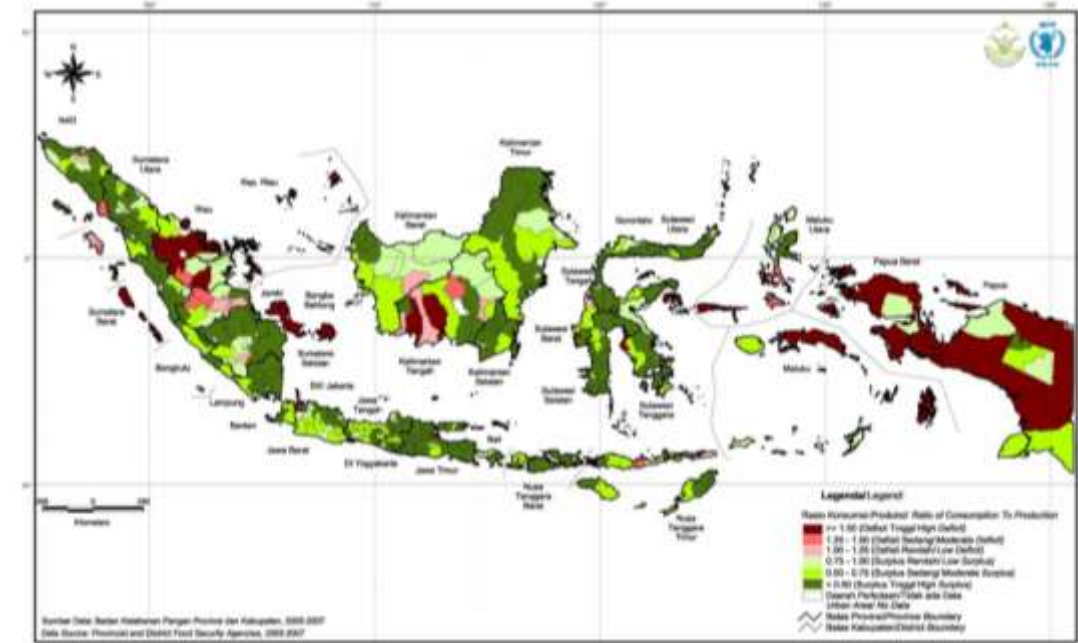
Figure 28 Stakeholder-issue Interrelationship diagram



Source: Author's elaboration based on documents review and interviews.

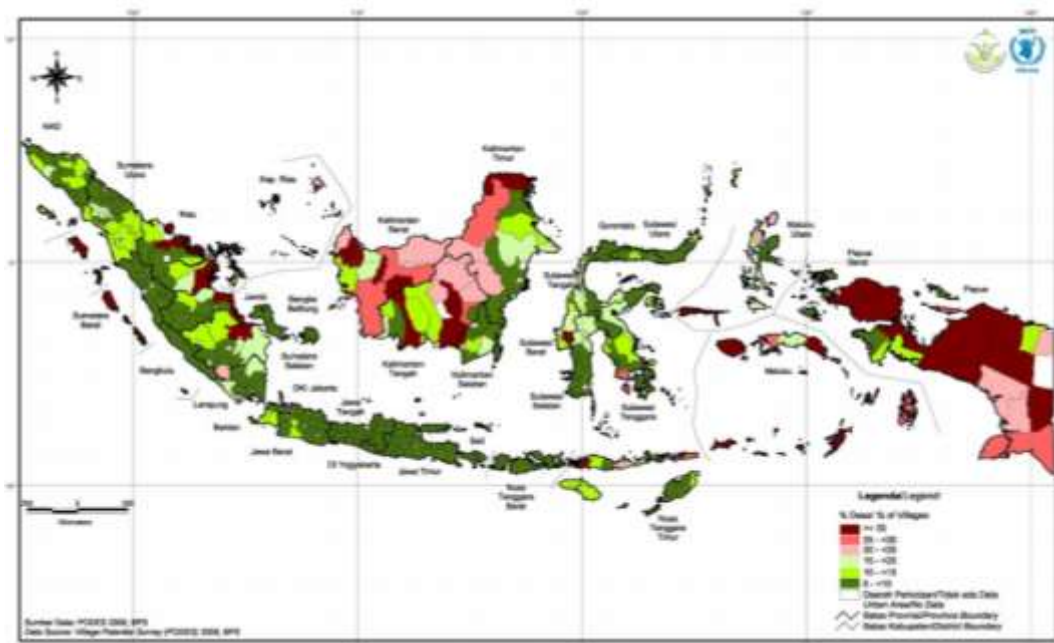
APPENDIX 5. Assessment of local markets and food supply. Mechanism 1: Suggested Food Insecurity Index

Figure 29 Map of Ratio of Per Capita Consumption to Cereal Production



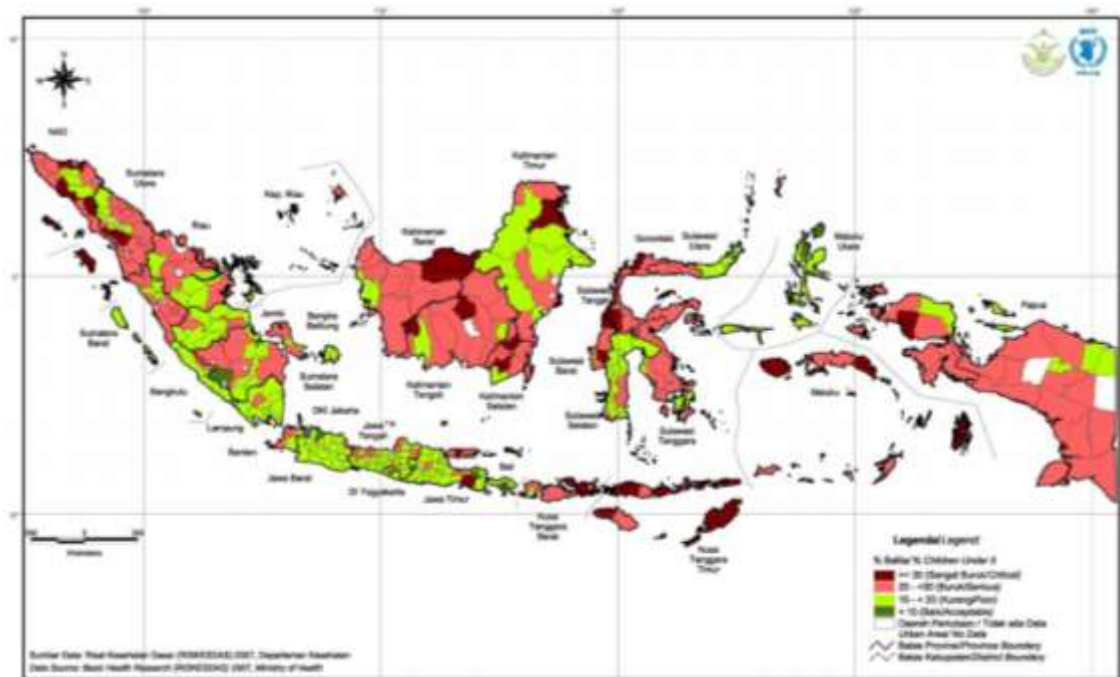
Source: (World Summit on Food Security, 2009)

Figure 30 Map of Villages Not Accessible by Four Wheel Vehicle



Source: (World Summit on Food Security, 2009)

Figure 31 Map of Underweight Children (<5 years)



Source: (World Summit on Food Security, 2009)

APPENDIX 6. ADMINISTRATIVE FEASIBILITY EVALUATION

Figure 32 Administrative Feasibility Evaluation

Policy Options	Material Resources Issues	Human Capacity Issue	Evaluation
<u>Option 1</u> Raskin	<ul style="list-style-type: none"> Highly costly Logistics Transport Storage and distribution 	<ul style="list-style-type: none"> Large opportunities for corruption unless M%E Build Local governments capacity Improve information asymmetries Socialization 	Low
<u>Option 2.A</u> (Rice vouchers) Commodity Based	<ul style="list-style-type: none"> Lower costs Involves large number of smaller downstream actors Traders would need to adjust their capacity to meet higher demand Weekly collection and payment system Proximity of markets should be analyse 	<ul style="list-style-type: none"> Facilitators in communities Train beneficiaries Train traders Less opportunity for corruption 	Medium
<u>Option 2.B</u> (Food vouchers) Value Based	<ul style="list-style-type: none"> Lower costs Involves large number of smaller downstream actors Traders would need to adjust their capacity to meet higher demand Weekly collection and payment system Proximity of markets should be analyse 	<ul style="list-style-type: none"> Limited to commodities available in the location Less opportunity for corruption 	Medium
<u>Option 3</u> Unconditional Cash Transfer	<ul style="list-style-type: none"> ATMs or Postal Office A similar program/logistics are already on place 	<ul style="list-style-type: none"> Less opportunity for corruption + finance staff 	High in urban areas Low in remote and rural areas

Source: Author's elaboration based on documents review and interviews.

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