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On The Complexity of Eliminating Fuel Subsidy in Indonesia; A Behavioral Approach¹

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Abstract

People's attachment to a subsidy creates difficulties for the government to phase out, and eventually eliminate, the subsidy. Elimination of fuel subsidy scheme in Indonesia is a perfect example of such occurrence. The subsidy has been implemented to commodity as opposed to households, thus individuals may not necessarily realize that they have been enjoying the subsidy when they buy fuel. In this case people may feel as if they are endowed by the values from the provision of the policy. The elimination of the subsidy consequently may be perceived as a loss - as opposed to a foregone gain.

This study aims to obtain the most acceptable exit strategy to eliminate the subsidy from the perspective of households by conducting a laboratory-based survey. The alternative exit strategies include methods of elimination of the subsidy and of reallocation of resources saved from eliminating the subsidy. The policy options have been derived using insight from behavioral economics ranging from endowment effect, status quo bias, to present biasness.

The survey includes 335 subjects, who come from four different backgrounds: 1) households with no motor vehicle; 2) households with only motorcycle(s); (3) households with one car and; 4) households with one luxurious car or more than one car. Each subject faces 55 paired-wise policy alternatives and the method proposed by Dunn-Rankin (1983) has been used to derive the ordering of preferences.

The result shows that gradual elimination of fuel subsidy and reallocation to earmarked programs were the most acceptable policy elements of the exit strategy. The survey, indirectly, showed that subjects' valuation of losses is greater for direct elimination strategies than that of the equivalent gradual elimination strategies. The results also show that respondents chose "to pay" later at a smaller amount than "to pay" immediately of the equivalent total value. The reallocation of resources saved to earmarked programs is more acceptable than the reallocation to non-earmarked programs. In particular, respondents opted for a more immediate compensation from the elimination or reduction of the subsidy.

Key Word: Fuel subsidy, experimental economics, laboratory-based survey, paired comparison, preference relation, reallocation of resources.

JEL Classifications: C91, D03, D12, Q48

1. INTRODUCTION

Most governments, in general, face difficulties of eliminating or phasing out policies—especially those, which provide transfer payment to households—owing to people's attachment to the policy. Individuals' valuation of the policy include not only to the extent of

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explicit value of the policy their entitlement to the policy and how long have they been benefited from the policy. Any attempt to eliminate or phase out the subsidy, therefore, will be perceived by households as a loss. Demonstrations occurred in Nigeria and Indonesia, as a reaction of the governments' plans to cut fuel subsidy, provide perfect examples on the complexity of eliminating or phasing out the policy.

Standard economic analysis does not provide sufficient analytical explanation on why people have a strong view when the subsidy that they have received will be eliminated or phased out. The analysis does not suggest that individuals weigh losses much more than gains, therefore individuals' attachment on the subsidy and their over reaction against the policy to reduce the subsidy, for instance, should not be as strong as what were occurred in Indonesia, Nigeria and India.

Behavioral economics may provide explanation on the overreaction of individuals' attitude toward the policy to reduce fuel subsidy in those countries. There are overwhelming evidences that individuals tend to weigh losses much larger than the respective gains (Markowitz, 1959, Kahneman and Tversky, 1979, 1991, Tversky and Kahneman, 1992, Rabin, 2000, inter alia). Individuals' evaluation toward the goods that they possessed tends to be higher than their valuation toward the goods before they possess them and, as a result, individuals' willingness to pay is different from their willingness to accept (Knetsch, 1994, Kahneman, Knetsch, and Thaler, 1990). Samuelson and Zeckhauser (1988) found similar evidence and they called the phenomenon as status quo bias.

In term of intertemporal decision-making process, individuals suffer from the lack of self control or present biased preferences (Laibson, 1997; O'Donoghue and Rabin, 1999; 2001). Furthermore, individuals are not good in making future plans (Bone, Hey and Suckling, 2003, 2009, Hey, 2004, Hey and Knoll, 2009).

People tend to perceive foregone gain to be more acceptable than losses. Thaler and Benartzi (2008) used behavioral economics as insights to formulate "prescription" for employees' savings problem. Their proposed program, Save More Tomorrow (SMarT), attempt to induce employees to join the program by framing saving as a forgone gain as opposed to a loss.² In the program, an increase in employees' saving occurred due to a change of saving concept from taking part of current take-home pay to foregoing a part of future increase in their

² Foregone gain is more acceptable than loss (Reeson and Dunstall, 2009)

salary. The program was successful since it took into account individuals' behavior toward gains and losses.

Fuel subsidy scheme in Indonesia has been implemented for decades owing to the fact that as an oil producer people are entitled to benefit from what was "endowed" to them. Fuel subsidy scheme, politically, can be easily framed as a good policy. Owing to the idea that people feel as if being endowed, people do not realize that they are buying fuel at subsidized price, nevertheless people feel as if they are paying the real price.

The fuel subsidy scheme is inefficient with the fact that the rich consume more subsidized fuel than the poor.³ The Government of Indonesia alternatively can use the fund for strategic development and poverty alleviation program. The Government of Indonesia (GoI) had planned to remove fuel subsidy, although the plan did not materialize, owing to political pressures toward the policy.

Normative theories, derived by solving particular optimization problem (Raiffa, 1982; Thaler and Benartzi, 2008), may not be sufficient to opt for one specific policy as a result in giving up the fuel subsidy. This study aims to seek the most acceptable policy option regarding the elimination of fuel subsidy in Indonesia using behavioral economics insights. In particular, the design of the study reflects individuals', with different characteristics, responses to losses and endowment effect. We aim to obtain a set of policy options regarding the elimination of fuel subsidy that are most acceptable by the households.

This article first highlights the formulation of policy options using behavioral insights. A short description on the fuel subsidy in Indonesia will be discussed in section 2. Section 3 discusses the application of paired comparison method to assess households' acceptability to the alternative policy options. Finally, the results of laboratory-based survey regarding the most acceptable policy in eliminating the fuel subsidy in Indonesia is discussed in section 4.

2. COMMUNITY PREFERENCE-BASED STRATEGY

It is essential to assess community preferences regarding a policy to eliminate fuel subsidy, as the preferences would reflect the values that individuals assigned. In general, individuals tend to perceive the elimination of fuel subsidy as a loss. Each individual, however, is going to have different attitude toward the elimination of fuel subsidy. Similarly, individuals may have

³ See Pradiptyo and Sahadewo (2012) for the discussion regarding distortionary effect of fuel subsidy.

different attitude when they face negative prospects. These differences in attitude result in different economic and heuristic valuation toward the policy.

Households' behavior in reality may not necessarily follow closely the optimal plan proposed by permanent-income hypothesis in the account of two arguments (Thaler and Benartzi, 2004).⁴ First, households might fail to compute the actual losses that they bear owing to the policy. Second, even if households knew the actual losses, they might be lacking of self-control to reduce current consumption for future consumption (Thaler and Shefrin, 1981, Shea, 1995). Moreover, households might find it difficult to integrate intertemporal choice prospect into their existing plan (Frederick et al., 2002).

The insights of time preference, particularly of gains and losses, and endowment effect also have important implications to the formulation of the policy options.⁵ Most individuals tend to procrastinate (O'Donoghue and Rabin, 2000) owing to time inconsistency leading to subjective valuation of a prospect with the same value is higher at an earlier date over a later date. Individuals also tend to impose smaller discount rates for losses than those of for gains (Thaler, 1981; Loewenstein, 1987). Individual valuation of a goods ties closely with his or her entitlement to that goods. In particular, valuation of the goods is higher when the goods belong to the individual (Kahneman, Knetsch, and Thaler, 1990, Knetsch, 1994, Samuelson and Zeckhauser, 1988). This idea is in line with the Prospect Theory, which stated losses are weighed more heavily than respective gains (Tversky and Kahneman, 1979, Kahneman and Tversky, 1991, 1992).

One important insight regarding the endowment effect is that households, in general, do not feel that they are being subsidized when purchasing the subsidized fuel. Most households do not actually know and observe the gains that they have received from the fuel subsidy. Households feel as if that they have been endowed with the subsidy, intensifying people's attachment to the policy. Removal of the subsidy therefore would not be regarded as a foregone gain but rather as a loss.⁶ As Idson et al. (1999) stated, the intensity of people's reactions to a loss is greater than a non-gain.

⁴ See Modigliani and Brumberg (1954) and Friedman (1957) for discussion of permanent-income hypothesis

⁵ See Thaler and Benartzi (2004), Warner and Pleeter (2001), and Hausman (1979) used insights regarding time preference to formulate policies.

⁶ Individuals may also face negative outcomes not only to the extent of removal of the subsidy but also possibility of increase in general prices of goods and services.

In relation to the elimination of the subsidy, the main challenge of the policy would be in the assessment of economic value of a particular reform since such assessment is important to ensure optimal allocation of resources. In the case of environment losses valuation, Kahneman, Ritov, and Schkade (1999) suggested that there are limited methods to estimate monetary values as well as limited agreement regarding consistency of the valuations. They found that individuals faced complexity in performing monetary valuations. This finding was supported by Rutherford et al. (1998) who reported that people found difficulty in providing consistent monetary measures.

The alternative strategy to overcome the problem above is to construct ranking of the relative importance using people's judgments. Kahneman, Schkade, and Sunstein (1998) found consistency in individuals' assessment of relative values. The concept of relative value in this study follow closely Brown's (1984) concept that is "*value is the expressed relative importance of worth of an object to an individual or group in a given context*". Such value provides relative importance of the choices using implicit or explicit comparison (Brown, 1984). The scale of relative importance is essential in the formulation policy to optimize resource allocation. The values attained from this exercise would reflect people's choices, which were socially acceptable (Chuenpagdee, 1998).

The advantage of the use of ordering choices is that irrespective of the background of households, subjects would perform a less daunting and a less difficult task in providing ranking of the choices (Chuenpagdee, 1998).⁷ As a result, households may be able to stipulate a consistent ranking of alternatives. The use of ordering of choices is sufficient to be used in a study provided that the study focuses on the ordering of the alternatives (Arrow, 1951). It should be noted that the households may face incommensurable options during the process. Chuenpagdee (1998) exerted that reasonable choices and ordinal ranking are feasible even if options are incommensurable.

In this study, households' preferences regarding the elimination of fuel subsidy were derived using choices of relative values. These choices, established in a range of policy options, were formulated and tested to subjects who would be affected by the policy. The study aims to observe whether a particular policy option of eliminating fuel subsidy is more acceptable than the others. Each policy question consisted of two policy elements which were methods of phasing out the subsidy and methods of reallocating the resources due to the policy.

⁷ Such strategy is also used in the valuation of environmental losses where monetary valuation is imperfect.

Considering various behavioral factors which may be attributable to households' decisions, we set up two methods of phasing out the subsidy: straight elimination and gradual elimination. Indeed, from the perspective of households, the elimination of fuel subsidy is considered as a loss, thus it is interesting to observe whether individuals choose to cope with the scheme at an earlier date or later. A straight elimination will be regarded as a higher decrease in current income relative to a gradual elimination. This notion would be more relevant to households with relatively high consumption of subsidized fuel both nominally or proportionally to their expenditure plan. This type of households may well carefully calculate the effect of both prospects to their consumption. In contrast, households who do not consume subsidized fuels may feel indifferent between the two prospects of subsidy elimination.

Each policy option was composed by incorporating methods of reallocating resources of fuel subsidy. There were two broader schemes of reallocation which are earmarking or dedicated funds and general or unstipulated funds. These schemes reflect two different agents, namely, the GoI and the households, who may have different utility functions. In general, their utility functions may be conflicting from one to another. What the GoI perceives as the first best option of reallocating the fuel subsidy fund may not necessarily be perceived as the best option by the households.

The GoI may focus on maximising the social welfare function of the society not only for the short run but also for the long run given certain budget constraint. The GoI will allocate its budget to wide-range government's programs, however, each program may not necessarily be targeted to a particular or a group of households as the program seeks optimal allocation of available resources. On the other hand, households tend to maximise their own utility functions, and they may not necessarily consider neither other households' utility function nor future generations' utility function. At this point, the GoI and the households may have different utility functions, and to some extent their utility function may also be conflicting from one to the other. Consequently, what the GoI perceives as the best option to eliminate the fuel subsidy and to reallocate the fuel subsidy fund may not necessarily be perceived as the best option by the households.

Consider a case in which two types of household, the first type receives the benefit of subsidy whereas the second type does not receive the benefit of subsidy. Dedicated funds or earmarking allow households of the first type to observe the goods or cash as a compensation of the eliminated subsidy. Let us assume that elimination of subsidy implies that households

are making payments. Earmarking would be more preferable for households as they seem more like getting something for the payment, analogous to a transaction in the market. Unstipulated funds or general program, on the other hand, implies that households may not directly receive anything for their payment. As a result, households receiving fuel subsidy would consider such scheme to result in a loss as opposed to a transaction. Households of the second type may consider earmarked programs as a gain rather than a compensation for their payment. Moreover, these households may be indifferent to reallocation to general program.

Households may also face uncertainty from reallocation to general program. Caplin and Leahy (2001), who incorporated expected utility function anticipatory emotions driven by uncertainty about the future, suggested that such emotion lead to time inconsistency. Empirical studies, such as that of Gideon Karen and Peter Roelofsma (1995) and Albrecht and Weber (1996) showed that uncertainty to current and future rewards influence individuals valuation (Frederick et al., 2002).

In this study, child vaccination and mass rapid transportation (MRT) were two earmarked programs which would be used to reallocate the eliminated subsidy. There are several rationale for choosing child vaccination as one of earmarked programs in the experiment. First, child vaccination is a straightforward arbitrary example of direct reallocation program for households. Every households need vaccination program, provided that each of them are endowed with child(ren). Second, child vaccination program has a widespread coverage. Every households, with different income background, are able to receive the benefit from vaccination program. The poor and low-income households have an equal opportunity to receive the benefit of child vaccination program as the high-income households. Third, even though child vaccination provides immediate reward, households cannot experience the benefit immediately. The benefit of vaccination, that is prevention of diseases, mortality, or disability for a single child, cannot be valued directly into monetary unit.

The other policy choice proposes earmarked reallocation of fuel subsidy saved to development of mass rapid transportation (MRT). The MRT would provide benefit to the household irrespective of their income background. Establishment of MRT would serve as the optimum alternative to private vehicle usage. The most apparent difference is that the coverage of MRT is not as vast since the MRT would be built only in several cities and districts. Each household would also value the MRT differently. For example, households who commute in workdays would value the project higher than those whose activities are

home-based, such as home industry owner. Additionally, the execution of the MRT development would not be as swift as that of the vaccine thus households may not view the reallocation as immediate reward.

One of the policy choices offered in this experiment also include reallocation for repayment of foreign debt including its interest. On the contrary to the vaccination and MRT development program, repayment of foreign debt is an indirect reallocation program. Households would not receive immediate benefit if the subsidy fund were reallocated to repay the debt. Therefore, the decision to choose such alternative would be considered as intergenerational decision making process.⁸

The last policy option is reallocation of the fuel subsidy fund to general or various government programs. In this scheme, indeed, households would not be able to observe the types of benefit they would receive. Households confront state of the world as households do not observe the type of reallocation and timing of the disbursement of the relocation. Unlike the other three alternatives, households would find this alternative difficult to internalize into their utility function owing to uncertainty. Furthermore, households' decision to vote for this alternative may depends on their valuation of the government i.e. the institution that would actually formulate and execute the reallocation program.

These policy options were going to be tested to several groups of households. These groups are divided according to possession of vehicle since the type of vehicle will determine the amount of subsidized fuel consumed. The first group includes households who posses neither motorcycle or car. The second and third group includes households who posses motorcycle and one car respectively. The last group include those who posses more than one car.

It is interesting to observe the responses from two very different types of households, particularly the responses to losses. Loss aversion, which is valuation of losses greater than gains, suggest that a loss of \$X is greater than a gain of \$X (Kahneman and Tversky, 1979). Kahneman, Knetsch, and Thaler (2008) stated that people value losses greater than gains as shown in many experiments such as Knetsch and Sinden (1984), Kahneman, Knetsch, and Thaler (1990). Households with no vehicle may not necessarily perceive elimination of fuel subsidy as a loss since they do not actually consume subsidized fuel directly. On the other hand, households who own motorcycle(s) and car(s) are going to experience losses since they

⁸ See Attachment 1 for policy options in the survey.

consume the subsidized fuel on a routine basis. This group of households may already have internalized the subsidy into their daily expenditure plan. On the extreme, households in this group might not realize that they have been being subsidized. Therefore, there is a possibility that this group will give a greater response to these losses relative to the other group of households.

3. DERIVING SCALES OF RELATIVE IMPORTANCE

Households would find difficulties in assessing policy options discussed in the previous section using monetary valuation. Households, in this study, assessed only to the extent of their ranking of preferences. A method that can be applied to extract households' preferences is paired comparison survey. Paired comparison survey is a conventional psychometric method for ordering preferences among objects of interest (David, 1988; Chuenpagdee et al., 2001). The output of the method is ordering of preferences among stated alternative (David, 1988). He also stated that method is useful when there are relative large numbers of options to be compared. Peterson and Brown (1998) showed that the method is applicable in the valuation of public goods and provides high degree of transparency.

Policy options were arranged in pairs so that each option is compared with every other one. Using the method of combination, the total number of pairs for comparisons is $N = {}_n C_2 = n(n - 1)/2$, where N is the total number of pairs and n is the number of policy options. Assuming there are four objects of interest, a , b , c , and d , the six possible paired comparisons are: (a vs. b), (a vs. c), (a vs. d), (b vs. c), (b vs. d), and (c vs. d). Respondents, for each pair, may state a more acceptable option with a scale of one to three. Harker and Vargas (1987) suggested that such scale is utilized for ratio judgments. Furthermore, respondents may also state that they are indifferent between the paired options.

There are several procedures that can be applied to recap respondents' preferences among the pairs. One procedure is analytical hierarchy process (AHP) which produces a ratio scale. The rankings of alternatives, however, are arbitrary (Dyer, 1990).⁹ AHP requires subjective estimate of strength, which is essentially difficult (Dyer, 1990). Owing to this difficulty, the preference theory based on the concept of strength preference is not preferable (Fishburn, 1988; Farquhar and Keller, 1988).

⁹ Results of the survey summarized using AHP are shown in Pradipto and Sahadewo (2012).

One alternative method to derive the preference scores is to report the proportion of times a policy option is chosen. These scores are utilized to formulate the scale of relative importance using the variance stable rank sum method by Dunn-Rankin (1983). In particular, these scores are normalized to a scale from 0 to 100 by dividing the proportion of times that the policy option is chosen relative to the maximum number of times it is possible to be chosen by all respondents (Dunn-Rankin, 1983). The normalized scores are the scale of relative importance of the policy options. Non-parametric approaches, in particular, Gamma coefficient and Kendall coefficient of agreement, are applicable to test the rankings and the scale values.¹⁰

Our survey design accommodates individuals who are indifferent between two choices where Dunn-Rankin method assume individuals are decisive between the two choices. The preference scores derived from our survey data, therefore, eliminate those who are indifferent between the two choices. Consequently, the average preference scores for all choices are not going to converge to the theoretical value.¹¹ The application of the scale still remains as the caveat of our study.

4. LABORATORY-BASED SURVEY AND RESULTS

In this study, a laboratory-based survey has been used to explore the most acceptable strategy perceived by households in eliminating fuel subsidy. Four groups of sample households, comprising of 335 subjects, participated in the survey in computer laboratories of the Faculty of Economics and Business, Universitas Gadjah Mada, Indonesia. Although the data collection stage was conducted in a computer laboratory and subjects faced pair wise choices in their PCs, the nature of the exercise tend to be a survey as oppose to an experiment. The survey would have been difficult to be conducted using conventional interviews or questionnaire since the subjects have to face 55 pair-wise questions. The use of computer laboratory ensures that the subjects better engaged in choosing pair-wise policy options.

Respondents were defined as those who live or work within 5 km radius from Faculty of Economics and Business, Universitas Gadjah Mada. Field assistants spread words and brochures to call for participations from university and faculties' employees and also to households whithin the sampling area. Call for participations were also published through emails and internet through experimenters' website. Individuals can either sign up to be

¹⁰ Gamma coefficient is suitable for data with tied observations (Goodman and Kruskal, 1963).

¹¹ The average preference score for all choices is 50%.

included in the pool of subjects in paper or through the available web form. Individuals read and signed the informed consent at registration before they were included in the pool of subjects.

The survey consists of three parts, all of which were incorporated in a computer software which was developed for this survey. Parts I and II were paired comparison questions based on policy options discussed in the previous section. Part I involved paired comparisons of five policy options whereas Part II involved paired comparisons of ten policy options. Part III was established to determine respondent's compensation, and in addition to that it was designed to explore the expected utility of the subjects toward risky prospects.

Prior to laboratory-based survey, respondents received instruction of the survey including examples of paired comparison questions during registration and pre-survey presentation. The presentation includes also information on the fuel subsidy policy in Indonesia and the alternative reallocation schemes. Practice sessions were conducted prior to the survey in order to ensure that the subjects understood on how to answer the questions. Respondents needing assistance on the use of computer and on the understanding of the instructions might request to be aided by 15 ready-helpers. The helpers were students from the Faculty of Literature, majoring in Javanese literature, as they were fluent to speak highly Javanese language¹².

Respondents were asked to choose the policy option they considered to be more acceptable for each paired comparison questions in Parts I and II. The options A and B were shown in a box side by side on the computer screen. We set random ordering of pairs for each respondent and random positioning of A and B in Part I and II to avoid bias due to sequencing of pairs (Chuenpagdee, 1998).

The standard question for Part I and Part II was: *Click on the circle that best represent your choice*. The circle refers to the one to three scale of acceptability of a policy option. The middle circle indicates that both policy options are equally acceptable. The circles to the right (left) of the middle circle indicate that option B (A) is more acceptable than option A (B).

¹² Since the survey was conducted in Yogyakarta, it is imperative to communicate with the elders with highly Javanese language (i.e. *kromo*), as the language is socially more acceptable and more appropriate to address by young people to elder people. Indeed the instruction was in Indonesian language, however, so long as a survey has been conducted in some areas in Central Jawa and in East Jawa and the respondents are elder people, it is imperative to ask the questions in highly Javanese language.

Moving towards the outer right (left) circle indicates that option B (A) is much much much more acceptable than option A (B).

Part III involved 36 paired comparison regarding prospects. Unlike in Parts I and II, the choices A and B were not randomly ordered and positioned. The question in Part III was phrased as: *Choose between two choices below*. There are three circles, the middle indicates that both prospects are equally preferable and each of the other two indicates the prospect above it is more preferable than the other. Respondents were asked to compare positive prospects in the first 9 questions and negative prospects in the subsequent 27 questions. Respondents receive an electronic voucher prior to each question regarding negative prospect. The results of Part III are not included in this report but can be found in Pradiptyo and Sahadewo (2012).

The survey was conducted in 10 different sessions, each with 40 to 60 respondents and ran for about 60-75 minutes. The survey was conducted in the computer laboratory in Faculty of Economics and Business, Universitas Gadjah Mada, Indonesia. Experimenter played powerpoint with audio presentation regarding details of the experiment, including explanations for each session. The powerpoint and audio presentation also include the prologue regarding fuel subsidy, children vaccination, mass rapid transportation, and foreign debt. Experimenter offered time for questions and answer before the experiment commence.

After finishing all three sessions of the experiment, respondents reported to the survey assistants to select a random number. The number selected refers to the question regarding prospect that the respondent played in Part III only. Respondent's choice to the randomly selected prospect determine the respective prospect that they would be played in a roulette. Respondent then played the roulette and claimed their prize accordingly to experimenter in a separate room. Respondents who randomly selected a prospect with negative payoff received a voucher, indicating they did not owe any money to the experimenter and will be rewarded with a souvenir.

Table 1 shows the distribution of age, gender and income for each group of subjects. The average age of the experiment subjects was 38.1 years old, whereby the highest average age belong to group 1 or subjects who do not possess motor vehicle at all (42.17 years old) and the lowest average age belong to motor cycle group (31.97 years old). Majority of the subjects possessed motorcycle only, accounted for 48.06% of the total number of subjects. It

should be noted that subjects who possess only 1 car and more than 1 cars have been combined since there were not many subjects who possess more than 1 car.

Table 1. Profile of experiment subjects

Group	Age (average)	Gender				Total	Income (average)[1]
		Male		Female			
		N	%	N	%		
No motor vehicle	42.17	34	36.2	60	63.8	94	Rp677,431
Motorcycle only	31.97	115	71.4	46	28.6	161	Rp1,835,038
Car	39.13	54	67.5	26	32.5	80	Rp6,397,491
Total	38.1	203	60.60%	132	39.40%	335	Rp2,517,399

Source: Primary data, calculated

Most of the subjects were male, accounting for 60.6% of the total participants. The average income for no motor vehicle group was Rp677,431/month (USD75.27)¹³. The average income for motorcycle and car(s) groups were Rp1,835,038/month (USD203.89) and Rp6,397,491/month (USD 710.83), respectively. The average income of subjects who possess car(s) was almost 10 times than that of subjects with no motor vehicle at all. This feature is quite common in developing countries whereby the discrepancy of income between middle income and low-income households tend to be wide.

In term of education characteristics, most of subjects obtained 9-12 years of schooling or high-school (41%), followed by those who obtained more than 12 years of schooling or higher education (27%). Subjects from no motor vehicle group tend to come from low educational background. It should be noted that 51 subjects only obtained 6 years of schooling or less and the majority of them were in the no motor vehicle group. Table 2 shows that those with lower education level tend to have no vehicle or only motorcycle. On the other hand, subjects who went to high school and higher education tend to have car(s).

¹³ Based on exchange rate USD1 = Rp9000.

Table 2. Education profile of experiment subjects

Group	Education level									
	No formal education		Elementary		Junior-high		High-school		Higher education	
	N	%	N	%	N	%	N	%	N	%
No motor vehicle	11	11.7	31	33	28	29.8	23	24.5	1	1.1
Motorcycle only	1	0.6	7	4.3	27	16.8	93	57.8	33	20.5
Car(s)	0	0	1	1.3	3	3.8	21	26.3	55	68.8
Total	12	3.6	39	11.6	58	17.3	137	40.9	89	26.6

Source: primary data, calculated.

Note: elementary school indicates up to 6 years of schooling; junior high indicates up to 9 years of schooling; high school indicates up to 12 years of schooling; diploma and higher indicates more than 12 years of schooling

Table 3 shows the overall result of the experiment in session 1. In session 1 gradual elimination and reallocation to earmarked programs was dominant in comparison to the other alternative policy options. All groups agreed to give the highest priority to gradual elimination and reallocation to MRT and vaccines. In addition, the majority of groups agreed to weigh direct elimination with reallocation to earmarked programs as oppose to gradual elimination with non-specified programs.

Table 3. Scale values of policy options in session 1

Exit Strategy	Total	Household Group 1		Household Group 2		Household Group 3		Household Group 4	
		Rank	Score	Rank	Score	Rank	Score	Rank	Score
Gradually for MRT and vaccines	60.8	1	62	1	53.1	1	57.6	1	74
Directly for vaccine and various government program	50.1	2	53.7	2	48.6	2	48.7	3	49
Gradually for debt repayment	37.8	3	35.9	4	36.5	4	35.3	4	42.7
Gradually for various government's program	37.7	4	32.2	3	38.8	3	35.7	2	56.3
Directly for various government's program	20.8	5	25.3	5	18.9	5	20.1	5	17.7
N	335		94		161		56		24
Kendall u	0.214		0.204		0.233		0.217		0.222
Observed Chi-square	723.8		199.7		383.1		129.5		61.2

Source: Primary data, calculated.

Apart from group 4, the rest of the groups gave direct elimination and reallocation to vaccine and various government programs in the second place. This tendency is different to the attitude of the subjects who possess more than 1 car tended to choose gradual elimination for

the top three alternative, irrespective of how the reallocation of the subsidy would be made. This shows that the affluent group tend to be more aware of the impact of the elimination of the fuel subsidy to their budget as opposed to the increase in the social welfare function due to the reallocation of the subsidy. All groups also agreed to place direct elimination with non-specified programs in the last place.

It should be noted that those who possess cars or households with high-income backgrounds have enjoyed the subsidy the most. It was estimated about 70% of the subsidy were received by 40% of top income households (Coordinating Ministry for Economic Affairs, 2008)¹⁴. This fact may explain the preference of the subjects in group 4. In contrast to the preference of the other groups, the top 2 preference of this group prefer gradual elimination instead of direct elimination.

Subjects in group 4 preferred to weigh the method of elimination heavier rather than the reallocation of the subsidy. In contrast, subjects in the other groups determined their preference by weighting reallocation of the subsidy heavier rather than the method of elimination. This finding provides hard evidence that those who have enjoyed the subsidy the most, have a higher status quo bias and endowment effect toward the subsidy as oppose to the other groups. The subsidy has been internalized more heavily by subjects in group 4 as part of their households income. It may not be surprising, therefore, that for subjects in this group, sudden elimination of the subsidy may be perceived as a substantial loss which may rock their households budget allocation.

Table 4 shows the overall result of the 45 pairwise choices in session 2. The result shows that subjects, in general, tend to have a general agreement on the first top three and the last three choices of their preferences. Gradual elimination tends to be dominant to direct elimination. In addition, reallocation of the subsidy to earmarked programs tends to be dominant to reallocation to unspecified programs. Consequently, all groups agreed to place direct elimination with reallocation to less-observable program (e.g. repayment of overseas debt) and unspecified programs on the last two of their preference.

¹⁴ Although the budget plan for the subsidy in 2011 was Rp129.7 trillion or 10% of the GoI annual budget, the actual subsidy was Rp160.7 trillion (13.3% of the GoI annual budget).

Table 4. Scale values of policy options in session 2

Exit Strategy	Total	Household Group 1		Household Group 2		Household Group 3		Household Group 4	
		Rank	Score	Rank	Score	Rank	Score	Rank	Score
Gradually for vaccine and various government program	61	1	59.3	1	60	1	60.9	2	69.4
Gradually for MRT and vaccine	59	2	57.5	2	56.4	2	58.7	1	77.3
Gradually for MRT and various government program	45.3	4	41.8	3	42.9	3	48.4	3	64.8
Directly for vaccine and various government program	41	3	42.4	4	42.2	7	33.1	5	42.6
Directly for MRT and vaccine	37.7	5	41.4	6	35.7	6	33.5	5	42.6
Gradually for debt repayment	36.6	6	35	5	36	4	38.3	7	40.3
Gradually for various government's program	35.5	7	30.4	6	35.7	5	36.5	4	48.6
Directly for MRT and various government program	26.5	8	28.2	8	24.3	8	23.8	8	38
Directly for debt repayment	19.6	9	22.3	9	19.8	9	16.3	10	13
Directly for various government's program	17.9	10	17.8	10	18.8	10	13.9	9	20.4
N	335		94		161		56		24
Kendall u	0.27		0.24		0.264		0.35		0.295
Observed Chi-square	4095.7		1073		1946.3		911.6		350.5

Source: Primary data, calculated.

The last three options in all groups' preference were related to direct elimination of the subsidy. Subjects in all groups agreed that the first two policy options were gradual elimination and reallocation to earmarked programs. Surprisingly, subjects in group 1 placed direct elimination with earmarked programs in their third preference, whilst the rest of the groups preferred gradual elimination with reallocation to earmarked programs. Subjects in group 1 tend to receive the least fuel subsidy as oppose to subjects in the other groups. It may not be surprising, therefore, that subjects in group 1 showed the least attachment to the subsidy. As a result, subjects in group 1 have been least affected by status quo bias or endowment effect owing to the subsidy.

The behavior of subjects in groups 1 and 2 was different to those of in groups 3 and 4 with respect to their preference up to the top four preferences. Subjects in both groups 3 and 4 did not choose any policy options which involve direct elimination. In contrast, subjects in groups 1 and 2 may accept to the policy options which content direct elimination of the

subsidy. This occurs since the subjects in groups 1 and 2 weigh more heavily on how the reallocation of the subsidy would be done. On the contrary, subjects in groups 3 and 4 more concern on the method to eliminate the subsidy. Indeed, it is rational for subjects in groups 1 and 2 to concern more on the reallocation of the subsidy since, thus far, they have not enjoyed the subsidy as much as their counterparts in the other groups. Reallocation of the subsidy means that subjects in groups 1 and 2 would enjoy more subsidy than what they have received. It is also rational for subjects in groups 3 and 4, however, to focus more on the method to eliminate the subsidy since they have enjoyed the subsidy more than the other groups.

In this circumstance, subjects in groups 3 and 4, which were relatively have affluent backgrounds, tend to be reluctant to have direct elimination, irrespective of the methods of reallocation of the subsidy. Both groups suffered from status quo bias and endowment effect more than the other groups. Indeed, the fuel subsidy that has been implementing by the GoI is not rational and it has adverse impacts on the social welfare function, however, subjects with more affluent backgrounds tended not to take into their consideration into their top four preferences. The problem is getting more complicated since the subjects in groups 3 and 4, as majority people in Indonesia, may not realize that, thus far, they have enjoyed the fuel subsidy.

The results of Part II, in general, shows that exit strategies with gradual elimination of fuel subsidy and reallocation to earmarked programs are valued as the most acceptable. In total, respondents were consistent between Part I and II regarding the ordering of the policy options. The close correspondence of the scale values among different groups is also evident for the ten policy options in Part II. The null hypothesis that there was no agreement among the respondents in each group was rejected in all cases.

The close correspondence of the scale values for the policy options in Part II among different household groups is shown by the high correlation coefficients in Table 5. Note that the correspondence between households of group 1 and 4 is relatively lower. The results however illustrate that paired comparisons method yield consistent judgments that reflect the apparent wide sharing of norms as Chuenpagdee et al. (2001) suggested.

Table 5. Gamma coefficient correlation of policy options

	Household Group 1	Household Group 2	Household Group 3	Household Group 4
Household Group 1	1	0.87	0.73	0.73
Household Group 2	-	1	0.87	0.78
Household Group 3	-	-	1	0.78
Household Group 4	-	-	-	1

Source: Primary data, calculated.

The results in Part I and Part II show that respondents valuation of losses is greater for direct elimination subsidy than the equivalent gradual elimination. Respondents chose “to pay” later and at a smaller amount rather than to pay immediately of the same total amount. The evidences also suggest that respondents preferred reallocation to earmarked programs such as children vaccination and MRT. Here, respondents valued earmarked programs more acceptable as they belief that they will receive compensation with higher certainty. In particular, respondents considered children vaccination more acceptable as it offers a more immediate compensation. Other noteworthy finding is the tendency for households of group 3 and 4 to choose gradual elimination scheme. This result is an indication that the higher the consumption of subsidized fuel by households, the higher the impact of the policy to the reduction in the households’ income.

Summarizing, each group was able to present relatively consistent preference regarding the most acceptable policy option. The scale values provide hard evidences and practical guide to formulate the appropriate exit strategy from the fuel subsidy. For example, policymakers should be motivated to formulate policy to accommodate gradual elimination as the results reflects people’s valuations of losses owing to removal of subsidy. Policymakers may also use the results for justification regarding reallocation of subsidy to earmarked programs. These valuations are useful to promote efficient allocations of resources of social objectives.

5. CONCLUSION

People’s valuations of losses owing to elimination of fuel subsidy would be a difficult task to perform. Scale of relative importance derived from a paired comparison survey provide a consistent community judgments of the most acceptable exit strategy on the elimination of fuel subsidy. The scale shows that exit strategy that includes gradual elimination of fuel subsidy and reallocation to earmarked programs were perceived to be the most acceptable.

This scale can be utilized by the government to establish the appropriate policy responses regarding elimination of fuel subsidy that would promote a more efficient allocation of resources. This scale provides a more practical solution to accommodate the complexity of decision to eliminate the fuel subsidy. At the end, establishment of scale of relative importance derived from community judgments can be applied to various problems that requires complex decision making. Example of such decision making include elimination of electricity subsidy, elicitation of the most appropriate poverty alleviation program, and many more.

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APPENDICES

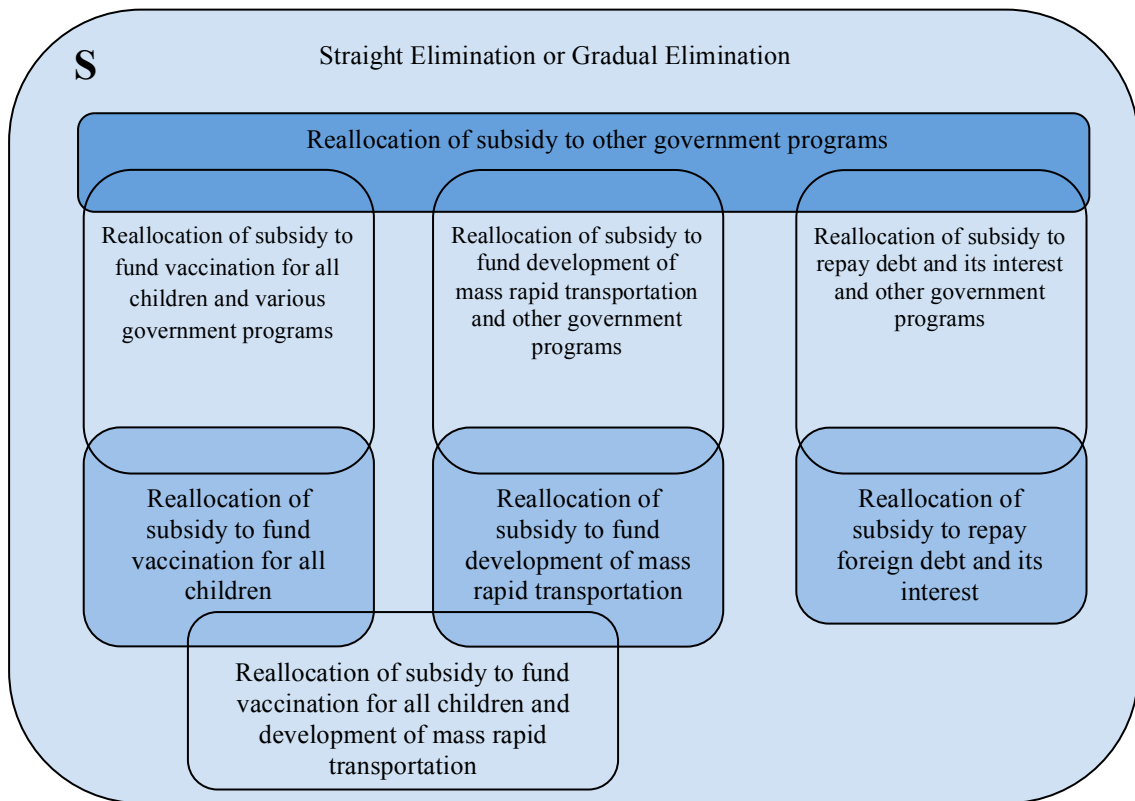
Appendix A: Subsidy Expenditure

Table 1: Subsidy Expenditure in Indonesia, 2005-2012

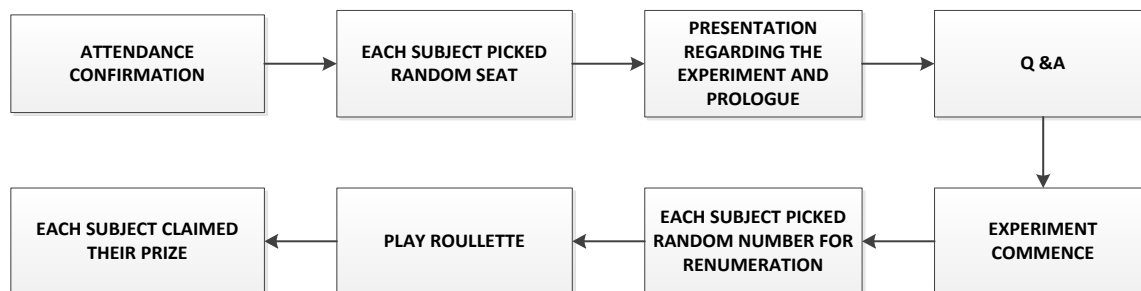
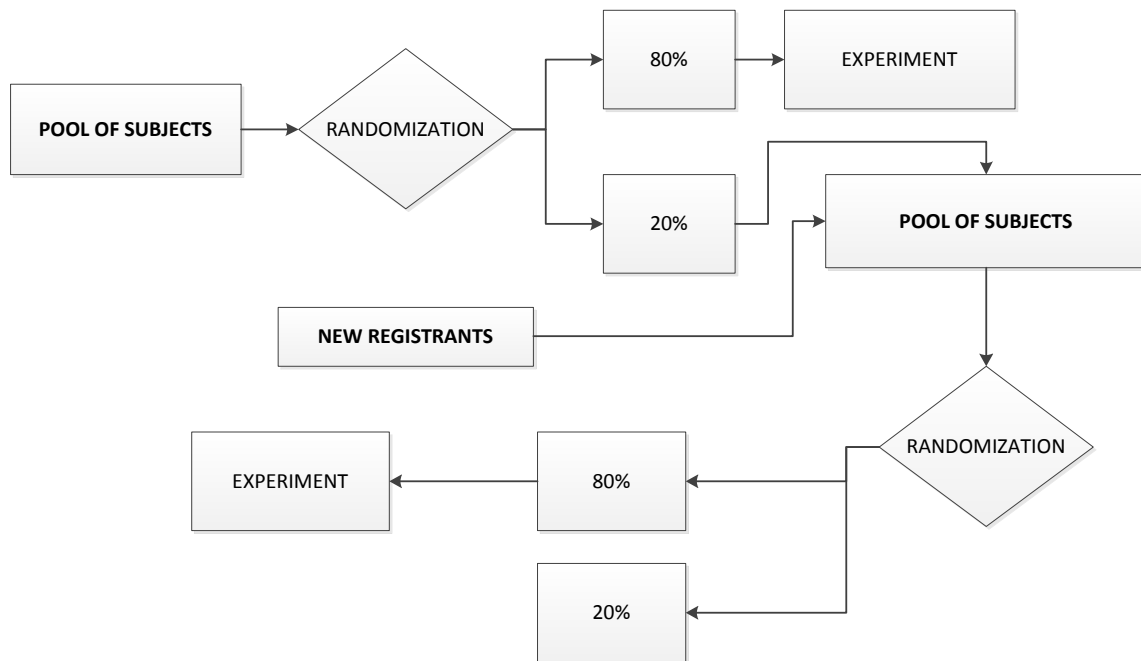
Subsidy Expenditure (trillion Rp)	2005	2006	2007	2008	2009	2010	2011	2012
Energy								
Fuel subsidy (A)	95.6	64.2	83.8	139.1	45	82.4	129.7	123.6
Electricity	8.9	30.4	33.1	83.9	49.5	57.6	65.6	45
Total Energy (1)	104.5	94.6	116.9	223	94.5	140	195.3	168.6
Non-energy								
Food	6.4	5.3	6.6	12.1	13	15.2	15.3	15.6
Fertilizer	2.5	3.2	6.3	15.2	18.3	18.4	18.8	16.9
Plant seed	0.1	0.1	0.5	1	1.6	2.2	0.1	0.3
Public Service Obligation	0.9	1.8	1	1.7	1.3	1.4	1.8	2
Credit assistance	0.1	0.3	0.3	0.9	1.1	0.8	1.9	1.2
Tax subsidy	6.2	1.9	17.1	21	8.2	14.8	4	4.2
Other subsidy	0	0.3	1.5	0.3	0	0	0	0
Total Non-Energy (2)	16.2	12.9	33.3	52.2	43.5	52.8	41.9	40.2
Total Subsidy Expenditure (3=1+2)	120.7	107.5	150.2	275.2	138	192.8	237.2	208.8
Total Government Budget (4)	361.2	440	504.6	693.4	628.8	697.4	908.2	954.1
Proportion of Fuel Subsidy/Total Subsidy (=A/3)	79.20%	59.70%	55.80%	50.50%	32.60%	42.70%	54.70%	59.20%
Proportion of Energy Subsidy/Total Budget (1/4)	28.90%	21.50%	23.20%	32.20%	15.00%	20.10%	21.50%	17.70%

Source: Ministry of Finance (2008; 2012) and Pradiptyo and Sahadewo (2012)

Appendix 2. The Schemes of policy option



Appendix 3: Sampling procedures



Appendix 4: Registration form and experiment guide

INFORMED CONSENT

The P2EB (Center of Economic and Business Research and Training) of the Faculty of Economics and Business of Gadjah Mada University is conducting an experiment in relation to a research on the appropriate strategy for the Government to lift fuel subsidy in Indonesia. This page briefly explains the experiment participant's rights in order to help you decide your participation. **If you agree to participate, you will not suffer any financial loss of whatsoever throughout the experiment.**

In this experiment you will be requested to select a number of options of your preference. All information you provide during the experiment process will be kept confidential and will not by any means related to your name. If during the experiment process you do not feel comfortable, for whatever reason, you can leave the laboratory where the experiment is conducted and the information that you have provided will not be recorded. Your participation in this study requires approximately 60 minutes. When this study is completed, you are free to ask any inquiry related to the questions we have asked. If you have any further enquiries about this research, feel free to contact us via our email address: experiment.ugm@gmail.com

Your participation is on voluntary basis. All information will be kept confidential and your name will not be related to the research finding. The research results will be published without mentioning your name. This research is not related with your profession or occupation.

The sampling method taken for this research is done by collecting a number of samples, and then there will be a random lottery to determine the experiment participants. If you are selected to be one, you will be contacted by phone. If you are not selected, you will still be contacted by phone too. Please sign the column below to acknowledge that you have understood the information that we provide on this sheet and that you give approval to participate in our experiment.

Noted by
Yogyakarta, 2012-03-01

Approved by
Yogyakarta, 2012-03-01

Research Tim Member

(Printed Name:)

EXPERIMENT PARTICIPANT REGISTRATION FORM

**In the Inquiry of the Most Acceptable Strategy for Lifting Fuel Subsidy Scheme in Indonesia:
an Experimental Approach**

CODE:

Please fill in the blanks in capital letters

Complete Name:

Sex* : Male/Female

Address :
.....
.....

Mobile Phone Number:

Are you the main breadwinner in your family? * Yes/No

Indicate your motor-vehicle ownership (you can choose more than one):

<input type="checkbox"/>	None		
<input type="checkbox"/>	Motorcycle:	Quantity :	unit(s)
<input type="checkbox"/>	Car :	Quantity :	unit(s)

Yogyakarta, 2012

(.....)
Printed Name

*Cross which is not applicable

EXPERIMENT GUIDES

Thank you for participating in this experiment. It is about a decision-making process. You are expected to follow the instructions which will guide you throughout the experiment. You have the chance to win a certain amount of money at the end of the experiment if you follow the experiment guides carefully and make the right decision. You can receive the money you will win in this experiment in cash at the end of the experiment.

Before the session for the explanation of the experiment guides starts, fill in your personal data in the section below. The information you provide for us will be kept confidential and will be used only for the purpose of this research. Do not hesitate to ask our help if you are not used to working on the computer.

A. GENERAL INSTRUCTION

This experiment consists of three sessions. In the first session, you will find 10 pairs of options on the fuel subsidy scheme. For every option pair, you are to choose one of the two fuel subsidy schemes which you think is the most acceptable. In the second session, you will find 45 option pairs on the fuel subsidy scheme. As in the previous session, for every option pair you are to choose one of the two fuel subsidy schemes which you think is the most suitable. In the third session, you will find 32 option pairs. You are to choose what you think is best for every option pair.

In the final section of the experiment, you are to randomly select anyone of the 32 option pairs which you have taken in the third session. Your selection will determine the money you will win, which will be paid in cash at the end of the experiment. The maximum amount you can win in this experiment is Rp 205,000.-

B. PROLOGUE

The Indonesian Government has provided fuel subsidy, particularly for Premium, since the 1970's. The amount of the subsidy paid by the Government for each liter of Premium is the difference between the price set by the Government and the real market economic price, which results in a lower price for consumers. For example, the price of a liter of Premium is Rp 4,500.- while that of the non-subsidized gasoline (Pertamax) is Rp 8,800.- Consumers just pay Rp 4,500.- and the difference, which is Rp 4,300.-, is subsidized by the Government.

The motor-vehicle operational cost has been lowered by the fuel subsidy so that the motor-vehicle sale and the fuel consumption have been increasing. On the other hand, the increase of the subsidized fuel consumption has increased the government's subsidy spending. The fuel subsidy in 2011 reached Rp 160 trillion or 5.8% of the government's total spending. The fuel subsidy rose sharply at 61% to Rp 95 trillion in 2011. In the near future, the Government plans to lift the fuel subsidy. The non-subsidized Pertamax will replace the Premium gasoline after the Government lifts the fuel subsidy.

The Indonesian Government, through the National Immunization Program, has freely provided five types of vaccines for children below five. The five vaccines include those against tuberculosis, tetanus, polio, measles and hepatitis B. This number has not met the World Health Organization's recommendation, which requires children to receive ten types of vaccines. The Indonesian Government has not been able to freely provide the other types of vaccines, which include MMR (measles, mumps, and rubella), chicken pox, meningitis, and pneumonia, influenza, and hepatitis A.

The Indonesian Government is currently planning the infrastructure construction, particularly the mass transport system in several big cities in Indonesia. The plan includes the

mass transport construction in the Jabodetabek (Jakarta-Bogor-Depok-Tangerang-Bekasi), the Gerbang Kertasusila (Gresik-Bangkalan-Mojokerto-Surabaya-Sidoarjo-Lamongan), the Mebidangro (Medan-Binjai-Deli Serdang-Karo), the Maminasata (Makassar-Maros-Gowa-Takalar, the Sarbagita (Denpasar-Badung-Gianyar-Tabanan) and the Greater Bandung (Bandung-Cimahi-Sumedang) areas.

The Indonesian Government’s foreign debts up to June 2011 reached Rp 588.5 trillion and the foreign-debt capital installment for last year amounted to Rp 47.2 trillion. The Government’s debt interest payment in 2011 reached Rp 106.5 trillion.

C. SESSION ONE

You will find 10 pairs of options on the fuel subsidy scheme. Every pair has two answer options, namely A and B, and each provides different information. Choose the subsidy scheme you deem more acceptable and select the number representing your choice. Click the number “0” if you think both are acceptable. Click the numbers “1”, “2”, and “3” if Option A is more acceptable than Option B, the higher the number the more acceptable A is. On the contrary, click the numbers “I”, “II”, and “III” if Option B is more acceptable than Option A. When you have been sure of your answer, click “RECORD YOUR ANSWER”.

Figure I: A Pair of a Sample Question in Session I

SESSION I

Please click the circle which you believe to be the most appropriate

<p>The price of subsidized fuel (Premium) is going to be increased by Rp750 for every 6 months until it is equal to the price of non-subsidized fuel (Pertamax) in three years. The total amount of the fuel subsidy saved is going to be allocated directly to other government programs for the next three years.</p>	<p>The fuel subsidy is going to be eliminated and everybody is going to pay non-subsidized fuel (Pertamax) price. Currently, due to limited budget, the government cannot afford to provide free vaccines for the prevention of the following diseases: meningitis, typhoid, mumps, measles and rubella. The total amount of the fuel subsidy saved is going to be allocated directly to make the vaccines for the diseases attainable for free only to children who come from low income</p>
---	---

A

3

A is more acceptable than B

2

1

0

A is as acceptable as B

I

B

II

B is more acceptable than A

III

RECORD THE ANSWER

You will find the following question after you have selected your answer.

ARE YOU SURE OF YOUR ANSWER

YES	NO
-----	----

Click “NO” if you are not sure of your answer and you want to change yet.

Click “YES” if you are sure of your answer. The computer will store your answer and you cannot change it any longer.

D. SESSION TWO

You will find 45 pairs of options on the fuel subsidy scheme. Every pair has two answer options, namely A and B, and each provides different information. Choose the subsidy scheme you deem more acceptable and select the number representing your choice. Click the number “0” if you think both are acceptable. Click the numbers “1”, “2”, and “3” if Option A is more acceptable than Option B, the higher the number the more acceptable A is. On the contrary, click the numbers “I”, “II”, and “III” if Option B is more acceptable than Option A. When you have been sure of your answer, click “RECORD YOUR ANSWER”.

Figure 2: A Pair of a Sample Question in Session 2

SESSION II

Please click the circle which you believe to be the most appropriate

The price of subsidized fuel (Premium) is going to be increased by Rp750 every 6 months until it is equal to the price of non-subsidized fuel (Pertamax) in three years.	The price of subsidized fuel (Premium) is going to be increased by Rp750 for every 6 months until it is equal to the price of non-subsidized fuel (Pertamax) in three years. The total amount of the fuel subsidy saved is going to be allocated to fund investment in necessary transportation infrastructure for the next three years.
--	--

A B

(3) — (2) — (1) — (0) — (I) — (II) — (III)

A is more acceptable than B A is as acceptable as B B is more acceptable than A

RECORD THE ANSWER

You will find the following question after you have selected your answer.

ARE YOU SURE OF YOUR ANSWER

YES	NO
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Click “NO” if you are not sure of your answer and you want to change yet. Click “YES” if you are sure of your answer. The computer will store your answer and you cannot change it any longer.

E. SESSION THREE

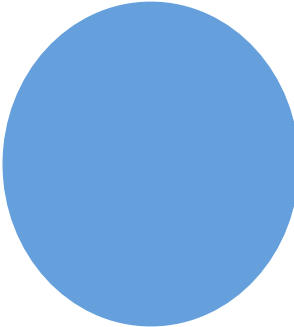
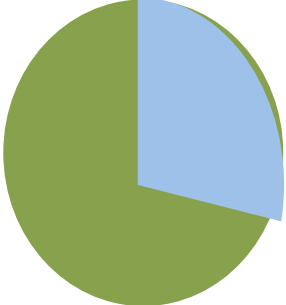
You will find 32 option pairs. The options in this session are not related with your answers in the previous two sessions. For every question, select the one you consider the better of the two options. You have the chance to win a certain amount of money when you play the game without risking any loss.

1. SECTION ONE: Questions 1-8

Option A offers a fixed amount of money while Option B offers two numbers with their respective chances. Click “SELECT A” if Option A is better than Option B. On the contrary, click “SELECT B” if Option B is better than Option A. If you think that Option A and B are equally good, click “A & B ARE EQUAL”. When you have been sure of your answer, click “RECORD YOUR ANSWER”. The computer will store your answer when you click “RECORD YOUR ANSWER” and you cannot change it any longer.

Figure 3: A Pair of a Sample Question in Section 3

Please choose between the two prospects

<p>Prospect A</p>  <p>Rp70,000 with certainty</p>	<p>Prospect B</p>  <p>Rp100,000 with probability 80% Rp0 with probability 20%</p>	
<input type="button" value="CHOOSE A"/>	<input type="button" value="INDIFFERENT"/>	<input type="button" value="CHOOSE B"/>
<input type="button" value="RECORD THE ANSWER"/>		

2. SECTION TWO: Questions 9 – 16

You will receive a voucher for every question from Number 9 to Number 16. The nominal value of your voucher varies from question to question.

In Questions 9 to 16, the question model is similar to that in Questions 1 to 8. Option A offers a fixed amount of money while Option B offers two numbers with their respective chances. Click “OPTION A” if you think that Option A is better than Option B. Conversely, click “OPTION B” if you think that Option B is better than Option A. If you think that Option A

and Option B are equally good, click “A & B ARE EQUAL”. When you have been sure about your answer, click “RECORD YOUR ANSWER”. The computer will store your answer after you click “RECORD YOUR ANSWER” and you cannot change it any longer.

3. SECTION THREE: Questions 17-24

You will receive a voucher for every question from Number 17 to Number 24. The nominal value of your voucher is the same for every question, namely Rp 125,000 for each.

In Questions 17 to 24, the question model is similar to that in Questions 1 to 8. Option A offers a fixed amount of money while Option B offers two numbers with their respective chances. Click “OPTION A” if you think that Option A is better than Option B. Conversely, click “OPTION B” if you think that Option B is better than Option A. If you think that Option A and Option B are equally good, click “A & B ARE EQUAL”. When you have been sure of your answer, click “RECORD YOUR ANSWER”. The computer will store your answer after you click “RECORD YOUR ANSWER” and you cannot change it any longer.

4. SECTION FOUR: Questions 25-32

You will receive a voucher and a souvenir for every question from Number 25 to Number 32.

In Questions 25 to 32, the question model is similar to that in Questions 1 to 8. Option A offers a fixed amount of money while Option B offers two numbers with their respective chances. Click “OPTION A” if you think that Option A is better than Option B. Conversely, click “OPTION B” if you think that Option B is better than Option A. If you think that Option A and Option B are equally good, click “A & B ARE EQUAL”. When you have been sure of your answer, click “RECORD YOUR ANSWER”. The computer will store your answer after you click “RECORD YOUR ANSWER” and you cannot change it any longer.

F. METHOD OF PAYMENT

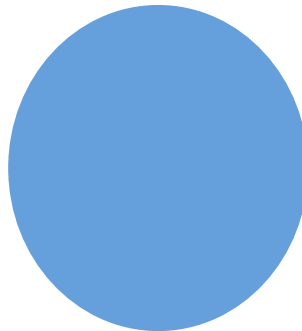
At the end of the third session, you randomly choose the questions that you have answered in the third session in order to determine the amount of money you can win.

For example, if you get the number 2, the money will depend on your selection in “Question 2”. For instance, if you select A for “Question 2”, you will win Rp 70,000. The amount of money you will win is Rp 70,000.

Prospect 16, Session 2

You chose

Prospect A



Rp70,000 with certainty

If you select Option B in “Question 2”, you will play “The Wheel of Fortune” to determine the money you will win. If the arrow of the Wheel of Fortune aims at the area of “Rp 100,000”, you will win Rp 100,000. If it aims at the area of “Rp 0”, you will receive no additional money from this session.

Prospect 16, Session 2

You chose

Prospect B



Rp100,000 with probability 80%

Rp0 with probability 20%

If you select “A & B ARE EQUAL” for “Question 2”, you will toss a coin to determine whether you will money from Option A or Option B. If the coin you toss shows the “HEAD”, you will win an additional sum of money in accordance with what is written in Option A. On the contrary, you will play the wheel of fortune if the coin you toss shows the “TAIL” to determine the amount of money which you win in Option B.