

# KEK

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## KAJIAN EKONOMI DAN KEUANGAN

- Analisis Urgensitas Pinjaman Luar Negeri Indonesia Dalam Rangka Pembiayaan Defisit APBN
- Phasing Out Kerosene Subsidy in Developing Countries. Case Study of India and Indonesia
- Kontribusi, Efektivitas, Efisiensi, dan Faktor-faktor yang Mempengaruhi Penerimaan Pajak Pertambahan Nilai
- Studi Potensi Pendanaan *Climange Change* Pada Lembaga Keuangan Multilateral
- *Tax Harmonization* ASEAN Melalui ASEAN Tax Forum : Pembelajaran Dari Proses *Tax Harmonization* Eropa

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# KAJIAN

## EKONOMI KEUANGAN



Pusat Kebijakan Ekonomi Makro  
Badan Kebijakan Fiskal  
Kementerian Keuangan RI

■ Analisis Urgensitas Pinjaman Luar Negeri Indonesia Dalam Rangka Pembiayaan Defisit APBN

■ Phasing Out Kerosene Subsidy in Developing Countries. Case Study of India and Indonesia

■ Kontribusi, Efektivitas, Efisiensi dan Faktor-faktor yang Mempengaruhi Pajak Pertambahan Nilai

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■ *Tax Harmonization* ASEAN Melalui ASEAN Tax Forum : Pembelajaran Dari Proses *Tax Harmonization* Eropa



## KATA SAMBUTAN

Kami panjatkan rasa syukur kepada Tuhan Yang Maha Esa atas terbitnya Kajian Ekonomi dan Keuangan edisi ini ke hadapan pembaca sekalian. Pada edisi ini, kami menyajikan berbagai topik yang berkaitan dengan analisis dan dampak kebijakan publik di bidang ekonomi dan keuangan negara.

Kajian pada volume kali ini diisi oleh berbagai topik tulisan yaitu Analisis Urgensitas Pinjaman Luar Negeri Indonesia Dalam Rangka Pembiayaan Defisit APBN; *Phasing Out Kerosene Subsidy in Developing Countries. Case Study of India and Indonesia*; Kontribusi, Efektivitas, Efisiensi, dan Faktor-faktor yang Mempengaruhi Penerimaan Pajak Pertambahan Nilai; Studi Potensi Pendanaan Climate Change Pada Lembaga Keuangan Multilateral; dan *Tax Harmonization ASEAN Melalui ASEAN Tax Forum : Pembelajaran Dari Proses Tax Harmonization Eropa*. Adapun para penulis yang berkontribusi pada penerbitan kali ini yaitu Abdul Aziz, Mahpud Sujai, M. Syarif Mulyadi, R. Nurhidajat, Sigit Setiawan, Suska dan Yuventus Effendi.

Demikianlah kata pengantar yang dapat kami sampaikan. Ibarat peribahasa tiada gading yang tak retak, maka kami menyadari kajian ini tentunya masih terdapat kekurangan baik yang disengaja maupun yang tidak kami sengaja. Oleh karena itu, kami mengharapkan masukan dari para pembaca guna perbaikan di masa yang akan datang. Selanjutnya, kami berharap jurnal ini dapat memberikan manfaat kepada para pembaca sekalian. Selamat membaca!

Jakarta, 2011  
Dewan Redaksi



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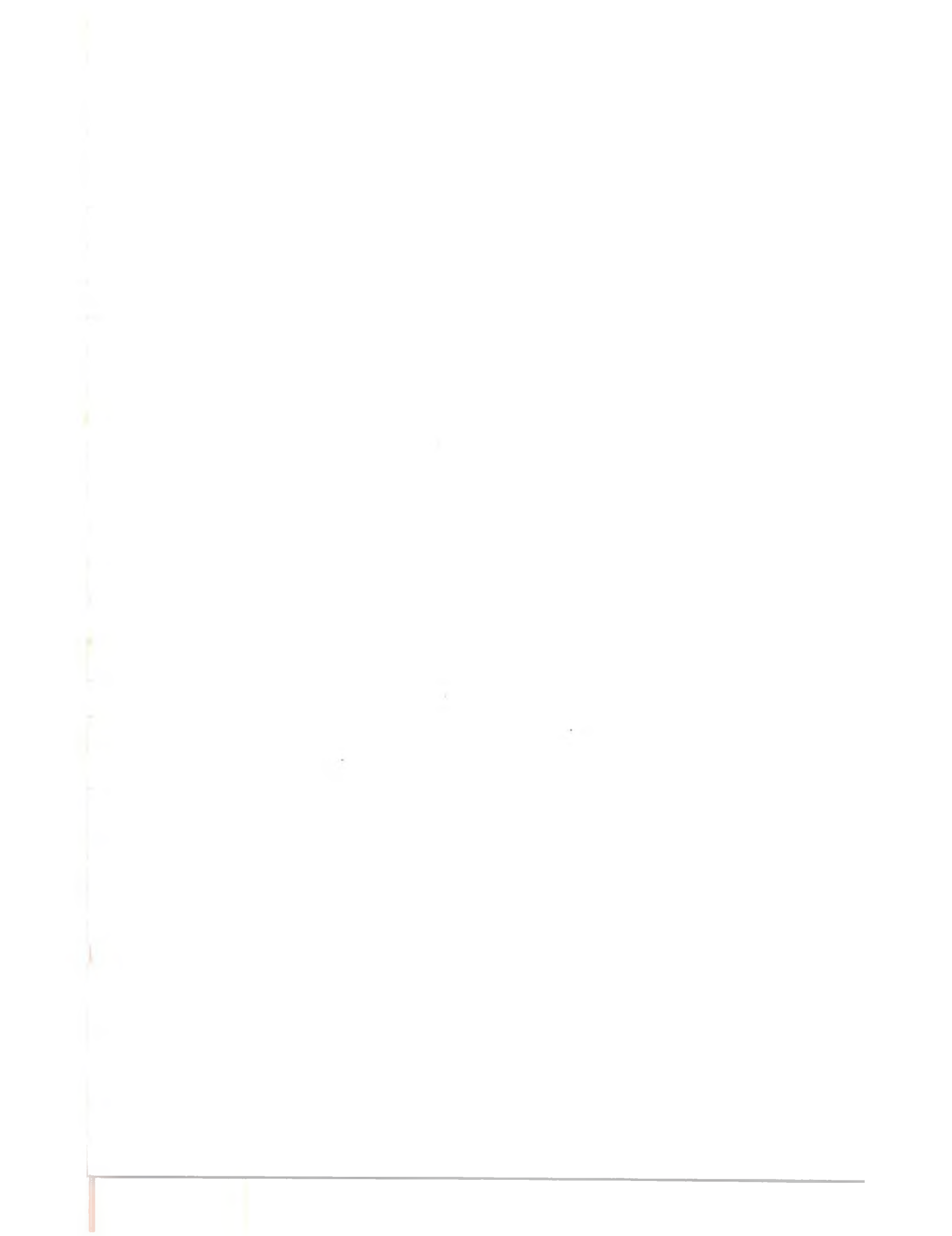
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**MAJALAH KAJIAN EKONOMI DAN KEUANGAN****ISSN 1410-3249****KEK Terakreditasi B****(No. Akreditasi : 306/AU2/P2MBI/08/2010)****Volume 15 Nomor 1 Tahun 2011***Keywords used are free terms. Abstracts can be reproduced without permission or charge.***ABSTRAKSI****Aziz, Abdul, et. al. (Badan Kebijakan Fiskal, Kementerian Keuangan)****Analisis Urgensitas Pinjaman Luar Negeri Indonesia Dalam Rangka Pembiayaan Defisit APBN****Kajian Ekonomi dan Keuangan Volume 15 Nomor 1 Tahun 2011, halaman 1-34**

*Dalam rangka menutup defisit anggaran (yaitu selisih kurang antara pendapatan negara dan belanja negara) biasanya setiap negara mencari sumber-sumber pembiayaan agar pembangunan yang telah direncanakan dapat berjalan dengan baik. Salah satu cara pembiayaan defisit anggaran negara tersebut adalah dengan mengajukan pinjaman luar negeri (PLN), hal ini juga dilakukan oleh Negara Indonesia. Permasalahannya adalah apakah PLN tersebut merupakan cara terbaik dalam rangka menutup defisit APBN mengingat setiap tahunnya PLN memberatkan kinerja APBN. Selanjutnya adakah cara lain yang lebih baik (preventif dan atau responsif) dalam rangka menghindari / membiayai defisit tersebut? Penelitian ini mencoba menganalisis secara kualitatif dan dibantu dengan analisis kuantitatif (melalui model ekonometrik) hubungan antara PLN dan defisit APBN serta menilai urgensitas PLN negara Indonesia dalam rangka menutup defisit anggaran (APBN) beserta alternatif solusi yang lebih baik.*

*Kata kunci: defisit APBN, pembiayaan, dan PLN*

**Sujai, Mahpud, et. al. (Badan Kebijakan Fiskal, Kementerian Keuangan)*****Phasing Out Kerosene Subsidy In Developing Countries. Case Study of India and Indonesia*****Kajian Ekonomi dan Keuangan Volume 15 Nomor 1 Tahun 2011, halaman 35 - 50**

*Subsidy is one of the main problems that burden the budget in some developing countries. Indonesia and India have similarities in dealing with efforts to reduce energy subsidies, especially kerosene. This study aims to explain the impact of the kerosene subsidy to the state budget of India and*

**MAJALAH KAJIAN EKONOMI DAN KEUANGAN****ISSN 1410-3249****KEK Terakreditasi B****(No. Akreditasi : 306/AU2/P2MBI/08/2010)****Volume 15 Nomor 1 Tahun 2011*****Keywords used are free terms. Abstracts can be reproduced without permission or charge.*****ABSTRAKSI**

*Indonesia, to explore and propose the alternative solutions to solve the problems occurred in relation with the implementation of the kerosene subsidy in both countries and to elaborate the strategy made by the government of both countries in reducing kerosene subsidy. This study used qualitative methods to explore ways of collecting information through data analysis in various types of both primary and secondary. The analysis used in this research is descriptive analysis in which researchers performed interpretation of data. From the analysis conducted, both countries succeeded in reducing the burden of subsidies for kerosene with a variety of strategies fit with the characteristics of each country.*

*Keywords: Kerosene Subsidy, budget, India, Indonesia*

**Mulyadi, M. Syarif, et. al. (Badan Kebijakan Fiskal, Kementerian Keuangan)**

**Kontribusi, Efektivitas, Efisiensi, dan Faktor-Faktor yang Mempengaruhi Penerimaan Pajak Pertambahan Nilai**

**Kajian Ekonomi dan Keuangan Volume 15 Nomor 1 Tahun 2011, halaman 51-72**

*This paper examines the contribution, the effectiveness, and the efficiency of value added tax (VAT) revenue. It also investigates the variables affecting the value added tax revenue. Using the ratio of VAT revenue to total government expenditures as the measurement of the contribution shows that VAT revenue contribution is 33 percent in average lower than income tax revenue contribution. Meanwhile the effectiveness of VAT is around 3,5 percent, still below the income tax effectiveness. In addition, the c-efficiency ratio is 0.50 in average which means that every 1 point increase in VAT tax rate results in an increase in VAT revenue by 0,50 percent of GDP. Furthermore, using ordinary least square estimation, the VAT revenue is determined by tax base, regulations, and the exemption policy where household and government consumption as tax base have positive and significant effect on VAT whereas previous import has a negative effect on VAT revenue.*

*Key words : Value added tax, efficiency and effectiveness*

**MAJALAH KAJIAN EKONOMI DAN KEUANGAN****ISSN 1410-3249****KEK Terakreditasi B****(No. Akreditasi : 306/AU2/P2MBI/08/2010)****Volume 15 Nomor 1 Tahun 2011***Keywords used are free terms. Abstracts can be reproduced without permission or charge.***ABSTRAKSI****Nurhidajat, R, dan Setiawan, Sigit, et. al. (Badan Kebijakan Fiskal, Kementerian Keuangan)****Studi Potensi Pendanaan *Climate Change* Pada Lembaga Keuangan Multilateral****Kajian Ekonomi dan Keuangan Volume 15 Nomor 1 Tahun 2011, halaman 73 – 86**

*Climate Change has adversely brought impacts to a large number of countries all over the globe, including Indonesia. The issues regarding climate change impacts have become primary concerns in managing sustainable economic development in Indonesia. In striving to tackle those impacts, funding will be a key element. While the State Budget has allocated a particular amount of funding, other sources of external funding is actually expected, including those from multilateral financial institutions. ADB is one of the multilateral donor institutions that provide climate change adaptation and mitigation related fund. In this study, the potentially utilized financing sources of the donor institution by Indonesia is explored, both solely from the individual institution or in cooperation with other donors. The potential financing source aspects which are analyzed cover funding mechanisms, types of funding, and the fund allocation provided. Other key aspects such as assessment and evaluation criteria employed by ADB to approve a particular project to finance under its portfolio are also explored, completed with several project examples under ADB funding.*

*Keywords : climate change, lembaga keuangan multilateral, ADB, skema pembiayaan, kriteria kelayakan proyek*

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**ABSTRAKSI**

**Suska, dan, Effendi, Yuventus et. al. (Badan Kebijakan Fiskal, Kementerian Keuangan)**

***Tax Harmonization ASEAN Melalui Asean Tax Forum Pembelajaran Dari Proses Tax Harmonization Uni Eropa***

**Kajian Ekonomi dan Keuangan Volume 15 Nomor 1 Tahun 2011, halaman 87 – 106**

*ASEAN Tax Forum was established in the ASEAN Minister of Finance meeting in Bali April 2011. The forum consists of tax authority among ASEAN countries intended for exchange of information on the tax regime and instruments among Member States as well as to work on the issues of avoidance of double taxation and addressing withholding tax to further support the building of a competitive ASEAN Economic Community. The tax harmonization process among member states of ASEAN needs several stages to be taken. Tax Treaty as the step to eliminate the double taxation still not implemented by all ASEAN members. Tax rate particularly corporate tax rate is varying among countries. Learning the lesson from European Union, the direction of tax harmonization is to establish the common tax base while tax rate still differentiate among member states.*

*Keywords: Tax Harmonization, ASEAN, Uni Eropa, Tarif*

# PHASING OUT KEROSENE SUBSIDY IN DEVELOPING COUNTRIES

## CASE STUDY OF INDIA AND INDONESIA

Oleh :  
Mahpud Sujai<sup>1</sup>

### **Abstract**

*Subsidy is one of the main problems that burden the budget in some developing countries. Indonesia and India have similarities in dealing with efforts to reduce energy subsidies, especially kerosene. This study aims to explain the impact of the kerosene subsidy to the state budget of India and Indonesia, to explore and propose the alternative solutions to solve the problems occurred in relation with the implementation of the kerosene subsidy in both countries and to elaborate the strategy made by the government of both countries in reducing kerosene subsidy. This study used qualitative methods to explore ways of collecting information through data analysis in various types of both primary and secondary. The analysis used in this research is descriptive analysis in which researchers performed interpretation of data. From the analysis conducted, both countries succeeded in reducing the burden of subsidies for kerosene with a variety of strategies fit with the characteristics of each country.*

*Keywords: Kerosene Subsidy, budget, India, Indonesia*

### **I. BACKGROUND**

Energy is one of the most important factors for accelerating economic development especially in the developing countries. The increase in world demand for energy has made energy prices increased sharply in recent years. This poses problems for developing countries. On the one hand the government tries to stabilize energy prices in the country to maintain economic growth, but on the other hand this creates a heavy burden for the state budget because it must bear the burden of substantial subsidies. One type of energy that becomes a crucial need for society and subsidized by government of several developing countries is kerosene.

The increasing demand of energy in the world makes one of the problems faced by the government in maintaining the sustainability of the state budget.

---

<sup>1</sup> Kepala Subbidang Pada Pusat Kebijakan APBN, Badan Kebijakan Fiskal, Kementerian Keuangan

Some developing countries which subsidized their fuel price face big problems in allocating budget for subsidy. Indonesia for example, the high fuel subsidies lead to extravagance and inefficiency in the management of the State budget.

Data from Indonesian Budget stated that in 2006, fuel subsidies have reached Rp.64, 212 trillion or US\$ 7 billion with a share of the subsidy for kerosene at Rp.31, 58 trillion equivalent to US\$ 3.4 billion or almost half of total fuel subsidy. Meanwhile in India, data from Ministry of Petroleum and Natural Gas 2009 stated that Indian government has to spend around US\$ 4.2 billion in 2006 to subsidize the Kerosene for the poor people in the form of Public Distribution System (PDS).

To overcome those problems, many developing countries have several strategies such as formulating national energy framework, carrying out subsidy through the diversification of energy and reducing dependence on fuel oil. One of the popular solutions is phasing out the subsidy by promoting other alternative energy such as gas, coal or other renewable energy.

From that background, this paper tries to explore and elaborate many problems happened in the developing countries regarding this matter of subsidy. However, this research will focus in Indonesia and India as a big and fast developing country which have similarities in the subsidy policy. This research will only limit on the reduction of kerosene subsidies since it has successfully implemented in both countries.

### **1.1. Research Questions**

In this research, there are three research questions that will try to be answered in this paper, which are:

- How kerosene subsidies burden the budget of India and Indonesia?
- What problems occurred in relation with the implementation of the kerosene subsidy in both countries?
- What is the strategy of reducing kerosene subsidy in both countries?

### **1.2. Objective**

This paper tries to elaborate the solutions of the three research questions mentioned above. The objectives of this research are:

- To explain the impact of the kerosene subsidy to the state budget of India and Indonesia
- To explore and propose the alternative solutions to solve the problems occurred in relation with the implementation of the kerosene subsidy in both countries.
- To elaborate the strategy made by the government of both countries in reducing kerosene subsidy.

### **1.3. Methodology**

This study used qualitative methods to explore ways of collecting information through data analysis in various types of both primary and secondary. The analysis used in this research is descriptive analysis in which researchers performed interpretation of data. In qualitative research, the researcher's role becomes very important and key because of qualitative research including research into the interpretative where the interpretation of researchers to a problem is crucial to the quality of research results.

Data collected from various sources such as the Fiscal Policy Office and the Directorate General of Budget Ministry of Finance and the Ministry of Energy and Mineral Resources, PT. Pertamina (Persero) and from data sources on the Internet from various official government website both in India and Indonesia.

## **II. LITERATURE REVIEW**

### **2.1. Public Policy Concept**

There are many definitions of public policy. Most of the scientists gave the sense of public policy in relation to the decision to use the authority of state or government to do an act which would bring positive influence to the lives of its citizens. Even in a broader sense of public policy is often interpreted as "whatever government choose to do or not to do" Dye (1995). Dye definition illustrates how great the authority of the government in implementing public policy. More concrete definition is said by Peters (1999:4) that public policy is a government activity, whether conducted directly or through another party, which affect the lives of residents in the country. From the definition, it can be concluded that the aspect of public policy is very broad and the government plays a very vital role in making policies. Theodoulou (2004: 24) concludes that there are six basic components of public policy, all of which is one unit, namely:

1. Represents a choice between taking action or not take any action.
2. Involve a number of both formal and informal actors in government or outside government.
3. Includes various types of public policy actions.
4. Focused on specific action on a number of alternatives.
5. Public policy will lead to the desired consequences or undesirable.
6. Followed by other steps that have been determined after a decision on the policy making process.

### **2.2. The concept of Subsidy**

Subsidy is a grant paid by a government to an enterprise that benefits the public (Worldnetweb.princeton.edu). Other definition of subsidy is an economic



benefit, direct or indirect, granted by a government to domestic producers of goods or services (Countrystudies.us). The provision of public goods is sometimes needed government subsidies to provide net benefits (net gain) of welfare which indicated the existence of consumer surplus. These benefits are to reduce poverty through the provision of access to infrastructure services to the poor, provide access to basic needs for all communities, provide stimulus for economic development and regional development. In addition, the impact of investment in public goods by the government is to provide positive externalities that are beneficial to society.

Subsidies can also be interpreted by the government payments to companies and households to achieve specific goals that enable them to produce or consume a product in greater quantity or at a cheaper price. Economically, the purpose of subsidies is to reduce prices or increase output. Subsidies can be divided into two forms of subsidy in the form of money (cash transfers) and subsidies in the form of goods or subsidies in natura (in-kind subsidy). Provision of subsidy by the government can be seen from the aspect of justice which the government subsidy is a great way to make income redistribution from high-income people to those on low incomes. According Riatna, DP (2005), whatever the reasons put forward to justify the granting of subsidies, these subsidies on the other side will also cause a distortion of the workings of the market mechanism. This distortion is usually called the excess burden which the consumer surplus (consumer surplus) obtained from the subsidy amount will always be smaller than the amount of funds expended by the government in the form of subsidies.

### III. ANALYSIS

#### 3.1. Indonesian Case

One of the problems faced by the government in maintaining the sustainability of the state budget is the subsidy expenditure is still high especially fuel subsidies. The high fuel subsidies lead to inefficiency in the management of the State budget. To overcome these problems, Indonesian government prepares a national energy framework which carried out through the diversification of energy to reduce dependence on fuel oil. Diversification is by optimizing the use of other fuels such as gas oil and coal.

Fuel subsidy is one of the most important government spending that has significant impact in the national budget. The importance of the fuel subsidy mechanism is seen in the calculation which is different with other subsidies. The fuel subsidy is a subsidy given by government for the difference between economical price and the benchmark price set by the government. Formula for calculating the fuel subsidy is as follows:

$$[\text{Reference Price of Fuel} - (\text{Retail Fuel Prices} - \text{Tax})] \times \text{Fuel Volume}$$

Whereas: *Retail fuel price* is the retail selling price per liter of fuel in domestic area.

*Tax* is a Value Added Tax (PPN 10%) and Motor Vehicle Fuel Tax (PBBKB 5%).

Reference price of fuel is calculated based on the MOPS price plus distribution costs and margins.

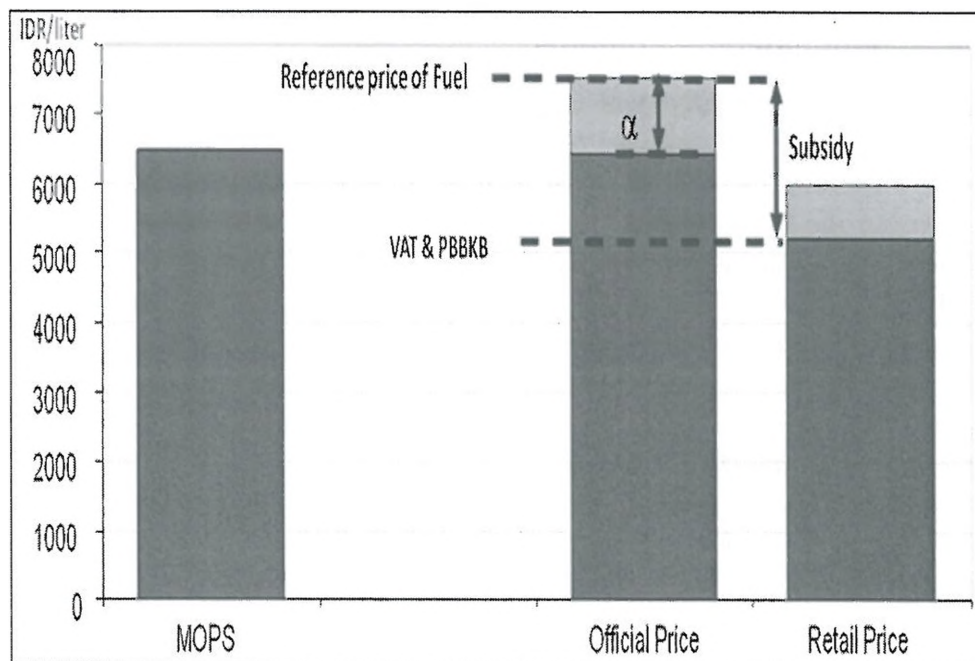
Reference price of fuel =  $MOPS + \alpha$ , which is:

$\alpha$  is the distribution cost + margin

MOPS (Mid Oil Platt's Singapore) is the price on the stock sale and purchase transactions on the Singapore oil

The formula of fuel subsidy can be shown in the following picture:

**Picture 3.1.**  
**Fuel Subsidy Formula**



Source: Fiscal Policy Office, 2011

In order to strengthen the budget capacity and maintaining budget sustainability, Government proposed a plan to reduce the energy subsidy gradually through the formulation of the national energy policy. One of the contents of the national energy policy is to convert the use of kerosene to LPG as an effort to reduce the use of fuel oil. The use of LPG can enhance the efficiency of energy use because the effective calorific value of LPG is higher than kerosene and more

environmentally friendly. In addition, the use of LPG has proven more efficient because the calculation of one liter of kerosene equivalent to 0.4 kg of LPG.

Conversion program from Kerosene to LPG is expected to reduce consumption of kerosene fuel and has several benefits, among others, which are increased potential for value-added kerosene to the aircraft fuel or jet fuel, reduce the abuse of the use of subsidized kerosene, structuring of the provision and distribution of fuel subsidized and secure the state budget from abuse and scarcity.

However, based on balance sheet data kerosene issued by the Ministry of Energy and Mineral Resources, in 2006, domestic kerosene production amounted to 8.545 million kiloliters, meanwhile the need for kerosene in this country reached 10.023 million kilolitres, so there still a shortage of supply which must be imported up to 2.11 million kilolitres, including for reserves amounted to 633.881 thousand kiloliters. Meanwhile, for the balance of LPG, LPG production in Indonesia in 2006 reached 1428 million tons, meanwhile consumption was estimated at 1,100 million tons, so there is a quota for export of 289 million tons.

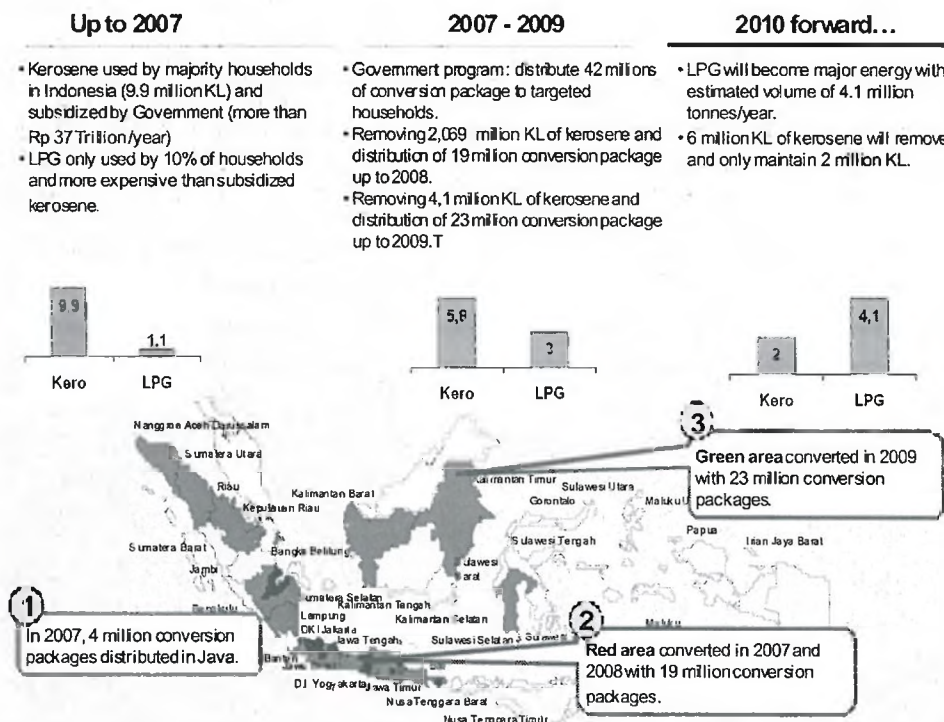
The amount of subsidy of kerosene price is the difference between the retail price set by the government with the reference price of kerosene. According to data from the Ministry of Energy and Mineral Resources, in 2006 the kerosene subsidy reached Rp.31, 58 trillion or about 50% of total fuel subsidies. To reduce the burden on the state budget is accomplished by reducing the use of kerosene through savings or by using alternative fuels such as LPG instead of kerosene. In addition, savings are also made through the efficiency of the distribution of kerosene and kerosene price adjustment approaching the economical price.

Conversion program from kerosene to LPG conducted with the aim of diversifying energy supplies to reduce dependence on petroleum fuels, especially kerosene to be transferred to LPG. Another objective is to reduce the abuse of subsidized kerosene because LPG is more secure from misuse. In the other hand, kerosene has the potential for increased value added to aviation fuel. In addition, with this conversion program, there will be a practical fuel, clean, and efficient for households and small businesses. And the main purpose of this conversion program is the efficiency of government budget because of the use of LPG is more efficient and will affect relatively smaller subsidy than the kerosene subsidy.

In the implementation of kerosene to LPG, the government provides assistance to households conversion package targets, consisting of 3 kg LPG cylinders, LPG gas stoves and gas hose. Each package is given free to the public who used kerosene as their source of energy. Selection of beneficiaries of subsidized LPG package based on a survey conducted by an independent agency with criteria have proof of residence, kerosene users and do not have a gas stove and LPG. Meanwhile, the region that received the transfer program kerosene to LPG was chosen with

consideration of the readiness of LPG infrastructure in the region. The roadmap of the targeted region which will be converting to LPG is disclosed in the following picture:

**Picture 3.2.**  
**Kerosene to LPG Conversion Road Map**



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Source: Ministry of Energy and Mineral Resources, Indonesia

Kerosene to LPG conversion program has the target beneficiaries in the form of households and small businesses. For households receiving target, target users living as a housewife, pure kerosene users, users with the social class of C1-down status, namely households with expenditures less than Rp1, 5 million / month on the condition have a clear proof of residence and legal as the ID card and family card. Meanwhile, for target beneficiaries in the form of micro-enterprise, users are small businesses that use kerosene as fuel and have a valid proof of residence in the form of ID card and family card and business letter issued by the local municipality.

Government's target with the success of kerosene to LPG is expected to reach the target composition of the expected supply of fuel. Target gasification ratio or the ratio between the number of households with gas-fueled overall number of

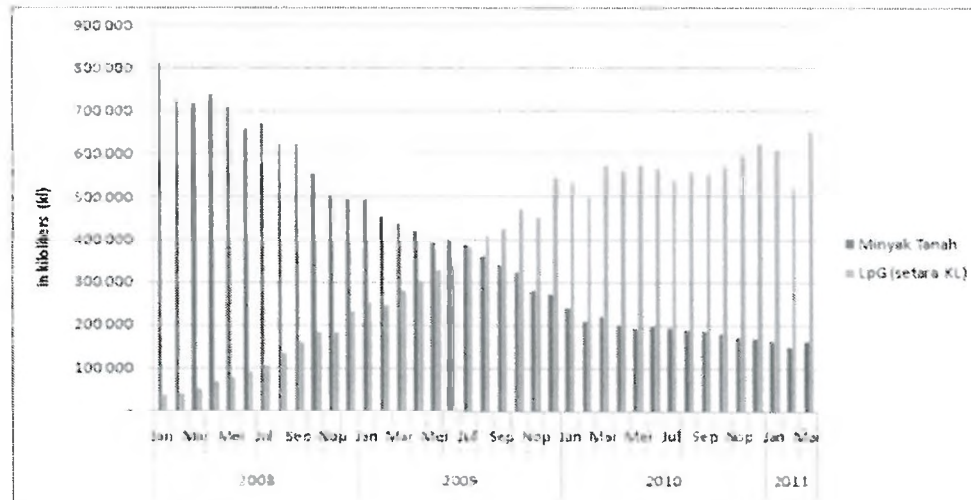


households is expected to reach 51.77 million households or 70.89% in 2012 increased sharply from 12.08 million households or 19.06% with a total number of households amounted to 63.39 million households in 2007 and increased to 73.02 million households in 2012. The amount is made up of city gas users by 80 thousand households in 2007 and increased to 100 thousand households in 2012, users of bottled LPG gas 12 kg of 6 million households in 2007 and increased to 9.6 million households in 2012 and users LPG gas containers 3 kg of 6 million households in 2007 increased to 42 million households in 2012.

Another target of this conversion program is a condition of zero-kero in 2012, where the zero-kero is a condition when there is no longer subsidized kerosene that circulates for public, but kerosene will still be marketed with economical price. In order to reach that goal, the government involves several relevant agencies responsible in accordance with its function, among others. The coordinator of this program is the Ministry of Energy and Mineral Resources meanwhile the Ministry of Finance is responsible in terms of budget, the Ministry of Industry is responsible for the procurement of the tube, the Ministry of Cooperatives and SMEs is responsible in terms of procurement stove, Ministry of Women Empowerment is responsible for socialization, Ministry of Social Affairs is responsible for the transfer of professions within the commercial business kerosene, BP Migas is responsible for the withdrawal of kerosene on the conversion and PT. Pertamina appointed as the executor of this program.

The positive impact of this conversion program is the continued decline in the volume of kerosene consumption significantly. This resulted in subsidies given to kerosene decreasing significantly. However, on the other hand, the volume of consumption of LPG to be increased significantly, this resulted in increase the amount of subsidy for 3 kgs LPG. However, kerosene subsidy reductions are greater than the increase in LPG subsidy which is better for the national budget. For more details about the volume of kerosene and LPG can be seen in the following picture:

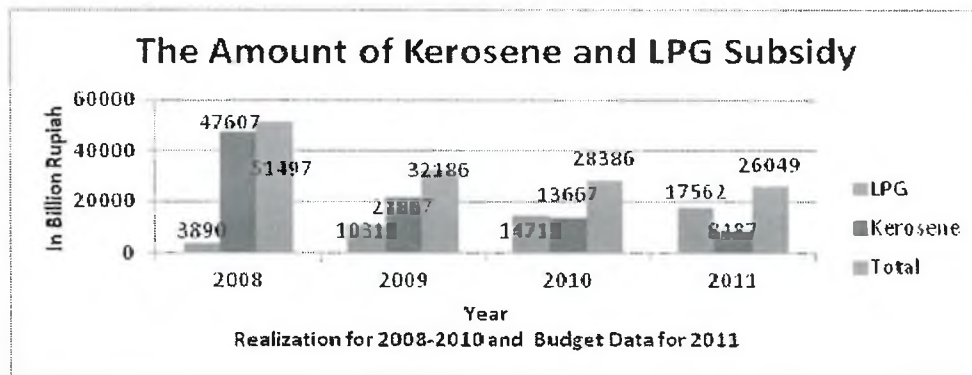
**Picture 3.3.**  
**Consumption Volume of Kerosene and LPG**



Source: Fiscal Policy Office, 2011

The result shows that the policy option made by Indonesian Government to reduce kerosene subsidy by converting to LPG is successful. The amount of kerosene subsidy in the budget is declined from Rp.47,607 trillion in the 2008 to Rp. 13,667 trillion in the year 2010. Meanwhile in the year 2011, the amount of subsidized kerosene will decrease and reach Rp.8,487 trillion. In the other hand, the subsidy for LPG increases from Rp.3,89 trillion in the year 2008 to Rp. 14,719 trillion in the year 2010. The amount will increase again in the year 2011 up to Rp. 17,562 trillion. The graph below shows the amount of subsidized kerosene and LPG from year 2008 to 2011.

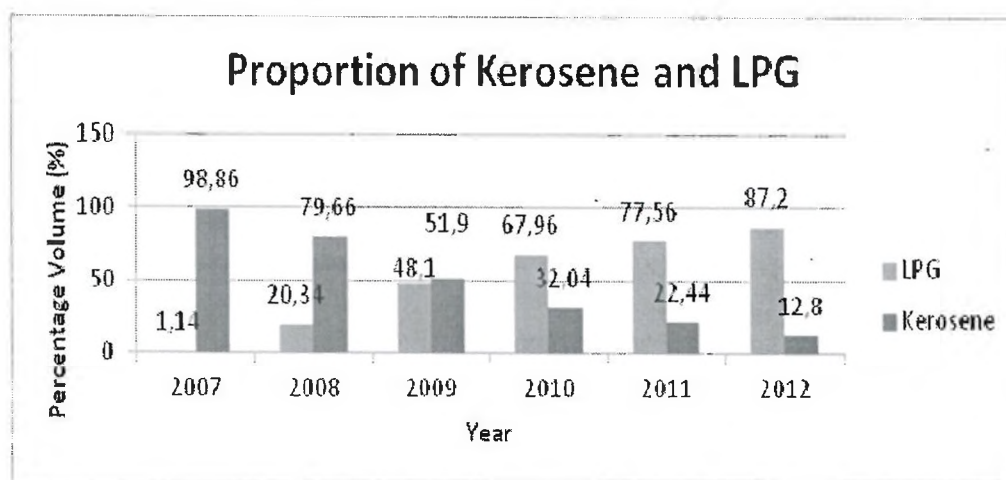
**Picture 3.4.**  
**The Amount of Subsidized Kerosene and LPG**



Source: Fiscal Policy Office, Ministry of Finance, Indonesia

In term of the proportion of kerosene usage to LPG, the trend seems decreasing every year. From the graph below, it shows that the usage of kerosene is decreasing significantly, started from 98,86% in the year 2007 decrease to only 12,8% in the year of 2012. In the other hand, the share of LPG usage is increase dramatically from only 1,14% in the year 2007 to 87,2% in the year 2012.

**Picture 3.5.**  
**Proportion of Kerosene to LPG Usage**



Source: Ministry of Energy and Mineral Resources, Indonesia

There are still some problems facing by the government behind the successfulness of the kerosene conversion to the LPG. One of the problem is there is a difference price between the subsidized 3 kgs LPG retail price and the 12 kgs LPG normal price. This difference caused smuggling, blending and repackaging the 3 kgs LPG into 12 kgs LPG. Other problem remain is the cost of providing the gas cylinders for 3 kgs LPG in the state budget. But overall, the conversion program of kerosene to LPG seems a successful story in phasing out kerosene subsidy in Indonesia.

### 3.2. Indian Case

Just like Indonesia, India also conducts policy of subsidy on kerosene for the poor. The Indian government allocated in the budget for the kerosene subsidy up to U.S. \$ 3.25 billion in 2006, even rising up to 6:14 billion in 2008. Providing subsidies for kerosene prices were much distorted by irresponsible parties. Based on data from India's economic bureau, 2005, approximately only 60% of subsidized kerosene reaches the target. Meanwhile the rest of 40% did not reach the target and fell into the black market.

Many efforts have been made by the Indian government to reform the provision of subsidized kerosene. Such as providing direct subsidies to the poor,

tracking the distribution of subsidized kerosene and liberalizing the price difference between subsidized and unsubsidized kerosene. But those efforts have not succeeded because there is still a strong political pressure to keep subsidizing kerosene for the poor who have access to subsidized kerosene and support the parties that participated in the black market kerosene.

Data from the Ministry of Petroleum and Natural Gas shows that the amount of energy subsidy in India is increasing significantly from year 2005-2006. This amount is increasing because of the rise of oil price. However, Indian government has a policy to administer the price of the fuel such as gasoline, kerosene, diesel and LPG. When the international price of fuel increased, the budget for fuel subsidy is increasing as well. The amount of the fuel subsidy showed in the following table:

**Table 3.1.**  
**Fuel Subsidy in India (in US\$ billion)**

Fuel	2005-06	2006-07	2007-08	2008-09
Kerosene	3.25	4.2	4.47	6.14
Domestic LPG	2.31	2.51	3.86	3.83
Gasoline	0.62	0.48	1.82	1.13
Diesel	2.86	4.41	8.73	11.37
Total	9.03	11.61	19.61	22.45

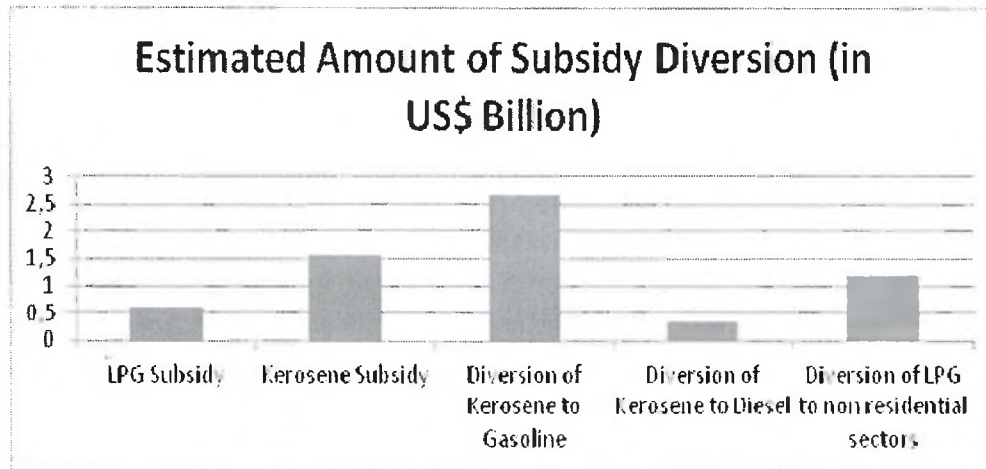
Source: Ministry of Petroleum and Natural Gas India, 2009

One of the major problems that occurred in India relating to the implementation of the subsidy is highly subsidized kerosene that does not reach the target and circulating on the black market. Subsidized products such as kerosene and LPG diverted to non-subsidized sectors such as trade and industry. India's poorest family which is the targeted subsidy is the people who suffer the hardest hit because of the lack of stock of kerosene. Poor families sometimes cannot cook and turned on the lights because of shortage of kerosene meanwhile the stock of kerosene is very much on the black market. Unfortunately, kerosene on the black market is sold at an expensive price<sup>5</sup>.

The Indian government has calculated the estimated losses incurred as a result of the abuse of subsidized kerosene on the black market. Estimated losses that occurred in 2009 with the assumption that world oil prices at the level of U.S. \$ 70 per barrel is as follows (Shenoy,2010):



**Picture 3.6.**  
**Estimated Amount of Subsidy Diversion in India**



Source: Shenoy, 2010

Apart from the disbursement of government funds that are misappropriate, other effects of the misuse of kerosene, is the emergence of corruption that reaches directly to the public. Funds obtained from the kerosene black market and derived from the subsidy system have become the political leader source of fund that leads to a corrupt government. In addition, kerosene is mixed with diesel and gasoline and used as fuel. It causes damage to the engine and increase pollution levels. In the future, it will impact the energy security of India because there is no balance between supply and demand of energy.

The Indian government has implemented several actions to reduce the misappropriation of subsidized kerosene and reduce kerosene subsidy. Some of the implementation actions are elaborated in the following explanation. First, the use of Global Positioning Systems (GPS) to improve kerosene supplies to poor consumers and prevent the kerosene diversion. Under this action, the distribution tankers fitted with GPS system supplied kerosene to wholesalers to keep track of their movements (Shenoy,2010). But this action in terminated in 2008 because the benefit derived from this action is less than the costs occurred to installed the GPS to all distribution tankers.

Second action taken by the government is to blend the subsidized kerosene with the specific color. It can help detecting the subsidized kerosene and unsubsidized kerosene. The subsidized kerosene has a different color with the unsubsidized one. This action can reduce the misappropriation of subsidized kerosene and the cost of this action is relatively small. However, the distributor

found the materials that could neutralize the marker just simply using natural clay. Finally this action becomes ineffective as well (Ranjan,2008).

Other action taken by the government is using a coupon system. This system tries to give the subsidy directly to the targeted poor people by giving them a coupon that can exchange with the amount of kerosene. At the beginning of the month, all subsidy recipients will receive a coupon to purchase kerosene which has been allocated. The distributor must sell kerosene to people who have a coupon. Then in the next month the distributor will be given in accordance with kerosene coupons that have been received. So if a distributor sells kerosene to the black market without a coupon, then next month they only get a quota in accordance with the entitlements through coupons. So the distributor will divert subsidies only once because after that the quota will be deducted automatically. After this coupons system implementation, consumers are happy because they did not have to wait in the long queue and they could show up any time to buy kerosene. They can buy kerosene anytime they want to obtain their allocated quota. Unfortunately, the distributor did not happy and complained that they had to wait for consumer to come and cash in the coupons before they could replenish their supply for the following month. However, with the change in leadership and strong lobbying by kerosene dealers and politicians, that perfect coupons scheme was slowly alienated (Shenoy, 2010).

The other option that has been taken to reduce misappropriation of subsidy is by using smart cards. That option firstly introduced in 2007 by providing unique identification card for every Indian with all relevant information regarding the citizen. It can help the government to distribute the subsidy and other welfare program because of the relevant data. Unfortunately, this big project, because of need a very big funding and latest development of IT system, could not implemented yet.

Some strategies options are proposed by the Indian Government to reduce fuel diversion and subsidy demand. First option is by liberalization of fuel prices. This option is still being discussed and not implemented yet. Many studies recommend the implementation of market based prices rather than the administered price (Rangarajan,2006). This subsidy option made a distortion for economy and lead to corruption. When offering a subsidy, it is better to offer it in the form of cash subsidy benefit direct to the recipient rather than through a reduction in the price of a good (Shenoy,2010).

Other strategy is diversifying energy. The Indian government tries to enhance another alternative energy to reduce the use of fossil fuel. One of the policy option made by government is to increase the ratio of electrification to reduce subsidy demand in kerosene. Data from National Sample Survey Organization 2008, found

that rural households use kerosene primarily for lighting. With increase in electrification ratio, the rural use of kerosene for lighting has fallen to 42 percent in the year of 2005-2006 from 51 percent in the year of 1990-2000.

#### IV. CONCLUSION

Subsidy is one of the problems faced by some developing countries that weigh heavily on the State budget. Indonesia and India are examples of countries that have problems in terms of subsidies. The amount of the subsidy, not exactly the distribution, the use of subsidies for goods that are not subsidized sector is an example of the problems faced.

Kerosene is one energy commodity that is essential for public and subsidized by the government. In an effort to reduce petroleum subsidies do various measures such as kerosene to LPG conversion, various options to reduce the misuse of subsidies and energy diversification.

Both countries have succeeded in reducing the kerosene subsidy in accordance with the characteristics of the country. The programs which are succeeded to be implemented are in Indonesia with conversion program from kerosene to LPG, and in India with energy diversification program, especially increasing electrification ratio for the poor people and remote area.

#### List of References

- Countrystudies.us/united-states/economy-12.htm diakses 1 Desember 2010.
- Data APBN (<http://www.fiskal.depkeu.go.id>, diakses 2 Desember 2010).
- Data Pokok APBN 2005-2010 ([http://www.anggaran.depkeu.go.id/Content/10-10-04.%20Data%20Pokok%20APBN%202011%20Indonesia rev2.pdf](http://www.anggaran.depkeu.go.id/Content/10-10-04.%20Data%20Pokok%20APBN%202011%20Indonesia%20rev2.pdf), diakses 4 Desember 2010).
- Dye, Thomas R. 1995. *Understanding Public Policy*, Englewood Cliffs, NJ: Prentice Hall.
- Kementerian Energi dan Sumber Daya Mineral, Republik Indonesia, (<http://www.esdm.go.id/cari/konversi%20mitan.html?ordering=&searchphrase=all> diakses 14 Desember 2010)
- Ministry of Petroleum and Natural Gas, *Energy, Infrastructure and Communications in Economic Survey 2008-2009* (<http://indiabudget.nic.in/es2008-09/chapt2009/chapter9.pdf>, diakses 14 Desember 2010)
- National Sample Survey Organization, *Household Consumer Expenditure in India 2005-2006* ([http://mospi.nic.in/rept%20 %20pubn/ftest.asp?rept\\_id=523&type=nsso](http://mospi.nic.in/rept%20%20pubn/ftest.asp?rept_id=523&type=nsso), diakses 13 Desember 2010)

- Peters, B.G., 1999, *American Public Policy : Promise and Performance*. (Chatham, NJ : Chatam House)
- Rangarajan.C. et.al (2006), *Report of the Committee on Pricing and Taxation of Petroleum Products* (<http://www.petroleum.nic.in/Report1.pdf> , diakses 10 Desember 2010).
- Ranjan, A (2008), Tamper Proof Kerosene: There is Proof it can be tampered (<http://www.indianexpress.com/news/tamperproof-kerosene-theres-proof-it-can-be-tampered/369550/0>, diakses 14 Desember 2010)
- Riatna, DP. 2007. Kebijakan Subsidi dan PSO Dibidang Infrastruktur. *Jurnal Bappenas*: Perpustakaan Bappenas.
- Shenoy,B. *Lessons Learned from Attempts to Reform India's Kerosene Subsidy*, Global Subsidies Initiatives, IISD, Geneva, 2010.
- Theodoulou, Stella Z. 2004, *The Art of The Game : Undertanding American Public Policy Making*, (Belmout, CA : Thomson and Wadsworth)
- Undang-Undang No.2 Tahun 2010 tentang Perubahan atas Undang-Undang No.47 Tahun 2009 tentang Anggaran Pendapatan dan Belanja Negara Tahun Anggaran 2010
- Worldnetweb.princeton.edu/perl/webwn, diakses 1 Desember 2010.

