THE EFFECTS OF OIL PRICE INCREASE ON THE INDONESIAN ECONOMY

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Abstract : *Oil is one important factor in the economy of a country and determines the activities of national production. The increase in oil prices is caused among other things by the imbalance between the demand and oil production of the world. The increase in oil prices will have a broad impact on state economic activities of the state through a domino effect. The increase in oil prices will cause rising product prices by increasing production costs and price increases will further cause inflation. This condition will eventually lower the purchasing power and the declining purchasing power will affect transaction demand for money which in turn will reduce the economic growth. Factually, it can be seen that after the oil price increase in October 2005 led to the decreasing in income growth as well as the purchasing power of certain groups of people, especially for fixed and low income communities. Empirically, before the 2005 oil price increase in Indonesia, the number of poor people was 35.19 million people (22.7%), but after the oil price increase in 2006, the number rose to 39.05 million (29.85 %). The same condition also occurs in West Sumatra in the same period, which prior to the increase in oil prices, poor population was 1.005 million inhabitants (15.97%) meanwhile in 2006 increased to 1.365 million inhabitants (19.85%). The fact above is reinforced by the results of the study INDEF (2005) they concluded that the rise in oil prices (all types of oil) by 5 percent, would increase the Consumer Price Index (CPI) of 1.6 percent and the number of poor people will tend to increase 2,76 percent. If the oil price increase 30% estimated the number of people likely will increase 9.6%. Furthermore, based on Bank Indonesia Scenario in 2006, it was revealed that the first round impact of oil price increase on inflation for every 10% price rise (premium, diesel, and kerosene) will cause 0.37% increase in inflation and in the second round 0.41% or 0.78% the total impact. In addition, rising oil prices also pose depreciative pressure on the rupiah exchange rate, caused by a widening differences in price levels and interest rates between the domestic and abroad. The weakening of rupiah exchange rate will eventually reduce the ability to import, if this condition is followed by lowering demand, it will result in a reduction of investment activity. The increase in oil prices by 10% is expected to reduce investment activity approxiamately 0.14% and imports around 0.06%, while the weakening of the rupiah has the potential to increase exports, although not significantly, only 0.01%. The same condition also occurs in West Sumatra, the increase in oil prices tend to influence negatively the level of consumption and investment, while inflation will tend to rise. Consumption in the first quarter of 2006 contracted by 4.6%, inflation has increased in quarter 1 around 0.09% while 4.38% inflation in goods and services tend to rise further 2.34%. Thus, the inflation rate in quarter 2 will increase to 6.73%. All these issues will lead to the decline of economic growth in both local and national. If before the oil price increase, national economic growth reached 6.82%, the expected growth will be a contraction of 0.14%. The contraction will occur in all sectors of the economy although the effects are largely determined by sensitivity of each sector as a result of oil price increases. Therefore, government policies to raise the price of oil must be done with comprehensive consideration and any policy of oil price increases must be followed by other policies to minimize their impacts on the society and the economy of the country.*

Globalization is characterized by a borderless world in which a country's borders with other countries have now become blurred, and thereby any economic phenomena taking place in a country will then bring effect to other countries. The rapid economic growth in China and India, for example, has caused an increase in world's demand for oil, meanwhile the cessation of production of oil refineries in the Gulf of Mexico due to hurricanes Katrina and Rita, has resulted in a decrease in world oil supply. Economically, these phenomena tend to lead to price increases.

Increasing oil prices will have impacts on the global economy as well as the domestic economy, because currently Indonesia is not only as a producer of petroleum, but also as the world oil

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consumer. Increasing domestic oil consumption is not offset by increased oil production in the country, thus the production is unable to meet the growing need which therefore must be met by importing the oil.

The increased domestic oil consumption cannot be separated from the increasing population ; based on the census data, the estimated number of population in 1980 was 147 million whereas in the year 2000 it became 203 million, which means that Indonesia has been experiencing population growth of 7% per annum, putting Indonesia as one of four the most populous countries after China, India and the United States. During the same period, the real Gross Domestic Product (GDP) of Indonesia grew by 10.4% per year, from USD 194 billion to 407 billion. This condition shows the real GDP growth was 3.4% faster than population growth in the same period. Both the population and GDP growths bring consequences of higher increase in energy consumption.

The increased oil prices followed by the increase in domestic oil consumption has a direct consequence on the subsidy that must be spent by the government because of differences between the selling price and the buying price of oil in the world market. The higher the difference between selling price and buying price means the greater the subsidy to be provided by the government for the people, which will in turn lead to growing budget deficit. Although in the calculation of the state budget the domestic oil prices were initially set to reduce subsidies, but later during the budget year the assumed prices were found to be in sharp disparities compared to the international prices. This makes the allocated subsidy swollen and puts big pressures on the sustainability of government finance.

TABLE 1
Assumptions in the 2007 and 2008 State Budgets (APBN)

Quality Indicators	2007		2008	
	State Budged Act.18/2006	**Revised State Budged**	**State Budged**	**Revised State Budged**
1. Gross Domestic Product (billion IDR)	3.779.154,7	3.701.412,2	4.701.412,2	4.280.005,8
2. Annual economic Growth (%)	6,3	6,3	6,8	6,4
3. Inflation (%)*)	6,5	6,0	6,0	6,5
4. The rupiah per U.S. $ *)	9.300	9.050	9.100	9.150
5. 3-month SBI interest rate (%)	8,5	8,0	7,5	7,5
6. Oil prices ICP (US$ / barrel) *)	63,0	60,0	60,0	83,0
7. Lifting the Indonesian oil (million barrels / day) *)	1,000	1,950	1,034	0,910

The increasing budget deficits become a serious challenge to the government, in 2008 for example the deficit was caused by increased oil subsidy from Rp 45.8 trillion to Rp 102 trillion and electricity subsidy from Rp 29.8 trillion to Rp 42.6 trillion, as well as food subsidy from Rp 7.2 trillion to Rp 19.8 trillion, assuming world oil price was U.S. $ 83 per barrel. The amount of subsidy appears to be fluctuative enough against total government expenditure; such condition is caused by fluctuations in world oil prices and political and macro-economic policies at the time.

TABLE 2
GOVERNMENT EXPENDITURE and OIL SUBSIDY

Fiscal Year	Government Expenditure (Trillion IDR)	Oil Subsidy (Trillion IDR)	Oil subsidy on Government Expenditures (%)
2000	221,5	53,81	24,3
2001	341,6	68,38	20,0
2002	345,6	31,16	9,0
2003	364,9	13,21	3,6
2004	430,0	59,18	13,8
2005	397,8	31,22	7,8
2006	440.03	64.21	14.59
2007	504.6	83.79	16.61
2008	693.3	139.1	20.06
2009	716.3	57.6	8.04

Source: Indonesia's Financial & Economy Statistics

THE IMPACTS OF OIL PRICE INCREASE ON THE NATIONAL ECONOMY

In macroeconomic perspective, the increase in oil prices will have a broad impact on economic activities, and ultimately has to be paid (the trade-off) with the welfare of the people. The increase in oil prices will cause direct impact on the increase in production costs (cost push inflation). The high inflation will have subsequent impacts to rising prices of goods and services, such as rising transportation costs, electricity tariff (TDL) and others. Eventually, this condition will lower the consumer purchasing power, because the income they earn has been undermined by the inflation, and thus reduces the consumption. The decline in purchasing power are usually also accompanied by a decline in consumer income expectation and the growth of transaction for money.

Based on empirical observation it seems that the oil price increase in October 2005 was also followed by a significant decline in the income growth and the purchasing power of certain groups of people, especially those with low and fixed-income. These particular groups are the most vulnerable to the poverty trap. If someone takes a closer look at the facts in 2005 before the rise of oil prices, the number of poor people was as much as 35.19 million (15.97%), but after the oil price increase the poverty rose to 39.05 million (19.85%) in 2006.

An INDEF study (2005) on the impacts of oil price increase on the poor and the Consumer Price Index (CPI), using the Vector Auto Regressive model (VAR), shows that an increase in oil price (all types of oil) by 5 percent causes an increase in the CPI by 1,6 percent, and the number of rural poor people tends to rise by 1.3 percent, while the number of urban poor people increases by 2.76 percent. It can be concluded that the higher the percentage of increase in oil prices the higher the rise in consumer price index (CPI) as well as the number of the poor. Thus, if the oil price increases by 30% then estimated number of poor people will rise by 9.6%. The study above is supported by a study by Oktaviani (2005) using Computable General Equilibrium (CGE) come up with a similar conclusion that the increase of oil price makes worse the condition of households, compared to the condition before the price increase. Besides, the level of income of poor households in rural and urban areas will certainly decline rapidly due to the decline in wage levels and capital rents. In general, the number of households living below the poverty line increases.

Moreover, based on the Baseline Scenario conducted by Bank Indonesia (2006) it was revealed that the first round impact of every 10% increase in oil price (premium, diesel, and kerosene) on inflation is 0.37%, while the second round impacts is 0.41%, bringing the total impact for each 10% increase in oil price is 0.78%. Further, such an increase also affects the exchange rates and GDP growth.

Table 3
Summary of The Impacts of Oil Price Increase Against Some Macroeconomic Indicators

Macroeconomic Indicators	10% Increase in Oil Price
Inflation	1st Round : 0,37 % ; 2nd Round: 0,41; Total : 0, 78 %
Exchange Rates	-0,40 %
GDP	-0,05 %

Based on the simulations conducted by Bank Indonesia (2006), it can be concluded that the oil price increase will also directly trigger an increase in inflation and put pressure on the purchasing power. A 10% increase in oil prices is predicted to reduce the consumption growth as much as 0.03%. Such an increase will fundamentally cause depreciating pressure on rupiah due to widening gap in price levels at home and abroad and declining real interest rate discrepancies. On one hand, the weakening exchange rate of rupiah will eventually reduce the ability to import, and if followed by a decline in demand it will cause a decline in investment. A 10% increase in oil prices is expected to reduce investment activity up to 0.14%. On the other hand, the weakening of rupiah has the potential to increase exports, though not too significant, only 0.01%. Meanwhile, the import activity is expected to experience a contraction of 0.06%. Overall, an increase in oil price by 10% would eventually reduce GDP growth by 0.047%.

Furthermore, a Bank Indonesia's analysis (2006), using the year 2000 Input Output data, reveals that rising oil prices will lead to changes in consumption patterns for three types of oil (Gasoline, Kerosene and Diesel). The calculation of household's demand elasticity for oil, based on a proxy using the data of oil sales volume against the price levels during the years 2000 and 2001, shows that every increase in oil prices by 1% caused a decline in household consumption by 1.1% and every 10% price increase reduced the domestic Gross Revenue as much as 0.05%. The impact of oil price increase on the non-performing loans (NPLs), according to Bank Indonesia's simulation study, is that any increase in world's oil prices by 10% tends to cause 0.20% default on loans in three months afterwards, and if the world's oil prices stay at USD 115, USD 120 and USD 125 the NPLs are estimated to reach 5.66%, 5.75 and 5.82%. Thus, the higher the world's oil prices the higher the NPLs will be. This proves by itself that the increase in oil prices causes many economic activities having operational disruptions because of increased production costs while on the other hand the consumer demand is declining. Such a condition will affect the performance of the real sector which in turn leads to termination of employment and reduction in government revenue from taxes and levies.

Oil Price Increase and the Economy of West Sumatra

The West Sumatra regional macroeconomic performances over the last two years seem quite satisfactory. From year 2006 to the first quarter of 2008, the economic growth was quite expansive with an estimated growth of 6.82%. One thing quite encouraging is that since the third quarter of 2007 to the first quarter of 2008, the growth exceeded the national economic performance. On the demand side, the drivers of economic growth in West Sumatra were still dominated by consumption and international trade. On the other hand, the agricultural sector was expansive enough to keep up with the high consumption. The plantation sector was the largest contributor to respond the demand, especially exports.

The relatively high economic growth cannot be separated from: (a) the increase in aggregate household consumption, since 2004 the household consumption grew by 6.13%, (b) the increasing investment, investment activities took place mainly in the agricultural sector and agriculture-based industries due to the increasing commodity prices in world markets. Some indicators of the increasing investment if compared to the first quarter of 2007 are as follows: sales of commercial vehicles grew by 44.80%, cement sales rose by 28.65%, and investment loans increased by 46.42%. In addition, the government investment increased four-folds compared to the first quarter of 2007 to Rp 71 billion, (c) and the increase in export especially in palm oil plantation sub-sector. CPO export sales increased by 70.05% compared to the first quarter of 2007, and the CPO price rose up to 80.84%.

However, the West Sumatra sector-by-sector economic growth from 2004 to the first quarter of 2008 seems somewhat inequitable. The performance of non-tradable business sector grew higher than tradable business sector. In the non-tradable sector, transportation and communications showed the highest growth, while in the tradable sector the high performer was the agricultural sector especially the plantation sub-sector. The inequitable of sector-by-sector growth indicates that the economic sectors are not well-managed and not yet referred fully to the economic bases of the region. Meanwhile, the service sector still shows a relatively low performance although in fact the sector has good potential for development, especially tourism.

Referring to the analysis of the impacts of rising oil prices in 2005 against a number of national macroeconomic indicators, the same condition also occurs in West Sumatra, because regional economic activity is actually an integral part of the national economy or in other words the national economy is the accumulation of regional economies.

Table 4
Sector-By-Sector Economic Growth Of West Sumatra Business Sectors By Year 2004 - 2008

Sectors	04	05	06	071	072	073	074	07	081
1	5,79	5,13	5,01	3,29	3,60	5,77	7,52	5,06	7,12
2	3,26	3,09	3,04	1,18	2,46	3,57	5,13	3,09	5,18
3	4,53	4,97,	4,47	2,67	4,79	7,08	7,62	5,55	7,72
4	5,90	12,51	8,93	4,77	6,59	8,27	7,89	6,90	8,21
5	7,62	4,69	7,26	6,08	6,17	4,12	4,99	5,33	4,96
6	5,29	5,97	6,73	7,91	7,76	6,98	5,26	6,95	5,14
7	8,03	9,81	10,27	9,08	9,62	10,08	9,66	9,61	9,63
8	6,35	6,33	7,87	7,90	6,99	6,78	7,05	7,17	7,11
9	3,67	4,21	4,85	5,86	6,12	5,84	6,26	6,02	6,01
GRDP	3,67	4,21	4,85	5,86	6,12	5,84	6,26	6,32	6,01

Source: Bank Indonesia Padang

Description:
1. Agriculture 2. Mining 3. Manufacture and Processing 4. Electricity, Gas and Water drinking 5. Building 6. Trade, hotels and restaurants 7. Transportation and Communications 8. Finance 9. Services

The increase in oil prices tends to bring negative effects on the consumption and investment levels, while inflation tends to cause the opposite. If consumption grows in the first quarter by 6.13%, it will face contraction by 0.09%. Inflation tends to rise after the oil price increase; if in the first quarter of 2008 the inflation rate for goods and services was 4.38% it tended increase as much as 2.34%. Thus, the inflation rate in the second quarter became 6.73%. All this problems will finally lead to the decline of economic growth. If prior to the price increase the economic growth reaches 6.82%, it is predicted to experience contraction by 0.14%. This contraction occurs in all economic sectors, but its effects are largely determined by the sensitivity of each sector against the price increase. Nevertheless, the growth contraction is not significant statistically when viewed from regional economic perspective. But when it is seen partially, the increase in oil prices will deteriorate the life of certain groups of people, particularly those with low income.

It may be undisputable that the increase in oil prices rise the number of under poverty line people. In 2005 the number of poor people in West Sumatra was 1,005,447 (22.7%) and in 2006 increased to 1,365,900 (29.85%). The increase was among others caused by the rising oil price in 2005. In 2007, the number of poor people declined as much as 29%. With rising oil prices by 30% in the following year, the number of poor people became higher, in which the urban poor increased to 13.80% and rural 6.5%.

The increased number of poor people becomes a social cost burden to the government. Although the government has shown concern to this unfortunate group by distributing direct cash assistance fund (BLT) to them, the fund appears still insufficient to free them from the shackles of poverty because the nominal is relatively small. The BLT fund, unfortunately, is not able to cover the price increases caused by the inflation which reaches 14%.

CONCLUSION AND RECOMMENDATIONS

The increase in oil prices has wide impact not only on economic activities but also on social and political life of the people. The oil price increase is not impossible to trigger social problems such as the increasing number of people who live in frustration and distress, which eventually cause social and political instability, and to lower the nation's credibility in the eyes of the international community. Therefore, an increasing oil price policy must be followed by other policies which in the long-run aim at minimizing the negative impacts of the rising oil prices. In the short-run, the government should ensure the availability of basic goods at affordable prices reachable to the purchasing power of the people.

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