

RESEARCHERS AT THE INSTITUTE OF SOUTHEAST ASIAN STUDIES SHARE THEIR UNDERSTANDING OF CURRENT EVENTS

---

**Singapore | 4 Feb 2015**

---

## **How Does the Oil Price Decline Affect Southeast Asia?**

*By Cassey Lee<sup>1\*</sup>*

### **EXECUTIVE SUMMARY**

- Between July 2014 and January 2015, crude oil prices declined by more than 50 percent.
- This situation is a worrying one for net oil-exporting countries in Southeast Asia such as Brunei, Malaysia and Vietnam, that are exposed to short-term negative impacts on oil export revenues and fiscal balance.
- In both Indonesia and Malaysia, the impact of lower oil prices on fiscal balance has been partly neutralized by recent fuel subsidy reforms.
- Net oil importers with moderate to high intensity oil consumption such as the Philippines, Thailand and Singapore will gain from the lowering of input costs.

---

<sup>1</sup> The author thanks Francis Hutchinson, Siwage Dharma Negara, Maxensius Tri Sambodo, Quah Boon Huat, Marc Foo, Ooi Kee Beng and Hal Hill for their comments and suggestions. The usual caveat applies.

- The least affected economies will be those not producing oil and those with low intensity in oil consumption such as Cambodia, Laos and Myanmar.

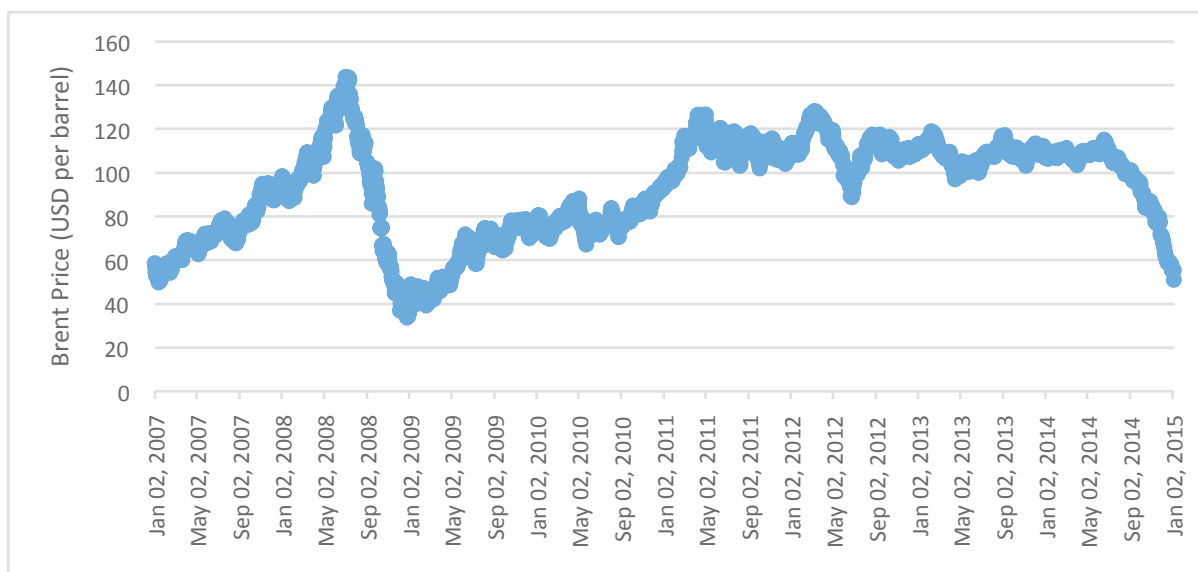
\* *Cassey Lee* is Senior Fellow at ISEAS; e-mail: [cassey\\_lee@iseas.edu.sg](mailto:cassey_lee@iseas.edu.sg).

## INTRODUCTION

Crude oil prices dipped below the USD50 per barrel psychological benchmark on Monday, 5 January 2015.<sup>2</sup> Only six months earlier, in July 2014, crude oil prices were hovering around USD110 per barrel (*Figure 1*). The steep decline in oil prices of about 50 percent, whilst not unprecedented, was totally unexpected. The last time oil prices dipped significantly was in 2009 in the aftermath of the global financial crisis. Back then, the world economy contracted by two percent. In contrast, the world economy grew by 2.6 percent in 2014.

The slump in oil prices is primarily driven by excess supply and weak demand in the oil market. As the slump in oil prices was totally unexpected before the end of 2014, it is safe to say that policymakers will need to go back to the drawing board to chart new policy directions for the coming year (at least). This essay examines how the economies of Southeast Asia are affected by the steep decline in oil prices.

**Figure 1: Crude Oil Price, Jan 2007-Jan 2015**



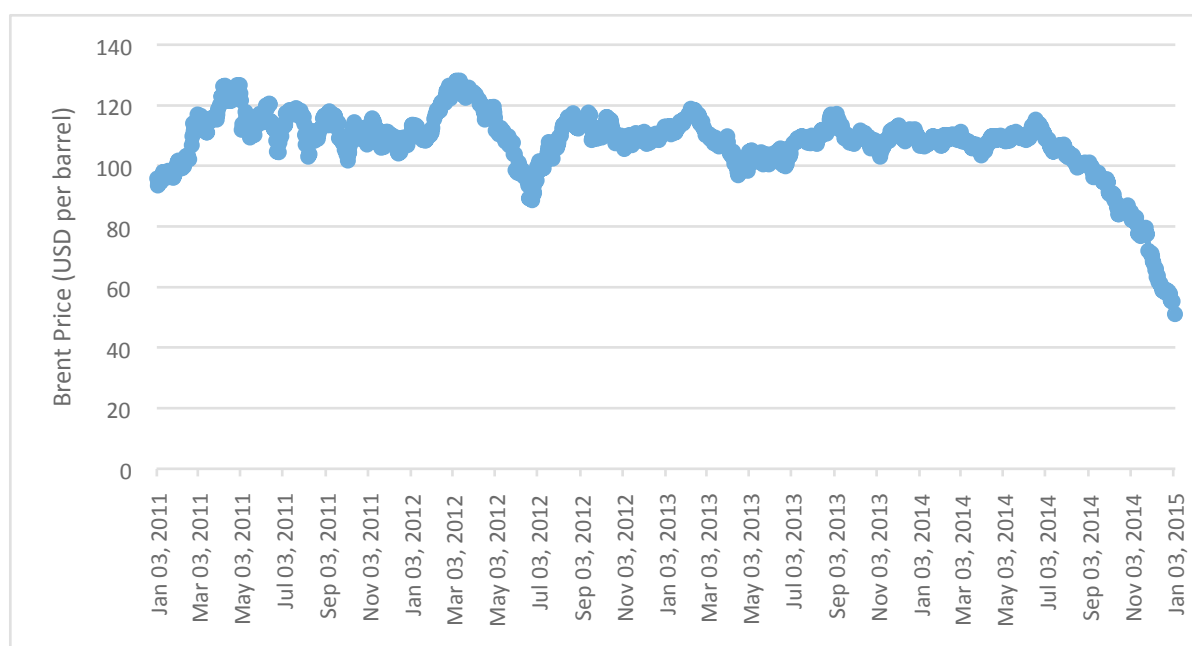
*Source: US Energy Information Administration*

<sup>2</sup> “Oil Prices Tumble to Fresh Lows,” Wall Street Journal, 5 January 2015.

## HOW MUCH FURTHER AND FOR HOW LONG?

At the time of writing (mid-January 2015), the price of crude oil had declined by at least 50 percent since July 2014. To put this in perspective, crude oil prices have fluctuated between USD100 and USD120 per barrel for the past three and a half years, from early 2011 to mid-2014 (*Figure 2*). In other words, during that time, economies had gotten used to USD100 per barrel oil prices. Even though oil prices began declining in July 2014, the market consensus at the end of 2014 was that prices would stay around USD70 per barrel in 2015.<sup>3</sup> In the October 2014 edition of IMF’s much-cited *World Economic Outlook*, the economic risk associated with oil prices (highlighted in the report) was considered within an “oil price spike” scenario due to geopolitical factors (IMF, 2014, p.16). In other words, much of the more recent decline in oil prices was unexpected.

**Figure 2: Crude Oil Price, 2011 – 2014**



Source: US Energy Information Administration

The continued steep fall in oil prices can be explained by a combination of demand- and supply-related factors. For starters, relatively lethargic global economic growth had dampened the demand for oil in 2014 (IMF, 2014), and in addition to this, high oil prices in the past had been lowering the global intensity of oil consumption (as measured by energy consumption per GDP) (World Bank, 2015). On the supply side, there has been a long-term

<sup>3</sup> “Oil Prices Again Buck Economists’ Expectations,” Wall Street Journal, 5 January 2015.

increase in global oil production particularly from the US shale industry, especially since 2012. As a consequence, the US share of world oil production rose from 8.3 percent in 2006 to 11.5 percent in 2013 (*Table 1*). Production volumes from Russia and Iraq have also remained high in recent months. Another equally important factor, albeit a short to medium term one, that affected the supply side was OPEC's decision in November 2014 to not stabilize oil prices by reducing output. The vast oil reserves and low production costs of Saudi Arabia – a key OPEC-member country – enable it to more easily cope with low prices compared to other oil exporting countries.

**Table 1: Global Oil Production, 2006-2013**

<b>Thousand barrels daily</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>
US	6,828	6,862	6,783	7,263	7,552	7,868	8,892	10,003
Russian Federation	9,818	10,044	9,950	10,139	10,365	10,510	10,643	10,788
OPEC	35,489	35,161	36,279	33,978	35,088	35,911	37,427	36,829
Saudi Arabia	10,671	10,268	10,663	9,663	10,075	11,144	11,635	11,525
Total World	82,593	82,383	82,955	81,262	83,296	84,049	86,204	86,754
<b>% of world total</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>
US	8.3	8.3	8.2	8.9	9.1	9.4	10.3	11.5
Russian Federation	11.9	12.2	12.0	12.5	12.4	12.5	12.3	12.4
OPEC	43.0	42.7	43.7	41.8	42.1	42.7	43.4	42.5
Saudi Arabia	12.9	12.5	12.9	11.9	12.1	13.3	13.5	13.3
<b>% annual change</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>
US	-1.09	0.5	-1.15	7.07	3.98	4.19	13.01	12.49
Russian Federation	2.3	2.3	-0.9	1.9	2.2	1.4	1.3	1.4
OPEC	0.91	-0.92	3.18	-6.34	3.27	2.35	4.22	-1.6
Saudi Arabia	-2.38	-3.78	3.85	-9.37	4.26	10.61	4.4	-0.94
Total World	0.59	-0.25	0.69	-2.04	2.5	0.9	2.56	0.64

*Source: British Petroleum (2014)*

At present, there appears to be a consensus that oil prices will remain low for the rest of 2015. However, forecasts range fairly widely, from USD47 to USD70. The upper limit of the forecast range is probably related to the cost of shale oil production, which is estimated to be around USD65-USD70 per barrel.<sup>4</sup> The scenario underlying many of the forecasts for 2015 is likely to be a reduction of shale oil production via industry consolidation as market prices dip below production cost. The outlook for 2016 remains uncertain – very few agencies and companies have attempted to provide such forecasts.

## **ECONOMIC EFFECTS OF OIL PRICE SLUMP**

Given the existing oil price forecasts, how will Southeast Asian economies be affected in the short to medium term? Given the diversity of these economies, the impact is likely to differ from country to country. To assess the implications, it is crucial to understand the nature of oil production, consumption and trade in each of these countries.

### ***Oil Production***

Seven of the ten countries in Southeast Asia produce crude oil, albeit on different scales (*Table 2*). The largest oil producers (in terms of output) are Indonesia and Malaysia, followed by Vietnam, Thailand and Brunei. In terms of the importance of oil production to these economies, the size of oil rents as a percentage of GDP is the highest for Brunei (25.1%) followed by Vietnam (7.6%) and Malaysia (6%) (*Table 2*).<sup>5</sup> Thus, even though the size of Indonesia's oil production is larger than these countries, its production volume is relatively small relative to its GDP size (2.6%).

---

<sup>4</sup> Bloomberg, "\$40 Oil? That's How Low Goldman Sachs Says It Needs to Go," 13 January 2015; "In a bind," *Economist*, 6 December 2015; Wall Street Journal, "Oil Prices Fall to Fresh Lows", 12 January 2015.

<sup>5</sup> Note: Oil rents is defined as the difference between the value of crude oil production at world prices and total costs of production.

**Table 2: Oil Production and Oil Rents**

(Ranked by oil rents as a % of GDP)

Country	Oil Rents (% of GDP) 2012	Oil Production (bbl/d) 2013/2014
Brunei	25.1	117,000
Vietnam	7.6	288,000
Malaysia	6.0	568,000
Indonesia	2.6	800,000
Thailand	2.2	227,000
Philippines	0.2	21,000
Myanmar	-	21,000
Laos	-	0
Cambodia	0.0	0
Singapore	0.0	0

Sources: US EIA, Trading Economics

### ***Oil Consumption***

In terms of energy consumption, oil is an important source of energy in Southeast Asia (*Table 3*). Countries heavily dependent on oil as a source of energy include Singapore (87.1%), Indonesia (43.8%), Thailand (43.6%), Philippines (43.0%), and Malaysia (38.5%). The per capita energy consumption and sources of energy consumption are clearly dependent on the level of development. More developed countries (such as Singapore) tend to have higher levels of per capita energy consumption. For less developed economies, biomass energy (e.g. firewood, charcoal, agriculture residue and animal waste) are very important. Southeast Asian countries that rely heavily on biomass energy include Cambodia (71.7%), Laos (62.4%) and Myanmar (33.3%). Understandably, lower oil prices are likely to have a greater impact on countries relying heavily on oil as a source of energy. With the exception of Brunei and Malaysia, the relatively low level of domestic oil production (with respect to GDP size) in many Southeast Asian countries implies that much of the oil consumed is imported.

**Table 3: Sources of Energy Consumption, 2013**  
(Ranked by percentage share of oil in total energy consumption)

Countries	Oil	Natural Gas	Coal	Hydro electric	Bio-mass	Total
<i>Mil. Tonnes oil equiv.</i>						
Singapore	65.9	9.5	-	-	0.3	75.7
Indonesia	73.8	34.6	54.4	3.5	2.3	168.7
Thailand	50.4	47.0	16.0	1.3	1.0	115.6
Philippines	13.7	3.0	10.5	2.2	2.4	31.8
Malaysia	31.2	30.6	17.0	2.1	0.3	81.1
Brunei (2010)	0.6	1.7	0	0	0	2.3
Vietnam	17.4	8.8	15.9	12.2	<0.05	54.4
Myanmar (2010)	1.8	1.4	0.4	0.4	2.0	6.0
Cambodia (2009)	1.5	0	0	<0.05	3.73	5.2
Laos (2011)	0.6	0	0.3	0.7	1.7	3.4
<i>Percentage</i>						
Singapore	87.1	12.5	-	-	0.4	100.0
Indonesia	43.8	20.5	32.3	2.1	1.4	100.0
Thailand	43.6	40.7	13.8	1.1	0.8	100.0
Philippines	43.0	9.6	33.1	6.9	7.4	100.0
Malaysia	38.5	37.7	20.9	2.6	0.4	100.0
Brunei	33.9	66.1	0	0	0	100.0
Vietnam	32.1	16.1	29.2	22.5	0.1	100.0
Myanmar	29.2	23.4	6.8	7.3	33.3	100.0
Cambodia	28.2	0	0	0.1	71.7	100.0
Laos	18.6	0	11.5	26.1	62.4	100.0

Sources: All data from BP (2014), otherwise indicated; Brunei data from Asrul (2013), Cambodia data from Ministry of Industry, Mines and Energy, Cambodia (2013); Lao Data from Malaykham (2012); Myanmar data from Tin and Aung (2013).



## ***Trade in Oil***

The effects of lower oil prices also depend on whether a country is a net exporter or net importer of oil. A net oil importing country will benefit from lower oil prices which lower input costs in production. For a net oil exporter, lower oil prices mean reduced revenues from oil exports which also puts pressure on fiscal revenues. Southeast Asian countries that are net oil exporters include Brunei, Malaysia and Vietnam (*Table 4*). Even though Indonesia is a net oil importer, its oil export is fairly sizeable – 5.6 percent of total exports (*Table 5*). Countries that are net oil importers can be further classified into three categories based on the share of oil in total energy consumption (*Table 6*). Countries that are net oil importers and consume less oil such as Cambodia, Laos and Myanmar benefit less from lower oil prices compared to medium and high-level consumers of oil such as Indonesia, Philippines, Thailand and Singapore.

From the perspective of trade balance, the size of net oil export as a percentage of total trade indicates that Brunei's trade balance will be severely impacted by declining oil prices (*Table 4* and *Table 5*). Other countries that are also vulnerable but to a lesser extent include Vietnam and Malaysia.

**Table 4: Trade in Crude Oil (USD), 2013**  
(Ranked by net oil export as a % of total trade)

<b>Country</b>	<b>Oil Import</b>	<b>Oil Export</b>	<b>Net Oil Export</b>	<b>Net Oil Export as % of Total Trade</b>
Brunei	177	5,118,007,248	5,118,007,071	34.0%
Vietnam	1,123,083,526	7,375,357,838	6,252,274,312	2.4%
Malaysia	7,162,736,369	10,212,387,597	3,049,651,228	0.7%
Indonesia	13,585,809,560	10,204,709,564	(3,381,099,996)	-0.9%
Singapore	35,538,675,371	433,825	(35,538,241,546)	-4.5%
Philippines	6,617,051,526	975,508,495	(5,641,543,031)	-4.7%
Thailand	38,916,857,988	1,163,529,425	(37,753,328,563)	-7.8%
Cambodia	8,592	0	(8,592)	-ve
Laos	NA	NA	NA	-ve
Myanmar	NA	NA	NA	-ve

Source: COMTRADE; NA – not available

**Table 5: Crude Oil Trade as a Percentage of Total Trade, 2013**  
(Ranked by oil export as a % of total trade)

Country	Oil Import /Total Import	Oil Export /Total Export
Brunei	0.000005	44.7
Indonesia	7.3	5.6
Vietnam	0.9	5.6
Malaysia	3.5	4.5
Philippines	10.2	1.8
Thailand	15.4	0.5
Cambodia	0.000093	-
Singapore	9.5	0.0
Laos	NA	NA
Myanmar	NA	NA

Source: COMTRADE; NA – not available

**Table 6: Oil Consumption and Oil Trade in Southeast Asia**

Share of Oil in Energy Consumption	Net Oil Importer	Net Oil Exporter
<b>Low Oil Consumption (0-30%)</b>	Laos (18.6%) Cambodia (28.2%) Myanmar (29.2%)	
<b>Medium Oil Consumption (30%-50%)</b>	Philippines (43.0%) Thailand (43.6%) Indonesia (43.8%)	Vietnam (32.1%) Brunei (33.9%) Malaysia (38.5%)
<b>High Oil Consumption (50%-100%)</b>	Singapore (87.1%)	

Source: Compiled by author based on Table 4 and Table 5.

### ***Fiscal Impacts – Oil Revenues and Oil Subsidies***

The drop in oil prices has a further impact on consumers and producers via fiscal effects. There are two important dimensions to these effects, namely, how oil prices affect fiscal revenues from oil, and government fuel subsidies.

The effect of declining oil prices on fiscal revenues is particularly relevant for oil-producing countries such as Brunei, Indonesia, Malaysia and Vietnam. In terms of oil and gas as a source of fiscal revenues for the central government, Brunei (93%) and Malaysia (32%) have the highest exposure followed by Vietnam (19%) and Indonesia (6%).<sup>6</sup>

Fuel subsidies are often popular with voters but they have distortionary effects, encouraging excessive oil consumption and imposing a drag on fiscal balance (ADB 2013, Clements, et al., 2013). Historically, countries with significant fuel (pre-tax) subsidies include Indonesia, Brunei and Malaysia (*Table 7*).<sup>7</sup> Lower oil prices provide opportunities for countries to reform fuel subsidies – an action which will enhance fiscal revenues. To date, a few countries in the region have taken advantage of the lower oil price to reduce fuel subsidies. Indonesia removed the subsidy for gasoline and reduced the fixed subsidy rate for diesel on January 1, 2015. Malaysia removed subsidies for RON95 gasoline and diesel on December 1, 2014 and implemented a managed float pricing system. The estimated revenue gains for these actions were estimated to be USD18 billion for Indonesia (12% of government expenditure budget) and USD6 billion (20% of government expenditure budget) for Malaysia. Brunei and Vietnam are now also considering reducing fuel subsidies.

For most countries, the overall impact of lower oil prices on their fiscal balance will be positive. Exceptions will include Brunei, Malaysia and Vietnam. In Malaysia's case, the reduction in fuel subsidies are likely to be insufficient to offset the decline in oil revenues. For countries which undertook reductions in fuel subsidies, retail gasoline prices may not decline as much as the decline in global oil prices. In Indonesia, the price of premium gasoline were reduced by 13 percent from Rp 7,600 to Rp 6,600 in mid-January 2015.<sup>8</sup>

---

<sup>6</sup> Source: Brunei (IMF), Malaysia (IEA), Vietnam (MOF), Indonesia (MOF). Oil Rents (World Bank).

<sup>7</sup> The figures on post-tax subsidies in Table 7 also suggest that a number of Southeast Asian countries have generally not imposed much taxes to account for negative externalities of fuel consumption.

<sup>8</sup> "Fuel price cuts have little impact on economy," Jakarta Post, 17 January 2015.

**Table 7: Oil Subsidies, 2011**  
(Ranked by pretax subsidies as a % of GDP)

Country	Pretax Subsidies in % of GDP for Petroleum Products	Pretax Subsidies in % of Govt Revenues for Petroleum Products	Posttax Subsidies in % of GDP for Petroleum Products	Posttax Subsidies in % of Govt Revenues for Petroleum Products
Indonesia	2.58	14.51	3.47	19.46
Brunei	2.34	3.77	6.06	9.73
Malaysia	1.24	5.67	5.38	24.61
Myanmar	0.54	9.35	1.04	18.11
Thailand	0.15	0.66	1.54	6.80
Vietnam	0.00	0.00	0.83	3.00
Singapore	0.00	0.00	0.49	1.97
Philippines	0.00	0.00	0.31	1.80
Cambodia	0.00	0.00	0.00	0.00
Laos	0.00	0.00	0.00	0.00

*Source: Clements et al. (2013)*

Note:

Pretax subsidy is defined as  $P_W - P_C$ , where  $P_W$  is the supply cost is the international price including transport and distribution costs and  $P_C$  is the price paid by consumers.

Posttax subsidy is defined as  $(P_W + t^*) - P_C$  where  $t^*$  is corrective tax (for externalities such as pollution) and/or VAT/GST.

## OVERALL MACROECONOMIC IMPACTS

The impacts of oil price shocks on Southeast Asian economies are likely to be asymmetric and heterogeneous. The “ratchet effect” implies that the impact of a decline in oil prices on the rate of inflation is likely to be less than that of an increase in oil price.<sup>9</sup> The diversity in economic structures as well as in the intensity of oil consumption and production in the region also suggest that there will be different responses to the current decline in oil price.

<sup>9</sup> The ratchet effect refers to a situation where prices are more upward than downward flexible.

There are at least three distinct groups of countries in the region that will be affected differently (*Table 8*).<sup>10</sup> In the first group are oil-exporting countries that rely heavily on oil as a source of fiscal revenue. These include Brunei, Malaysia and Vietnam, which will all be vulnerable to moderate to high negative impacts on their fiscal budget. The negative impact on the fiscal budget can partly be neutralized by reductions in fuel subsidies. However, the decline in export revenues from oil could adversely affect the current account. In the short-term, the current account balance could be further adversely affected if declining oil prices are accompanied by exchange rate depreciation or devaluation (which makes imports more expensive).<sup>11</sup> This is observed in the case of all the three countries mentioned.<sup>12</sup> Currency depreciation in these countries can exert further inflationary pressures in the short term. The benefits from currency depreciation/devaluation in terms of export competitiveness will only be felt in the medium-term provided inflation is kept in check.

The second group comprises countries that are net oil importers and are moderate to highly intensive consumers of oil. Indonesia, Philippines, Thailand and Singapore are in this group. These will benefit in terms of lower input costs, low-to-moderate inflation and more favourable balance of payment. The negative impact of lower oil prices on Indonesia's fiscal revenue is also moderated by the recently implemented fuel subsidy reforms. The recent improvement in fiscal space has enabled the Indonesian government to increase public investment in infrastructure.<sup>13</sup> The high share of oil in Singapore's energy consumption imply it will benefit from the oil price decline.

In the third group, the lower intensity of oil consumption by countries such as Cambodia, Laos and Myanmar suggests that the oil price decline is likely to have lower short-term impact on these countries compared to other countries in the region. This applies to their exchange rate (relative stable), fiscal revenues (neutral), and balance of payment (moderately positive).

A key issue is the uncertainty surrounding oil prices beyond the one-year horizon. This is a crucial issue as gains in export competitiveness from currency depreciation experienced by net oil exporters such as Malaysia and Vietnam will only materialize in the medium term and beyond. Such gains would also depend on the ability to maintain stable domestic prices (low inflation) and global economic growth prospects.

---

<sup>10</sup> For broad analyses, see Arezki and Blanchard (2014) and Clements et al (2015).

<sup>11</sup> There could be a variety of reasons for exchange rate depreciation such as short term capital flows driven by economic uncertainties and interest rate differentials. The recent currency depreciation against the dollar has been attributed to expectations of interest rate increase in the US.

<sup>12</sup> During the period from July 2014 to mid-January 2015, the Brunei dollar and Malaysian ringgit have depreciated by around 7% and 14%, respectively. Vietnam devalued the Dong twice – by 1% on 19 June 2014 and by 1% again on 7 January 2015.

<sup>13</sup> “Editorial: Huge sums for infrastructure,” Jakarta Post, 19 January 2015.

**Table 8: Impact of Oil Price Decline**

<b>Country</b>	<b>Impact on Input Cost Decline</b>	<b>Exchange Rate Trend – Against USD (Jul-Dec'14)</b>	<b>Inflation</b>	<b>Balance of Payment</b>	<b>Fiscal Budget</b>	<b>Fiscal Budget + Subsidy Reforms</b>
Brunei	Medium	Depreciate (-7%)	Moderate	High (-)	High (-)	Moderate (-)
Cambodia	Low	Stable	Low	Low (+)	Neutral	-
Indonesia	Medium	Depreciate (-6%)	Moderate	Moderate (+)	Moderate (+)	Low (-)
Laos	Low	Stable	Low	Moderate (+)	Neutral	-
Malaysia	Medium	Depreciate (-14%)	High	Moderate (-)	High (-)	Moderate (-)
Myanmar	Low	Stable	Low	Moderate (+)	Neutral	-
Philippines	Medium	Stable	Low	Moderate (+)	Neutral	-
Singapore	High	Depreciate (-8%)	Low	Moderate (+)	Neutral	-
Thailand	Medium	Stable	Moderate	High (+)	Neutral	-
Vietnam	Medium	Devalue (-2%)	Moderate	Moderate (-)	Moderate (-)	Moderate (-)

*Source: Author's Compilation*

## **CONCLUSION**

The large decline in oil prices have heterogeneous effects on Southeast Asian countries. Major net oil exporters such as Brunei, Malaysia and Vietnam will be the most adversely affected in terms of balance of payments and fiscal space. Fiscal reforms are likely to be required in these countries. Net oil-importers that rely heavily on oil as a source of energy such as Indonesia, Philippines and Singapore will benefit the most. Indonesia, in particular, needs to channel the fruits of its subsidy reforms to finance long-term investment in infrastructure, health and education. Countries with low oil-intensity consumption such as Cambodia, Laos and Myanmar are the least affected. For these countries, it might be worthwhile to consider implementing fuel tax reforms that take into account the externalities of fuel consumption. Finally, the net impact of low oil prices are also likely to be affected by how countries in the region will respond to the softening global economy.

## REFERENCES

Arezki, Rabah and Blanchard, Olivier. (2014). “Seven Questions About the Recent Oil Price Slump,” iMFDirect blog at: <http://blog-imfdirect.imf.org/2014/12/22/seven-questions-about-the-recent-oil-price-slump/>

Asrul Sany Haji Mohammad Ali (2013), ‘Brunei Darussalam Country Report’ in Kimura, S. (ed.), Analysis on Energy Saving Potential in East Asia, ERIA Research Project Report 2012-19, pp.83-97.

Asian Development Bank. (2013). *Asian Development Outlook 2013*. Manila: Asian Development Bank.

British Petroleum (2014). *BP Statistical Review of World Energy*, June.

Clements, Benedict; David Coady, Stefania Fabrizio, Sanjeev Gupta, Trevor Alleyne, and Carlo Sdravovich. (eds.) (2013). *Energy Subsidy Reform: Lessons and Implications*. Washington DC: IMF.

Institute of Energy Economics (2011). *Third ASEAN Energy Outlook*. Tokyo, Japan.

International Monetary Fund (2014). *World Economic Outlook, October 2014*. Washington DC: IMF.

IEA and ERIA. (2013). *Southeast Asia Energy Outlook*. Paris: IEA.

Malaykham, Bouathep. (2012). “Overview of Energy Efficiency and Conservation in the Lao PDR,” Presentation at the 2nd EAS Energy Efficiency Conference, Phnom Penh, Cambodia 31st July – 01st August 2012.

Ministry of Industry, Mines and Energy, Cambodia (2013). “The National Policy, Strategy and Action Plan on Energy Efficiency in Cambodia,” Phnom Penh.

Tin Zaw Myint and Nay Aung. (2013). “Myanmar Country Report”, in Kimura, S. (ed.), Analysis on Energy Saving Potential in East Asia, ERIA Research Project Report 2012-19, pp.225-242.ERIA

World Bank (2015). “Understanding the Plunge in Oil Prices: Sources and Implications,” in *Global Economic Prospects*, January. Washington DC: World Bank.



---

**ISEAS Perspective** is published electronically by the Institute of Southeast Asian Studies, Singapore.

Institute of Southeast Asian Studies  
30, Heng Mui Keng Terrace  
Pasir Panjang, Singapore 119614  
Main Tel: (65) 6778 0955  
Main Fax: (65) 6778 1735

Homepage: [www.iseas.edu.sg](http://www.iseas.edu.sg)

ISEAS accepts no responsibility for facts presented and views expressed. Responsibility rests exclusively with the individual author or authors. No part of this publication may be reproduced in any form without permission.

Comments are welcome and may be sent to the author(s).

© Copyright is held by the author or authors of each article.

Editorial Chairman: Tan Chin Tiong

Managing Editor: Ooi Kee Beng

Production Editors: Benjamin Loh,  
Su-Ann Oh and Lee Poh Onn

Editorial Committee: Terence  
Chong, Francis E. Hutchinson and  
Daljit Singh