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## Modelling the macroeconomic consequences of oil shocks for the Indonesian economy, 1973-1991

Atifah Thaha  
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**MODELLING THE MACROECONOMIC CONSEQUENCES  
OF OIL SHOCKS FOR THE INDONESIAN ECONOMY  
1973 - 1991**

A thesis submitted in fulfilment of requirements  
for the award of degree of  
Doctor of Philosophy

from



Department of Economics  
**THE UNIVERSITY OF WOLLONGONG**

by

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August 1994

## **AUTHOR'S CERTIFICATION**

I certify that the substance of this thesis has not already been submitted for any degree and is not being currently submitted for any other degree.

I certify that any help received in preparing this thesis, and all sources used have been acknowledged in this thesis.

**Atifah Thaha**

## ABSTRACT

This thesis is concerned with developing a dynamic long run macroeconomic model of Indonesia, focussing upon the contribution of oil developments upon that economy's income, investment, wealth, balance of payments, and trade performance. The model incorporates the main characteristics of the oil sector in the Indonesian economy, emphasising the crucial role of government in the distribution of oil production for domestic usage and for export, and the spending of oil generated revenue upon consumption (*routine*) and investment (*development*) (equivalent to a capital transfer to the private sector) expenditure. While focus is placed upon oil developments, the model is sufficiently general for analysing the economic effects arising from non oil shocks and that arising from a wide range of policy options.

A numerical simulation procedure is adopted to identify how the domestic economy is affected by oil related shocks, and how such outcomes can be altered through the adoption of alternative policy responses. The roles of alternative nominal exchange rate policies, combined with different degrees of control over international capital mobility, are also incorporated, in order to capture the impact of such policies upon the domestic economy. This is particularly prevalent in the context of an economy such as Indonesia's, which is engaging in extensive economic liberalisation.

The study indicates that the influence of the oil sector on the Indonesian macroeconomy has been significant over the long run, and that this has been more so from oil price shocks in comparison to that of oil production shocks. A dynamic and long run analysis is adopted in order to identify the most appropriate policy responses in order to moderate the possible Dutch disease effects, and to enhance the benefits arising from such oil shocks.

The major results of this study suggest that adopting a more development-oriented policy (investment) towards additional oil revenue, would moderate the Dutch disease consequences, improve the longer term economic development of the economy, and also smooth the adjustment process. The opposite would be so from stimulating consumption expenditure. Adopting a more export oriented policy towards oil production worsens the Dutch disease consequences, however this would be compensated by a greater accumulation of net foreign asset stocks and vice versa.

It is also found that a flexible exchange rate policy, combined with perfect international capital mobility, is a preferable response to an oil price increase, whilst adopting a flexible exchange rate, together with high degree of control over international capital mobility, is a preferable response to an oil production increase. Hence adopting a more market oriented policy, that leads to a greater role for the private sector and closer integration with the global market economy, is found to be preferable for the case of Indonesia.

**TO THE MEMORY OF MY BROTHER AND MOTHER**

**BUDIMAN THAHA**

**1940 - 1981**

**SYAFLAH ABBAS**

**1908 - 1994**

## ACKNOWLEDGMENTS

"In the name of Allah, Most Gracious, Most merciful. Praise be to Allah,  
The Cherisher and Sustainer of the Worlds" (Al Qur'an, Surat 1. Ayat 1-2),

I complete this thesis.

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