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**FOREIGN DIRECT INVESTMENT AND ITS IMPACT ON
THE NEW ZEALAND ECONOMY: COINTEGRATION AND ERROR
CORRECTION MODELLING TECHNIQUES**

A Thesis presented in partial fulfilment
of the requirements
for the degree of
Doctor of Philosophy
in Economics
at Massey University, New Zealand.

Jananee Raguragavan

2004



CERTIFICATE OF REGULATORY COMPLIANCE

This is to certify that the research carried out in the Doctoral Thesis entitled, "FOREIGN DIRECT INVESTMENT AND ITS IMPACT ON THE NEW ZEALAND ECONOMY: COINTEGRATION AND ERROR CORRECTION MODELLING TECHNIQUES" in the Department of Applied and International Economics at Massey University, New Zealand:

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Candidate's Name: Ms Jananee Rauragavan

Signature: 

Date: 28.01.04

Supervisor's Name: Dr James Obben

Signature: 

Date: 17 Feb. 2004



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Candidate's Name: Ms Jananee Raguragavan

Signature 

Date 28.01.04



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Signature 

Date 17 Feb. 2004

ABSTRACT

Ongoing globalisation has resulted in more liberalisation, integration, and competition among countries. An upshot of this has been higher levels of cross-border investment. Foreign direct investment (FDI), long considered an engine of growth, has led to widespread debate with its recent rapid spread. Nevertheless, while research on the contribution of FDI to host countries has concentrated heavily on the developed and developing economies, there has been a marked neglect of small, developed economies. This study proposes to focus on New Zealand, a country that falls within the latter category. The study seeks to verify econometrically the impact of FDI on the country through causality links with growth, trade, domestic investment and labour productivity. The analysis is based upon time-series data, the econometric techniques of single, autoregressive distributed lag (*ARDL*), and the multiple equations approach, vector error correction method (*VECM*).

The study found that there have been substantial gains to the New Zealand economy. A positive effect of FDI on the variables mentioned above led to an improvement of the balance of payments through an increase in exports rather than in imports. Economic growth has mainly been achieved through FDI's impact on exports and domestic private investment. The dynamic innovation techniques indicated a bi-directional causality between FDI and the variables. The long-run causality, however, runs mainly from growth and labour productivity to FDI rather than in the opposite direction. Another noticeable feature is that New Zealand's regional agreement with Australia, Closer Economic Relations, has brought the country significant gains in terms of growth and development through FDI.

Both the *ARDL* and *VECM* approaches suggest that for a small, developed country qualitative impacts are greater than quantitative ones. The policy implication is that maintaining sustainable economic growth with a positive domestic investment environment is vital for attracting foreign investors. New Zealand, while continuing to encourage inward FDI, should aim to channel it into 'innovative' tradable sectors. The challenge lies in providing the right kind of policy mix for this purpose.

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LIST OF ACRONYMS

ADF:	Augmented Dickey-Fuller Tests
AIC:	Akaike Information Criteria
ARDL:	Auto Regressive Distributed Lag
APEC:	Asia-Pacific Economic Cooperation
BOP:	Balance of Payments
CER:	Closer Economic Relations Agreement
CV:	Cointegrating Vector
DC:	Developed Country
DF:	Dickey-Fuller
ECT:	Error Correction Term
FDI:	Foreign Direct Investment
FEV:	Forecast Error Variance
GDP:	Gross Domestic Product
GLS:	Generalised Least square
IMF:	International Monetary Fund
IRF:	Impulse Response Function
LDC:	Less Developed Country
MNE:	Multinational Enterprise
M & A:	Mergers and Acquisition
NICs:	Newly Industrialised Countries
NZ\$:	New Zealand Dollar
OLS:	Ordinary Least Square
OECD:	Organisation for Economic Co-operation and Development
OIC:	Overseas Investment Commission
R&D:	Research and Development
SBC:	Schwartz Bayesian Criteria
2SLS:	Two-Stage Least Square
3SLS:	Three-Stage Least Square
SUR:	Seemingly Uncorrelated Regression
TFP:	Total Factor Productivity
UK:	United Kingdom
UNCTAD:	United Nations Conference on Trade and development
US:	United States of America
VAR:	Vector Autoregression Analysis
VECM:	Vector Error Correction Model
WTO:	World Trade Organisation