MACRO-ECONOMIC FACTORS AFFECTING THE UNEMPLOYMENT RATE AND ITS EFFECT ON THE SRILANKAN GDP

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Degree of Master of Science

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Thesis submitted in partial fulfilment of the requirements for the Master of Business Statistics

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DECLARATION

I declare that this is my own work and this thesis does not incorporate without acknowledgment any material previously submitted for a Degree or Diploma in any other University or institute of higher learning and to the best of my knowledge and belief it does not contain any material previously published or written by another person except where the acknowledgment is made in the text.

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ABSTRACT

Underutilization of human capital which is also known as Unemployment is a critical factor that is essential to the growth of economies. Unemployment of youth in the country is a severe and sensitive problem in Sri Lanka throughout the last few decades. As a result, Sri Lanka is facing various issues including youth unrest due to the unemployment and poverty. A proper analysis of the reasons for unemployment within the country would lead to better decision making at the higher levels. Various advanced time series techniques can be used to identify the factors which affect unemployment.

In this study, the focus was to improve the decision-making process of the government while focusing on the components which influence the unemployment rate within the country. The data related to unemployment, inflation, GDP Growth, Population Growth and Exchange rate were extracted for the analysis. The study was done using Advanced Time series analysis. In the advanced time series analysis, Cointegration analysis, ARDL Bound Cointegration testing, Error Correction Modelling and VAR Modeling were used. Long term relationship between unemployment and the cluster of macroeconomic factors: inflation, GDP Growth, Population Growth and Exchange rate was identified by the ARDL Bound Cointegration analysis. Based on the residual analysis carried out, the fitted ARDL (1,0,1,0,1) model was determined as the best fitted model for the selected data. Finally, the long run association between Unemployment and GDP Growth was identified via the Johanson Cointegration Analysis and a VAR Model was fitted since there was no long run relationship between Unemployment and GDP Growth.

Key Words: Unemployment, Advanced Time Series Analysis, Cointegration, ARDL

DEDICATION

This Thesis is dedicated to all those who helped me and encouraged me in numerous ways!

ACKNOWLEDGMENT

I would like to take this opportunity to thank my supervisor Senior Lecturer in Mathematics and Statistics, Division of Interdisciplinary Studies, Institute of Technology, University of Moratuwa, Dr. Samanthi Mathugama and the joint Coordinators of the MSc/PGD in BS Program, Department of Mathematics, Faculty of Engineering, University of Moratuwa, Ms D R T Jayasundara & Dr J A B U Jayasinghe.

Also my family and friends who have been always with me!

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LIST OF ABBREVIATIONS

ADF: Augmented Dickey Fuller

AIC: Akaike Information Criterion

AR: Auto Regressive

ARDL: Auto Regressive Distributed Lag

ARIMA: Auto Regressive Integrated Moving Average

D(Exchange Rate): First differenced series of the Exchange Rate

D(Inflation Rate): First differenced series of the Inflation rate

ECM: Error Correction Model

Exchange Rate (-1): First lagged series of the Exchange Rate

GDP Growth Rate (-1): First lagged series of the Annual GDP Growth Rate

GDP: Gross Domestic Product

HQC: Hannan Quinn criterion

Inflation rate (-1): First lagged series of the Inflation rate

MA: Moving Average

OLS: Ordinary Least Squares

Pop Growth Rate (-1): First lagged series of the Pop Growth Rate

Pop Growth Rate: Population Growth Ratee

SBC: Schwartz Bayesian Criterion

Unemployment Rate (-1): First lagged series of the Unemployment Rate

VAR: Vector Auto Regressive