MODELLING MONTHLY NON FOOD COMPONENT OF THE COLOMBO CONSUMER PRICE INDEX (CCPI) USING VECTOR AUTO REGRESSIVE (VAR) APPROACH

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DECLARATION OF THE CANDIDATE

Hereby I state and declare that this Msc project report is a product of my own and without the participation of any other person or authority. The references made in here have been acknowledged appropriately and with appreciation. The sources of data and external information to the dissertation and the research have been acknowledged appropriately. Any form of substance in this research has never been submitted for any other degree, anywhere else. I hereby give my consent for making this available by photocopy for inter-library uses and for the title and summary of the dissertation to be made available for use of other institutes of learning.

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DECLARATION OF THE SUPERVISOR

I have supervised and accepted this thesis for the submission of the degree.

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Abstract

This study attempts to model the non food component of monthly Colombo Consumer Price Index (CCPI) in Sri Lanka using multivariate generalization of the univariate ARIMA model known as vector auto regressive (VAR) modeling approach. The data used are monthly series of Colombo Consume Price Index from year 2008 to 2015 and corresponding monthly series of data related to non food items. The structure of model is a linear function of past lags of itself and past lag of the other variables. All series were stationary for the corresponding first difference of log series and confirmed that the existence of long run dynamic relationship among all variables. The significant variables identified are clothing and footwear, housing water electricity gas and fuel, health, education, furnishing, communication, transport, recreation and culture and miscellaneous goods and services. These non food sub categories in the CCPI can be forecast using the developed model. The results would be useful when analyzing the key indicators in the economic sphere. Furthermore, the results of this study emphasize the need to put in place a stable macroeconomic policy environment to maintain price stability, since low inflation would enhance economic growth.

Keywords: Consumer Price Index, Co-integration, Granger causality, Inflation, Vector Error Correction, Vector Auto Regression

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LIST OF ABBREVIATION

Abbreviation	**Description**
ADF	Augmented Dicky Fuller
CCPI	Colombo Consumer Price Index
CPI	Consumer Price Index
C_F	Clothing and Footwear
Commu	Communication
Edu	Education
Furn	Furnisher
H_W_E_G	Housing_Water_Electricity_Gas and Fuel
HH	House Hold
HIES	House hold Income and Expenditure Survey
M_G_S	Miscellaneous Goods and Services
N_F	Non Food
PCE	Personal Consumption Expenditure
R_C	Recreation and Culture
RMSE	Root Mean Square Error
Trans	Transport
VEC	Vector Error Correction