

University of Moratuwa.
Department of Mathematics, Faculty of Engineering.
Masters of Finance Mathematics

An Evaluation of United States' trade balance with selected two countries including a demographic variable.

By Ms. Ugika Navaratnarajah.
13th May 2022.

DECLARATION STATEMENT

I declare that this is my own work and this thesis does not incorporate without acknowledgement 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 acknowledgement is made in text.

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Ugika Navaratnarajah

01.12.2022

Date

The above candidate has carried out research for the Master's thesis under my supervision.

Ms. Kumuthini Sivathas

01.12.2022

Date

PhD Candidate

Economics/ Econometrics with University of Adelaide, Australia.

UOM Verified Signature

Mr. Rohana Dissanayake

01.12.2022

Date

Senior Lecturer

Department of Mathematics, Faculty of Engineering

University of Moratuwa.

ACKNOWLEDGEMENTS

I would like to express my special thanks of gratitude to my main supervisor Ms. Kumuthini Sivathas, PhD candidate, Economics/ Econometrics with University of Adelaide, Australia and my Co – Supervisor Dr. Rohana Dissanayake, Department of mathematics, faculty of engineering, University of Moratuwa for their consecutive comments and continual support throughout this research work. Without my supervisors, successful completion of this research work would never become reality.

Finally, I would like to express my sincere gratitude to my parents, husband and friends for their support and motivation to complete this dissertation.

ABSTRACT

The purpose of this research study is to estimate the determinants of USA's trade balance with Australia and Germany including a demographic variable (youth dependency ratio) and testing their relationships in the long run.

The research data included over the period of 39 years (1980 – 2018). We run linear regression with these set of variables that are GDP ratio, real exchange rate, nominal exchange rate, price deflator ratio, lending rate ratio, money supply ratio and youth dependency ratio for both the pair of countries.

For both pair of countries namely USA vs Australia and USA vs Germany, all the variables are I (1) which means non stationary. Also, cointegration tests shows that there is a relationship between selected variables. Since these variables (non-stationary) are cointegrated then run the multiple linear regression model to estimate the determinants of USA's trade balance.

For the pair of USA and Australia, we run Engle – Granger test where Australia's import share and GDP ratio are cointegrated at 10% and showed a weaker relationship between those significant variables. There is a positive long run relationship between net exports (NE) and exchange rate (ER) at 5% level of significance.

For the pair of USA and Germany, based on Engle – Granger test there is no strong correlation between Germany's import share and GDP. But there is a positive long run relationship between net exports (NE) and exchange rate (ER) at 10% level of significance.

For the pair of USA and Australia, regression results showed the most important determinant of net export is GDP ratio followed by price deflator ratio, money supply ratio, lending rate ratio and the real exchange rate which explains 89.7% of the variation in net exports. We run F – Test which showed that net exports respond to rising and falling exchange rate regimes symmetrically.

For the pair of USA and Germany, regression results showed that the most important determinant of net export is real exchange rate followed by GDP ratio and youth dependency ratio which explains 76.9% of the variation in net exports. We run F – Test which showed that net exports depend on rising and falling exchange rate regimes.

Results based on error correction model (ECM) suggests that there exists a positive long run relationship between expected exchange rate (ER) and USA's net export (NE) at 5% level of significance, for both pair of countries.

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LIST OF ABBREVIATIONS

NE	– USA’s net exports
ADF	– Augmented Dickey Fuller
PP	– Phillip perron
ECM	– Error Correction Model
ECT	- Error Correction Term
U. S	– United states of America
GDP	– Gross domestic product
NEER	– Nominal effective exchange rate
CEIC	– Census and economic information center
BEA	– Bureau of economic analysis
OEC	– The observatory of economic complexity
OECD	- Organisation for Economic Cooperation and Development
CV	– Coefficient of variation

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