Ways to face the twin deficit between public budget and the current account with application to the Egyptian case

Thesis submitted in partial fulfillment of the requirements For the PhD degree in economics

Department of Economics
Faculty of Economics and Political Science

Prepared by
Yousra hassan omar nafie

Supervised by
Prof . Baher Atlam

Professor at Department of Economics, Faculty of Economics and Political Sciences, Cairo University

Prof . Yazid dissou

Professor at Department of Economics,
Faculty of Social Sciences
University of Ottawa

Prof . Samy Fathy El sayed

Professor at Department of Economics,
Faculty of Economics and Political Sciences,
Cairo University

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Budget deficit, Current account deficit, Twin-deficit hypothesis, Ricardian equivalence, ARDL, Current account sustainability, Nonlinear cointegration; Nonlinear autoregressive distributed lag (NARDL) , Asymmetric relationship, Fiscal multiplier. Structural Vector Autoregressive Model. Egypt

Abstract

The purpose of this thesis is to provide an assessment of the potential efficacy of fiscal policy in Egypt as a countercyclical policy tool. This dissertation discusses three related topics and consist of four chapters. The First chapter provides a survey on empirical literature ,the Second chapter is an assessment of the Twin-Deficit Hypothesis with empirical evidence from Egypt, the third chapter examine the Sustainability of the Current Account Deficits with an evidence from a Nonlinear Cointegration analysis. And the fourth Chapter is an empirical estimation of Fiscal Multiplier in Egypt using SVAR analysis.

Chapter two provides an empirical analysis of the twin-deficit hypothesis in the presence of structural breaks in Egypt. The chapter analyze the relationship between the two deficits using the Autoregressive Distributed Lag (ARDL) approach and the bootstrap causality test while considering the presence of breaks. Based on the econometric results, no support for the twin deficit hypothesis was found in Egypt over the long run. But a support for the Ricardian equivalence hypothesis was found. The absence of any relationship between the two variables in the long run is backed by the results of our bootstrap causality test. Still, the short-run analysis with the ARDL model provides support for the existence of a relationship between the two deficits in the short run. Overall, The findings suggest that, to restore external balance, the government should rely more on policies to improve the competitiveness of the economy, instead of considering fiscal policies.Chapter three provides an investigation of the sustainability of the current account deficits using a nonlinear cointegration approach, with an application to Egypt. We assess the mean-reversion properties of the current account by examining the long-run relationship between real exports and real imports, plus interest payments on external debt. We use the nonlinear autoregressive distributed lag (NARDL) model to assess their long-run relationship and compare the results with those of the linear ARDL model. The results of the linear ARDL model suggest that there is no strong evidence to support the sustainability of the Egyptian current account. However, the results with the nonlinear model point toward the rejection of the null hypothesis of

no cointegration between the two variables. Moreover, we reject the null hypothesis of no long-run asymmetry between the impacts of positive and negative shocks to imports on exports. Overall, our results suggest that the Egyptian current account followed a mean-reverting nonlinear process during the study period.In Chapter four , we empirically estimate fiscal multiplier for Egypt. Using Structural Vector Autoregressive Model (SVAR) model using quarterly data for the period 1990-2015. The results show that the estimated fiscal multiplier was around positive at the first year , then it turned to be negative in the second year. The chapter concluded that very low fiscal multiplier is an indication of a weak impact of government spending on real GDP during the period of the study. The study justified low fiscal multiplier because of most of the rising expenditures are devoted to the continuous rise in subsidies , debt services cost and public wage .The study recommend that the government authorities should not rely solely on increasing the amount of spending , but a series of complementary actions are needed to improve the efficiency of public expenditure like , direct more spending toward productive. Also, cutting government spending and increasing taxes will be more efficient case way to increase economic growth in the Egyptian specifically in case of negative fiscal multiplier

Name: Yousra Hassan Omar Mohamed Nafie
Nationality : Egyptian
Date of birth : 21/03/1987
Major :Economics
Degree: PHD in Economics
Supervisors : Baher Atlam , Samy El sayed – Yazid Dissou
Title of the thesis/ dissertation (English): Ways to face the twin deficit between public budget and the current account with application to the Egyptian case

Summary

The purpose of this thesis is to provide an assessment of the potential efficacy of fiscal policy in Egypt as a countercyclical policy tool. This dissertation discusses three related topics and consist of four chapters. The First chapter (**Literature Review**) provides a survey on empirical literature , It is structured as follows , introduction in the first section , section two provides empirical studies on the validity of twin deficit hypothesis,. The third section provides literature review and related work on Current account sustainability. In the fourth section , we present literature review on measuring fiscal multiplier and conclude at last .

The Second chapter (**An assessment of the Twin-Deficit Hypothesis with empirical evidence from Egypt**) provides an empirical analysis of the twin-deficit hypothesis in the presence of structural breaks in Egypt. The second chapter start by introduction , followed by A thumbnail description of some stylized facts on the Egyptian budget and current account deficits . Section three provides a theoretical framework . section four provides the data sources . In section five we present the empirical analysis of the relationship between the two deficits using the Autoregressive Distributed Lag (ARDL) approach and the bootstrap causality test while considering the presence of breaks . in section 6 we concluded that there is no support for the twin deficit hypothesis was found in Egypt over the long run. But a support for the Ricardian equivalence hypothesis was found. The absence of any relationship between the two variables in the long run is backed by the results of our bootstrap causality test. Still, the short-run analysis with the ARDL model provides support for the existence of a relationship between the two deficits in the short run. Overall, The findings suggest that, to restore external balance, the government

should rely more on policies to improve the competitiveness of the economy, instead of considering fiscal policies.

Chapter three provides (**An investigation of the sustainability of the current account deficits using a nonlinear cointegration approach, with an application to Egypt**) . Chapter three is organized as follows , section one is an introduction . Section two provides a Theoretical framework. In section three we provide a Quick overview on the evolution of the Egyptian current account balance. Section four include Data and empirical analysis. We assess the mean-reversion properties of the current account by examining the long-run relationship between real exports and real imports, plus interest payments on external debt. We use the nonlinear autoregressive distributed lag (NARDL) model to assess their long-run relationship and compare the results with those of the linear ARDL model. Finally we concluded in section 6 that is no strong evidence to support the sustainability of the Egyptian current account. However, the results with the nonlinear model point toward the rejection of the null hypothesis of no cointegration between the two variables. Moreover, we reject the null hypothesis of no long-run asymmetry between the impacts of positive and negative shocks to imports on exports. Overall, our results suggest that the Egyptian current account followed a mean-reverting nonlinear process during the study period.

In Chapter four (**Empirical Estimation of Fiscal Multiplier in Egypt : A SVAR analysis**) we empirically estimate fiscal multiplier for Egypt. Using Structural Vector Autoregressive Model (SVAR) model using quarterly data for the period 1990-2015. The chapter starts by an introduction . followed by a theoretical background in section two . Section three provides An overview on the Egyptian macroeconomic policy. In section 4 we provide the data sources and methodology .We concluded at las section that estimated fiscal multiplier was around positive at the first year , then it turned to be negative in the second year. The chapter concluded that very low fiscal multiplier is an indication of a weak impact of government spending on real GDP during the period of the study. The study justified low fiscal multiplier because of most of the rising expenditures are devoted to the continuous rise in subsidies , debt services cost and public wage .The study recommend that the government authorities should not rely solely on increasing the amount of spending , but a series of complementary actions are needed to improve the efficiency of public expenditure like , direct more spending toward productive. Also, cutting government spending and increasing taxes will be more efficient case way to increase economic growth in the Egyptian specifically in case of negative fiscal multiplier

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