

An Impact of Trade and Financial-Openness on Government Size: A Case Study for ECO

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ABSTRACT

This paper concentrates on the relationship between trade openness, financial openness and government size concerning the ECO. Compensation hypothesis explains that trade-openness is positively interconnected with the government size. Also, financial openness has negative relationship with the government size. Using panel data for ECO countries during 2000-2009, we have found evidence of a positive relationship between trade-openness and government size and also a negative relationship between financial openness and the size of government.

Keywords: Government Size, Trade-Openness, ECO Region, Panel Data.

Introduction

Recently there has been an interest in regarding that openness is positively related to government size. This idea was initially proposed by Cameron (1978) but it was Rodrik (1998) who first conducted a detailed investigation of the issue. As described by Cameron (1978) and Roderick (1998), compensation hypothesis explains that trade-openness is positively interconnected with government size due to its greater risks because governments afford social insurance against exterior risks. Financial openness is also joined with lesser size of government because it reduces the ability to preserve high levels of public spending (Shahbaz, et al, 2010). Likewise, Swank (2002) indicates the fact

that increase in international capital mobility is joined with decline in social welfare expenditures, which is called conventional wisdom hypothesis. The conventional wisdom hypothesis is motivated by the common idea that the ability of a country to spend (and to redistribute through spending) may be undermined by the intensity of capital flows, as their mobility makes significant tax bases to disappear. The existence of a compensation hypothesis for financial openness, i.e. a positive association between financial openness and government size, here is denied (Liberati, 2006). The present article tests two

hypotheses, using panel data for ECO countries during 2000-2009.

I. Trade-openness is positively related to the government size.

II. Financial openness has negative relationship with government size.

This paper is organized in five sections. After the introduction in the first section, section 2 provides a theoretical background and the related literature. Section 3 presents model specification and data description. Section 4 considers the empirical results and finally the conclusion will be provided in section 5.

Theoretical Background and the Related Literature

Related Literature with Trade-Openness and Government Size

The main explanation put forward in the literature is due to Rodrik (1997, 1998), argued that increasing external economy's exposure (trade openness) may lead to more demand for public expenditures. The basic argument is that increasing openness may lead to increasing risk. Citizens may therefore demand more redistributive public expenditures to compensate for this risk, a process that has become known as the compensation hypothesis. Using non-budgetary measures of government size (like government ownership, price controls, barriers to trade, etc.) they show that less open countries tend to have higher public sectors. Devereux (1991), Anderson et al. (1996) and Epifani and Gancia (2008) point to a further channel of influence. They argue that in an open economy, the costs of taxation can be exported if changes in public spending influence the terms of trade. Epifani and Gancia (2008) argue that openness can increase the size of governments through two channels: (1) a terms of trade externality, whereby trade lowers the

domestic cost of taxation, and (2) the demand for insurance, since trade raises risk and public transfers. Theoretically, there is little evidence to support the claim that openness is associated with greater government size. The literature finds only weak evidence for support. Related studies can be divided to three groups. The first group has used time series data, second group has used cross-sectional data and third group has used panel data. Among the first, Islam (2004) and Molana et al. (2004) do not support the hypothesis in which Trade-openness is positively related to government size, but Shahbaz, et al (2010) support the hypothesis. In second group, using cross-sectional data Alesina and Wacziarg (1998), Garen and Trask (2005) and Liberati (2006), show that the relationship between openness and government size is not very robust, but Epifani and Gancia (2008) support the hypothesis. Finally, Liberati (2006), Ram (2009) using panel data support the compensation hypothesis, but Benarroch and Pandey (2008), do not support the hypothesis. Therefore, more experiments in support or contradiction would be useful.

Related Literature with Financial Openness and Government Size

With regard to this question: "Is financial openness affecting the traditional compensation hypothesis?" Rodrik indicates that, one could argue that financial openness would further increase the risk of external economy's exposure and so the demand for public expenditures. However, increasing degrees of financial openness may leave governments with a reduced ability to raise the necessary tax revenue, as capital, on average, is a more mobile tax factor than labor. In this case, increasing demand

for redistribution might not be easily matched by increasing supply of redistribution by governments. This characteristic of financial openness would mark an important distinction with trade openness, which does not necessarily entail significant mobility of tax bases (Liberati, 2006). The impact of financial and trade openness on social welfare expenditures in a positive manner was elaborated by authors like Bretschger and Hettich (2002). They supported the compensating hypothesis of Rodrik (1998). On the other hand, Swank (2002), Quijano and Gaecia (2005), Liberati (2006) and Shahbaz, et al. (2010) found the negative impact of financial openness on government size.

Methodology

Model Specification

The present research using panel data estimates the model concerning ECO region, as follows:

$$GOV_{it} = \beta_1 + \beta_2 FDI_{it} + \beta_3 TR_{it} + \beta_4 POP_{it} + u_{it}$$

$$i=1,2,\dots,N$$

$$t=1,2,\dots,T$$

$$\beta_1 < 0, \beta_2 > 0, \beta_3 > 0$$

Proxies for the variables are fairly standard. As in the basic formulations of Rodrik (1998) and Alesina and Wacziarg (1998), government size is represented by the share (percent) of government consumption in GDP. Similarly, ratio (percent) of openness imports to (imports + exports) is the measure of openness, also Foreign Direct Investment (net inflows) as share of GDP is proxy for Financial Openness.

Table 1. Descriptive Statistics of Variables

Variables	GOV				TR				FDI			
	Mean	Max	Min	Std	Mean	Max	Min	Std	Mean	Max	Min	Std
Country												
Azerbaijan	10.45	13.84	8.68	1.46	0.43	0.61	0.26	0.12	11.15	45.14	-14.36	19.35
Iran	12.72	14.17	11.17	1.07	0.42	0.47	0.36	0.04	1.22	3.14	0.04	0.91
Kazakhstan	11.43	13.41	10.18	0.92	0.46	0.51	0.39	0.03	9.07	12.79	3.45	2.79
Kyrgyz Republic	18.08	20.04	16.83	0.93	0.57	0.65	0.50	0.05	3.57	7.93	-0.17	3.07
Pakistan	9.05	12.48	7.78	1.48	0.58	0.65	0.50	0.05	1.79	3.90	0.41	1.29
Tajikistan	13.93	28.80	8.27	8.22	0.59	0.71	0.53	0.07	5.33	13.10	0.31	4.76
Turkey	12.54	14/70	11.72	0.85	0.52	0.55	0.46	0.03	1.71	3.80	0.36	1.25

Data Description

All data are obtained from WDI (2012) for ECO countries during 2000-2009. Descriptive statistics concerning the variables of GS, TR and FDI are presented in Table 1 given below.

Empirical Results

We use Levin, Lin Chu test to analysis of variables stationary. Table 2 presents the result of this test.

Based on the results in table 2 all variables are stationary in the level of variables.

We use panel data model, and for choosing between OLS the pooled model, Fixed Effects (FE) and Random Effects (RE) we applied the Leamer F test and Hausman tests by Review 6.

Table 2. Levin, Lin Chu unit root test results

Variables	Level	Condition	T-Stat	Prob
GOV	0	Intercept & Trend	-3.99	0.0000
TR	0	None	-4.81	0.0000
FDI	0	Intercept & Trend	-4.75	0.0000
POP	0	Intercept & Trend	-36.14	0.0000

Table 3. F & Hausman tests results

	Statistic	Prob
Cross-Section F	6.4079	0.0000
Cross-Section Random	16.4347	0.0009

Table 3 presents the Leamer F test and Hausman tests for the model. Based on the result in table 3, the model is FE: the results of fixed effects panel data model are presented in table 4.

Results of table 4 show that according to the theoretical priors, the coefficient of TR is positive and statistically significant and

it has been approved that first hypothesis indicating that Trade-openness is positively related to the government size.

The coefficient of FDI is negative and dose not significant and do not supporting the second hypothesis. Also, we find that the effect of population growth is positive and significant statistically.

Table 4. Results of Estimation of Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	7.720	2.3522	3.28	0.0018
FDI?	-0.015	0.0174	-0.88	0.3807
TR?	8.752	3.2208	2.71	0.0089
POP?	1.251	0.4054	3.08	0.0032
AR(1)	0.796	0.1039	7.66	0.0000
R-squares	0.85	Ad R-squares	0.82	
F-stat	30.768	Prob (F-stat)	0.0000	
D-W	2.07			

Conclusion

In this paper, we have examined the effects of trade and financial openness on government size using panel data for ECO countries during 2000-2009. The results show that more trade-openness will increase government expenditures as indicated in Cameron (1978) and Roderick (1998) hypothesis. Moreover, financial openness has negative relationship with the government size.

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