Capital Account Liberalization and Capital Mobility: An Analysis based on Sri Lanka

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Introduction

Mobility of capital is the ability of capital to move across national boundaries seeking higher returns. According to Eichengreen *et al*. (1998), capital mobility creates opportunities for portfolio diversification, risk sharing, and inter-temporal trade. Bailliu (2000) found evidence that capital inflows foster higher economic growth. An argument by Quirk and Evans (1995) on capital account liberalization emphasis that the growing difficulties of enforcement policies designed to limit international capital flows increasingly invasive and distorting in a world of highly developed capital markets. Eichengreen *et al*. (1999) describe as "explosive growth" of international financial transactions and capital flows as one of the most far-reaching economic developments of the twentieth century. There is a dearth of studies that examines the impact of capital account liberalization in Sri Lanka, but most of those studies are commentaries and it does not consider the empirical relationship between liberalization and capital mobility.

Objectives

The objective of this study is to examine the relationship between capital account liberalization and capital mobility in Sri Lanka.

Methodology

Annual data for the period of 1978-2011 was used for the present study. In this study, four variables were defined to measure capital mobility: Direct Investment (DI), Other Private Capital (OP) and Government Capital (GVT) represent long run capital mobility, while portfolio and other short term capital are represented by Short Term Capital (ST). All the data were obtained from the annual reports of Central Bank of Sri Lanka and the KAOPEN[1] measure.

This study used bivariate model. All the capital mobility variables used in the model are considered as dependent variables and KAOPEN measure (named in the models as Openness) is used as proxy for capital account liberalization which is the independent variable. So, the functional model is given as:

$$DI_t = \beta_0 + \beta_1 Openess_t + u_t \ldots\ldots\ldots\ldots\ldots\ldots (1)$$

$$OP_t = \beta_0 + \beta_1 Openess_t + u_t \ldots\ldots\ldots\ldots\ldots\ldots (2)$$

$$GVT_t = \beta_0 + \beta_1 Openess_t + u_t \ldots\ldots\ldots\ldots\ldots\ldots (3)$$

$$ST_t = \beta_0 + \beta_1 Openess_t + u_t \ldots\ldots\ldots\ldots\ldots\ldots (4)$$

As the first step, Augmented Dickey Fuller (ADF) test used to check the stationarity of data. Johansen co-integration test used to identify long run relationship where as Vector Error Correction Model (VECM) was used to identify the both long run short run relationships among variables. A Granger causality test was conducted to study the casual relationship between liberalization and capital mobility.

Results and Discussion

The ADF unit root test results revealed that all the variables were stationary in the first difference and these variables were considered as

[1] KAOPEN is an index that measures the openness of the capital account developed by Chinn and Ito (2002).

integrated in order one. According to the bivariate model analysis, since the trace statistic is greater than the critical value there exist a long run relationship between other private capital and capital account liberalization.

Table 1: Cointegration Test Result for Other Private Capital

Hypothesized No. of CE(s)	Eigen value	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.3381	16.7953	15.4947	0.0317
At most 1	0.1061	3.5914	3.8415	0.0581

Table 2: Results of Optimal Lag Length Selection

Lag	Log L	LR	FPE	AIC	SC	HQ
0	-863.3975	NA	1.48e+18	56.02564	56.2569	56.1010
1	-787.6816	122.1224*	5.74e+16*	52.7537	54.1414*	53.2060*

Table 3: Granger Causality Test Results

Null Hypothesis	Probability	Decision
DGVT does not Granger Cause DDI	0.0005***	GVT ⟶ DI
DDI does not Granger Cause DST	0.0150*	DI ⟶ ST

Note: '*' and '***' indicate variable is significant at 5% and 1% levels respectively

According the Table 2, optimum lag length is one. The Granger causality results in Table 3 show, there are casual relationships between government capital, direct investment and short term capital.

According to the cointegrating equation results shown by equation 6, error correction coefficient of OP is significant and negative which implies a movement of 5.7 percent back towards equilibrium following a shock to the model. According to the equation 08 there is a short run relationship between Short term capital and capital account liberalization. However, this relationship exists at 10% level. This study results emphasis empirical evidences regarding the relationship between capitals account openness and capital mobility. However this relationship is statistically weak.

The VECM results are given below:

$$\Delta DI_t = -0.0078\hat{u}_{t-1} - 0.3016\Delta DI_{t-1} - 0.6405\Delta DI_{t-2} - 23.7793\Delta CAL_{t-1} + 9.4065\Delta CAL_{t-2} \ldots\ldots (5)$$
[-0.6283] [-1.3855] [-2.9541] [-0.4887] [0.1918]

$$\Delta OP_t = -0.5792\hat{u}_{t-1} + 0.045\Delta OP_{t-1} - 0.1651\Delta OP_{t-2} + 51.159\Delta CAL_{t-1} + 50.254\Delta CAL_{t-2} \ldots\ldots (6)$$
[-2.2666] [0.2037] [-0.8163] [1.4044] [1.3769]

$$\Delta GVT_t = -0.0242\hat{u}_{t-1} + 0.242\Delta GVT_{t-1} + 0.076\Delta GVT_{t-2} - 9.902\Delta CAL_{t-1} - 0.7287\Delta CAL_{t-2} \ldots\ldots (7)$$
[-0.2526] [1.0804] [0.2639] [-0.0948] [-0.0069]

$$\Delta ST_t = -0.1447u_{t-1} - 0.1746\Delta ST_{t-1} - 0.2012\Delta ST_{t-2} + 149.523\Delta CAL_{t-1} - 29.8945\Delta CAL_{t-2} \ldots\ldots (8)$$
[-1.1892] [-0.7996] [-0.7328] [1.7674] [-0.33401]

Note: ‘ t’ values are in the parentheses

In overall, the study emphasis that there is a short run relationship between short term capital and capital liberalization; and no causal relationships among capital mobility variables and capital account liberalization. The liberalization policies implemented in Sri Lanka since 1977 is caused to increase short term capital flows, however, it does not receive enough capital flows to the country. The weak domestic financial institutions and poor macroeconomic condition of the economy cause barriers to Sri Lanka to compete other countries in capital flows. This explains why Sri Lanka’s capital account liberalizing process does not cause short term and long term capital mobility.

Conclusion and Policy Recommendations

The results of this study emphasis an empirical evidence on long run relationship between capital account openness and capital mobility. It conclude that capital account liberalization policies and private capital variable are cointegrated which implies long run relationships while there are no casual relationships between capital mobility variables and capital account liberalization. It emphasis that mobility of long

term capital like direct investment and government capital do not depend on capital account liberalization. So, the study concludes that the Sri Lanka's capital account liberalizing process has not affected on short term and long term capital mobility. The study suggests that a proper sequencing of liberalization of the capital account is necessary to provide sufficient time for domestic financial institutions to build a proper macroeconomic environment to compete with other liberalized economies in capital mobility.

References

Bailliu, J. N. (2000) Private Capital Flows, Financial Development, and Economic Growth in Developing Countries. Bank of Canada Working Paper 2000-15. U.S.A

Echengreen, B., M. Mussa, G. Ariccia, E. Detragiache, G. M. M. Ferretti, A. Tweedie (1998). Capital Account Liberalization: Theoretical and Practical Aspects. International Monetary Fund. U.S.A

Echengreen, B., M. Mussa, G. Ariccia, E. Detragiache, G. M. M. Ferretti, A. Tweedie (1999) Liberalizing Capital Movement: Some Analytical Issues. International Monetary Fund. U.S.A

Quirk, P. J. and O. Evans.(1995) Capital Account Convertibility : Review of Experience and Implications for IMF Policies. International Monetary Fund. U.S.A.