Foreign Direct Investment and Economic Growth in Mauritius: Evidence from Bounds Test Cointegration

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Abstract

Employing the newly developed auto-regressive distributed lag (ARDL) bounds approach to cointegration this paper addresses the important question of whether foreign direct investment enhances economic growth in Mauritius using time series data for the period of 1975-2001. Domestic private investment and public investment are also utilised to estimate a neoclassical production function in the long run as well as in the short run. The results indicate that foreign direct investment has a significant impact on economic growth in Mauritius. As for domestic investments, only private investment shows positive, and marginally significant, contribution to growth.

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1. Introduction

Foreign Direct Investment (FDI) from Multinational Corporations (MNCs) is considered as one of the main channel for the acquisition of technology and knowledge by Less Developed Countries (LDCs). Therefore, it has often been argued that FDI was growth-enhancing for the host country. However, there is in fact no consensus as to the relationship between FDI and economic growth.

FDI is thought to be growth-enhancing mainly through the capital, technology and know-how that it brings into the recipient country. By transferring knowledge, FDI will increase the existing stock of knowledge in the host country through labour training, transfer of skills, and the transfer of new managerial and organisational practice. FDI will also promote the use of more advance technologies by domestic firms through capital accumulation in the domestic country (De Mello, 1997, 1999). Finally, FDI is thought to open up export markets and to promote domestic investments through the technological spillovers and the resulting productivity increase. Overall FDI is thought to be more productive than domestic investments. Indeed, as Graham and Krugman (1991) argue, domestic firms have better knowledge and access to markets, so for a MNC to enter it must have some advantages over the domestic firms. Therefore, it is likely that the MNC will have lower costs and be more productive thanks to technology and know-how.

On the other hand, it has been argued that FDI and the attached technology transfer may be costly for the host country. It has been argued that MNCs capital contribution is greatly reduced by their tendency to repatriate profits. Stewart (1981, 1984) argued that the technology transferred by MNCs was likely to be inappropriate for the LDCs resource and factor endowments, including human capital. She also argued that

by bringing in inappropriate products, FDI might affect the social and cultural norms of the host country. Ram and Zhang (2002) pointed out that FDI is also thought to affect negatively domestic enterprise as the latter will struggle to compete with the powerful MNCs, which could affect domestic investment negatively.

The cross-section evidence suggests that overall FDI has a positive impact on the economic growth of LDCs, however this relationship is conditional. Balasubramanyan *et. al.* (1996) looking at a cross-section of 46 countries over the period of 1970 to 1985, find that FDI performed better under export oriented or neutral regime than under import substitution regimes. Balasubramanyan *et. al.* (1999), looked at the same cross-section and found that the positive impact on FDI on economic growth was conditional on a certain threshold level of human capital endowments in the host country. Blomstrorn *et. al.* (1992), looking at the determinants of growth on 78 developing countries and 23 developed countries from 1960 to 1985, found that there was a positive impact of FDI on growth almost exclusively for higher-income economies. They conclude that for the host country to benefit from FDI it has to be capable of absorbing the new technology brought in by the FDI. Borensztein *et. al.* (1995), using a panel data of 69 countries from 1970 to 1989, found that a minimum human capital threshold was necessary for FDI to have a positive impact on growth. They also found that FDI contributed more to growth than domestic investment. However, Ram and Zhang (2002) looking at a cross-country of 85 countries did not find evidence that a minimum human capital threshold was necessary for FDI to have a positive impact on growth. Ram and Zhang (2002) conclude that while the interaction between human capital and FDI might have been important in the 1980s (as Borensztein *et al.* found in their 1995 paper), Ram and Zhang's (2002) results suggest

that it was no longer the case in the 1990s. Also, de Mello (1999) using time series and panel data evidence found that the extent to which FDI promoted growth depended on the degree of complementarity and substitution between FDI and domestic investment.

Regarding country specific evidence, Dees (1998) found that FDI played an important role in promoting economic growth in China. Chakraborty and Basu (2002), looking at the case study of India from 1974 to 1996 also found that FDI had a positive and significant impact on growth, both in the short and long run. Finally, Zhang (2001) looking at East-Asia and Latin America from the 1960s to 1997 found mixed evidence on the impact of FDI on economic growth. While FDI was found to be growth enhancing in the long run in Taiwan, Mexico, Hong Kong, and Indonesia, this was not the case in Columbia, Argentina, Brazil, Korea, Malaysia, Thailand and Singapore (however in Singapore FDI has a positive impact on growth in the short run).

Overall, the evidence suggests that FDI can be growth-enhancing for LDCs but export orientation, an economic development threshold level, a human capital endowment threshold level and complementarity between FDI and domestic investment might all be necessary conditions for the relationship to hold. Evidence also seems to suggest that FDI is more growth enhancing than domestic investment (Borensztein *et al.*, 1995).

In this paper we are interested in exploring the role played by FDI on the growth process in Mauritius during the period of 1975-2001. We also looked at the differential impact of private and public investment on economic growth, given the importance of private domestic investment in Mauritius. To explore these relationships we utilised a new growth theory inspired model endogenising human capital and using the auto

regressive distributed lag (ARDL) bounds approach to cointegration. The impact of FDI on economic growth is expected to be positive as Mauritius is likely to be satisfying all the necessary conditions highlighted by the existing evidence presented earlier in this section.

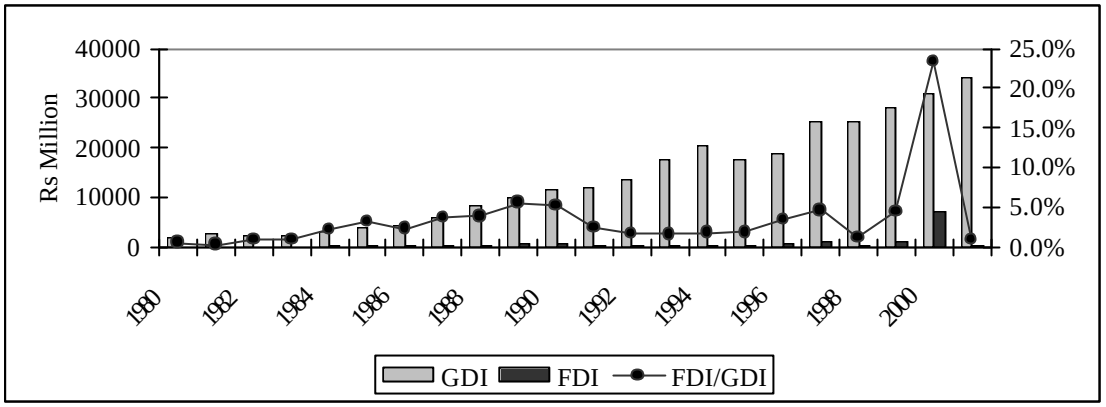
The paper is organised as follow. Section 2 provides an overview of the structure and evolution of investments in Mauritius since 1975. We explore the role played by domestic and foreign investment and look at whether FDI policies in Mauritius have been conductive to inward-FDI. Section 3 presents the model and the data used and in Section 4 we present the empirical results. Concluding remarks and policy implications are left to section 5.

2. Mauritius: some facts

2.1 FDI in Mauritius

Mauritius, a small island economy of the Indian Ocean, has witnessed an incredible development in the last 30 years. Mauritius was transformed from a dependent monocrop economy in the early 1970s to a multi-sector middle-income economy two decades later. The driving force of Mauritius' development has been its exports sectors, namely the sugar sector, tourism and the Export Processing Zone (EPZ). The relatively dynamic financial sector has also played a crucial role in the development process. These sectors have all benefited from both domestic and foreign investments throughout their development.

Figure 1: FDI and GDI in Mauritius, 1980-2001



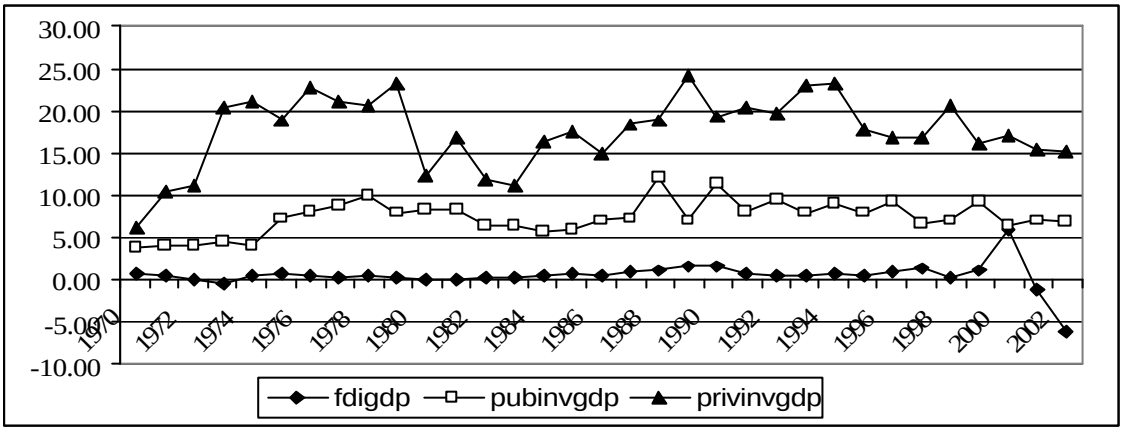
Sources: Yin (1992); Bank of Mauritius (2001).

It is only from the mid-1980s that Foreign Direct Investment (FDI) started entering Mauritius significantly, mostly in the EPZ and in tourism. UNCTAD (2001) argued it played a significant role at the time more because of the technological know-how it brought, rather than because of the capital inflows per se. Indeed, the proportion of FDI to gross domestic investment (GDI) remained quite low throughout the 1980s, representing 6 per cent of GDI in its peak year (Figure 1). However, according to UNCTAD (2001) the FDI in tourism and the EPZ brought in the necessary technologies and know-how to transform them into leading sectors of the economy. UNCTAD (2001) argued that FDI in Mauritius were successful in allowing local investors to acquire and assimilate these technologies and know-how and develop domestic firms in the EPZ and the tourism sector. However, FDI in Mauritius have also been highly concentrated regarding sector as well as in skills and capabilities, therefore limiting the capacity to rapidly upgrade and diversify production (UNCTAD, 2001).

Many Mauritian specialists suggest that one other key factor of the development success of Mauritius has been the large proportion of domestic investments in these leading economic sectors, in particular private domestic investment as can be seen on

figure 2 (Hein, 1989; Assidon, 1990; Dommen and Dommen, 1999; Blin, 2004). Indeed, the large proportion of private domestic investment in sectors such as the EPZ, tourism and the financial sector is thought to have prevented large dependency on foreign capital (Hein, 1989) and to have facilitated joint ventures and therefore technological spillovers.

Figure 2: FDI, public domestic investment and private domestic investment as a percentage of GDP in Mauritius: 1975-2001.



Source: CSO (2002)

Looking at the structure of investment in Mauritius in the last 25 years and comparing it to other middle-income industrialising economies, we can see that the low proportion of FDI to the Gross Fixed Capital Formation (GFCF) is not unique to Mauritius (see Table 1). Countries such as South Korea and Taiwan also had low FDI as a proportion of GFCF, while Singapore, Malaysia and Hong Kong had much higher FDI inflows as a proportion of GFCF. However, all these countries experienced incredible growth rates in the last 30 years. Would this be an indication that the volume of FDI inflows is less important than the quality or type of FDI inflows? This remains as open questions as Zhang (2001) found that FDI had a positive impact on economic growth in Taiwan but not in South Korea. While among countries with high proportions of

FDI/GFCF, only in Hong Kong did FDI have a positive impact on economic growth in the long-run (Zhang, 2001). Therefore, given the mixed evidence, it is difficult to know whether FDI in Mauritius has been growth-enhancing or not on the basis of the small proportion of FDI to GFCF. Nevertheless, it could be argued that given the existing evidence on the relationship between FDI and economic growth, we would expect FDI in Mauritius to be growth-enhancing. The conditions for growth-enhancing FDI, which were presented earlier, are all met in Mauritius: the country has a large human capital base (Blin, 2004), it is an export-oriented economy, and the high rate of domestic investment in sector with relatively high FDI inflow suggests there is a relatively high complementarity between domestic and foreign investments (Hein, 1989, UNCTAD, 2001).

Table 1: FDI inflows as a percentage of Gross Fixed Capital Formation (1970-2002, selected years).

Countries	1970	1975	1980	1985	1990	1995	2000	2002
Mauritius	6.14	2.07	0.44	3.97	5.06	1.94	25.88	2.71
Hong Kong	6.65	17.49	7.65	-3.59	16.34	14.38	138.92	35.2
Taiwan	1.46	0.44	1.19	2.92	3.73	2.36	6.79	2.89
Korea, Republic of	2.95	1.01	0.03	0.87	0.84	0.99	7.08	1.55
Malaysia	13.37	14.98	12.25	7.46	17.95	15.02	16.52	NA
Singapore	15.24	14.73	25.93	14.02	46.83	40.79	45.63	NA

Source: UNCTAD, 2001.

2.2 Investment policies in Mauritius

The Mauritian government has generally been conductive in promoting private domestic investment with as a central idea that the government should complement but not replace the private sector (Blin, 2004). Regarding FDI, Mauritius welcomes them and has put into place a wide range of incentives across sectors to attract it (Blin, 2004). Double

taxation treaties (24 in effect and another 14 under negotiation) are expanding and remain the main source of FDI (UNCTAD, 2001). There is no official foreign exchange control, Mauritius has a modern copyright law, and despite a rigid labour market, wages have generally been above the minimum wage set by the National Remuneration Board. In theory, the Government of Mauritius is open to welcoming FDI.

However, in practice the government only welcomes FDI in certain sectors, and not necessarily with transparency as to why some FDI is welcome and other not. The government does not set out clearly the priority sectors and does not give any guidance on the conditions required for approved investments. UNCTAD (2001) identified manufacturing, hotel development and management, financial and business services, regional headquarters as the sectors where FDI is welcomed. IT should maybe be added to the list as it is now on the government's priority list in terms of FDI entry (NCB, 2001, Ministry of Finance, 2002). According to UNCTAD (2001) FDI is not encouraged (but not prohibited) in agriculture and in many services such as wholesale and retail trade, engineering and construction. FDI is restricted in tourism, and the government's approach to FDI in commercial banking is neutral, it neither encourages it nor deters it (UNCTAD, 2001). State owned businesses are not open to either domestic or foreign investment.

In fact, all companies need an authorisation from the Department of the Prime Minister to invest in Mauritius (UNCTAD, 2001). Administrative delays, even though they have been reduced, are still a constraint. Other constraints are the poor quality of many services in Mauritius such as airfreight, telecommunications and insurance. The business surveyed by UNCTAD attributed the poor quality of services to the lack of

competition (UNCTAD, 2001). There has also been a lack of strategic focus in FDI incentives, maybe creating more costs than benefits (UNCTAD, 2001). However, in 2000 the Board of Investment was created and is in charge of facilitating both local and foreign investment, and it is hoped that this will improve the efficiency of Mauritius' investment policy.

3. The Model and Data

3.1 The Model

The model used in this paper is built upon the following augmented production function:

$$Y_t = f(I_{gt}, I_{pt}, FDI_t, HC_t, M2_t, Open_t) \quad (1)$$

where Y is real GDP per capita; I_g is public investment; I_p represents private investment; FDI is foreign direct investment; HC is human capital; $M2$ (money supply) represents a measure of the financial sector development; and $Open$ stands for openness of the economy.

For the estimation purpose, Equation (1) can be represented by the following logarithmic reduced form equation:

$$\begin{aligned} \ln Y_t = {} & a_0 + a_1 \ln I_{gt} + a_2 \ln I_{pt} + a_3 \ln FDI_t + a_4 \ln HC_t \\ & + a_5 \ln M2_t + a_6 \ln Open_t + u_t \end{aligned} \quad (2)$$

3.2 Data

The data used in this paper comes from various sources. The data on public investment and private investment (expressed as a % of GDP) was obtained from World Bank Global Development Network (macro time series). The data on the financial sector variable (M2 as % GDP), human capital variable (secondary school enrolment-5 year average) was obtained from the World Development Indicators (2002). The openness variable (OPEN) has been calculated by adding exports (% of GDP) and imports (% GDP), both from the World Development Indicators (2002). Summary Statistics of the data (in logarithm form) are presented in Table 2.

3.2 Methodology

The methodology used in this paper is based on the ARDL bounds cointegration approach proposed by Pesaran *et al.* (2001). The choice of this methodology is based on several considerations. Firstly, as shown by Pesaran et al. (2001), the ARDL models yield consistent estimates of the long run coefficients that are asymptotically normal irrespective of whether the underlying regressors are I(1) or I(0). Secondly, this technique generally provides unbiased estimates of the long run model and valid t-statistics even when some of the regressors are endogenous (Harris, 2003). Inder (1993) and Pesaran (1997) have shown that the inclusion of the dynamics may help correct the endogenity bias. Thirdly, given the size of the sample used in this study (26 observations) and the number parameters to be estimated (6 in total, excluding the constant term) the bound approach appears more appealing than the Johansen cointegration technique, which

would have required the estimation of a system of 6 equations and thus a considerable loss in degree of freedom.

Table 2 Summary statistics

Variables	Mean	Std. Dev.	Min	Max
lnrgdppc	6.158	0.323	5.654	6.711
lnfdi	-0.625	0.944	-2.834	1.805
lnIg	2.067	0.189	1.740	2.498
lnIp	2.889	0.204	2.403	3.180
lnM2	3.987	0.269	3.638	4.388
lnOpen	4.763	0.119	4.539	4.925
lnHC	3.96	0.214	3.627	4.245

To implement the bound test procedure, Equation (2) is modelled as a conditional ARDL- error correction model:

$$\begin{aligned}\Delta \ln Y_t = {} & b_0 + \sum_{j=1}^{n} b_j \Delta \ln I_{gt-j} + \sum_{j=1}^{n} d_j \Delta \ln I_{pt-j} + \sum_{j=1}^{n} m_j \Delta \ln FDI_{t-j} \\ & + \sum_{j=1}^{n} f_j \Delta \ln HC_{t-j} + \sum_{j=1}^{n} j_j \Delta \ln M2_{t-j} + \sum_{j=1}^{n} g_j \Delta \ln Open_{t-j} \\ & + h_1 \ln Y_{t-1} + h_2 \ln I_{gt-1} + h_3 \ln I_{pt-1} + h_4 \ln FDI_{t-1} + h_5 \ln HC_{t-1} \\ & + h_6 \ln M2_{t-1} + h_7 \ln Open_{t-1} + e_t \end{aligned} \quad (3)$$

where b_0 is a drift component and e_t are white noise error. The first step in the ARDL approach is to estimate Equation (3) using ordinary least square (OLS). The second step is to trace the presence of cointegration by restricting all estimated coefficients of lagged

level variables equal to zero. That is, the null hypothesis of no cointegration ($H_0 : h_1 = h_2 = h_3 = h_4 = h_5 = h_6 = h_7 = 0$) is tested against the alternative ($H_1 : h_1 \neq 0,\ h_2 \neq 0,\ h_3 \neq 0,\ h_4 \neq 0,\ h_5 \neq 0,\ h_6 \neq 0,\ h_7 \neq 0$) by the mean of a F-test with an asymptotic non-standard distribution. Two asymptotic critical value bounds provide a test for cointegration when the independent variables are $I(d)$ with $0 \leq d \leq 1$. The lower bound assumes that all the regressors are $I(0)$, and the upper bound assumes that they are $I(1)$. If the computed F-statistics lies above the upper level of the band, the null is rejected, indicating cointegration. If the computed F-statistics lies below the lower level band, the null cannot be rejected, supporting the absence of cointegration. If the statistics fall within the band, inference would be inconclusive. After confirmation of the existence of a long run relationship between the variables in the model, the long run and short run models can be derived using information criteria such as the Schwartz Bayesian or the Akaike information criteria.

The ARDL approach to cointegration does not require the pre-testing of the variables, included in the model, for unit root unlike other techniques such as the Johansen approach (Pesaran *et al.*, 2001). However, as remarked by Ouattara (2004), if the order of integration of any of the variables is greater than one, for example an I(2) variable,[1] then the critical bounds provided by Pesaran *et al.* (2001) are not valid. They are computed on the basis that the variables are I(0) or I(1). Put differently, it is necessary to test for unit root to ensure that all the variables satisfy the underlying assumption of the ARDL methodology before proceeding to the estimation stage. With this in mind, we

[1] Although most macro time series are either I(0) or I(1) the existence of I(2) variables is well documented in the cointegration literature (see Harris, 2003; Johansen 1995).

start the econometric analysis, in this paper, by analysing the order of integration of the variables.

3.3 Unit root tests

To test the order of integration of the variables we use the standard tests for unit root, namely the Augmented Dickey-Fuller (ADF) and the Phillips-Perron (PP) tests proposed by Dickey and Fuller (1979) and Phillips and Perron (1988), respectively. Results of these tests are presented in Table 3. The results indicate that all our variables are either I(0) or I(1). For the variable lnFDI however, the ADF results show that it is I(0) whilst the PP test indicates that it is I(1). A plot of the variable and its correlogram, not reported in the paper, suggests that the order of integration is one as in the PP test. Now that we have ascertained that the order of integration of our variables is zero or one, we can confidently apply the ARDL methodology to our model.

Table 3: ADF and PP Unit Root Tests (with constant no trend)

Variables	ADF	PP	Variables	ADF	PP	Decision
lnY	0.060	-0.010	?lnY	-4.781***	-4.806***	I(1)
lnIg	-4.269***	-4.361***	?lnIg	…	…	I(0)
lnIp	-3.037**	-3.030**	?lnIp	…	…	I(0)
lnFDI	-2.913**	-2.868	?lnFDI	…	-4.882***	I(1)
lnHC	-1.105	-1.046	?lnHC	-5.467***	-5.505***	I(1)
lnM2	0.721	0.432	?lnM2	-8.379***	-7.342***	I(1)
lnOpen	-1.201	-1.288	?lnOpen	-4.842***	-4.843***	I(1)

Note: *** and ** represent significance at the 1% and 5% levels, respectively. The critical values are based on the finite sample values computed by McKinnon (1991). The software Stata 8 was used for these tests.

4. Estimation results

4.1 Long run relationship

Equation (2) is estimated for Mauritius using annual data covering the period of 1975-2001. Before testing the existence of a long run relationship among our variables it is important to decide the order of the lag of the ARDL. Results based on information criteria (Akaike, Schwartz Bayesian and Hannan-Quinn criterion)[2] suggest that the process is an AR(1).

Table 4 reports results of the bound test for the existence of a long run relationship. The F-statistics is above the 5 per cent critical bounds computed by Pesaran *et al*. (2001), thus implying that the null hypothesis of no cointegration can be rejected. Put differently, there exists a long relationship among the variables of our model. Table 5 shows results of the long run estimate based on the Schwartz Bayesian criteria. The selected ARDL (1, 0, 0, 0, 0, 1, 0) passes the standard diagnostic tests (serial correlation, functional form, normality and heteroscedasticity).

The results show that public investment affects positively (0.051) but insignificantly, in statistical term, real GDP per capita. The impact of private investment on per capita output is positive (0.150) and marginally significant at the 10 per cent level. The estimate of the coefficient of foreign direct investment (0.043) is positive and marginally significant at the 5 per cent level, thus suggesting that FDI flows to Mauritius have a stimulating effect on growth. The estimate of the human capital variable, proxied

[2] These tests are generally used to decide the order of a vector auto-regression (VAR). However, what ever holds for the VAR must also hold for individual equations. In other words, applying information criteria in deciding the order of lag for each equation is appropriate.

by secondary school enrolment, bears a positive sign (0.475) and is significant at the 5 per cent level. This confirms the predictions of the endogenous growth theory on the importance of human capital for economic growth. The financial sector variable affects positively (0.712) real GDP per capita in Mauritius. The estimated coefficient is highly significant. Finally, openness, measured as the sum of exports and imports as a share of GDP, does not seem to have a significant effect of real GDP per capita. The estimated coefficient is negative (-0.05) and statistically insignificant.

Table 4: Bounds Tests for the Existence of Cointegration

F-statistics	5% Critical values	
	I(0)	I(1)
3.952	2.476	3.646

Table 5: Estimates of the Long Run Coefficients- ARDL (1, 0, 0, 0, 0, 1, 0)
Dependent variable: real GDP per capita

Variables	Coefficients	t-ratios	p-values
constant	1.237	1.540	0.144
lnIg	0.051	0.722	0.482
lnIp	0.150	1.544	0.144
lnFDI	0.043	1.825	0.088
lnHC	0.475	2.384	0.031
lnM2	0.712	4.113	0.001
lnOpen	-0.05	-0.026	0.800

4.2 Short run Dynamics

The fact that the variables in our model are cointegrated provides support for the use of an error correction model mechanism (ECM) representation in order to investigate the

short run dynamics. Estimation results, still based on the Schwartz Bayesian criteria, are presented in Table 6. The R^2 is 0.79 suggesting that such error correction model fits the data reasonably well. More importantly, the error correction coefficient has the expected negative sign and is highly significant. This helps reinforce the finding of a long run relationship among the variables in the model.

Table 6: Estimates of the Error Correction Representation

Variables	Coefficients	t-ratios	p-values
dconstant	0.605	1.428	0.172
dlnIg	0.025	0.714	0.485
dlnIp	0.073	1.594	0.131
dlnFDI	0.021	1.929	0.072
dlnHC	-0.041	-0.333	0.743
dlnM2	0.348	2.847	0.012
dlnOpen	-0.026	-0.256	0.801
ecm(-1)	-0.489	-4.810	0.000

R^2 = 0.795; DW-Statistic = 2. 473; F-statistic = 8. 296.

The results in Table 6 suggest that the immediate impact of changes in the growth rate of private investment is positive and marginally significant at the 10 per cent level. Turning to foreign direct investment, it can readily be discerned that this variable has a positive and statistically significant effect on the growth rate of per capita output. The impact of public investment is positive but insignificant. Openness and human capital appear not to have a significant impact on growth, in the short run; whilst the financial sector variable appears with a positive significant impact on it. The size of the coefficient of the error correction term (-0.489) suggests a relatively high speed of adjustment from

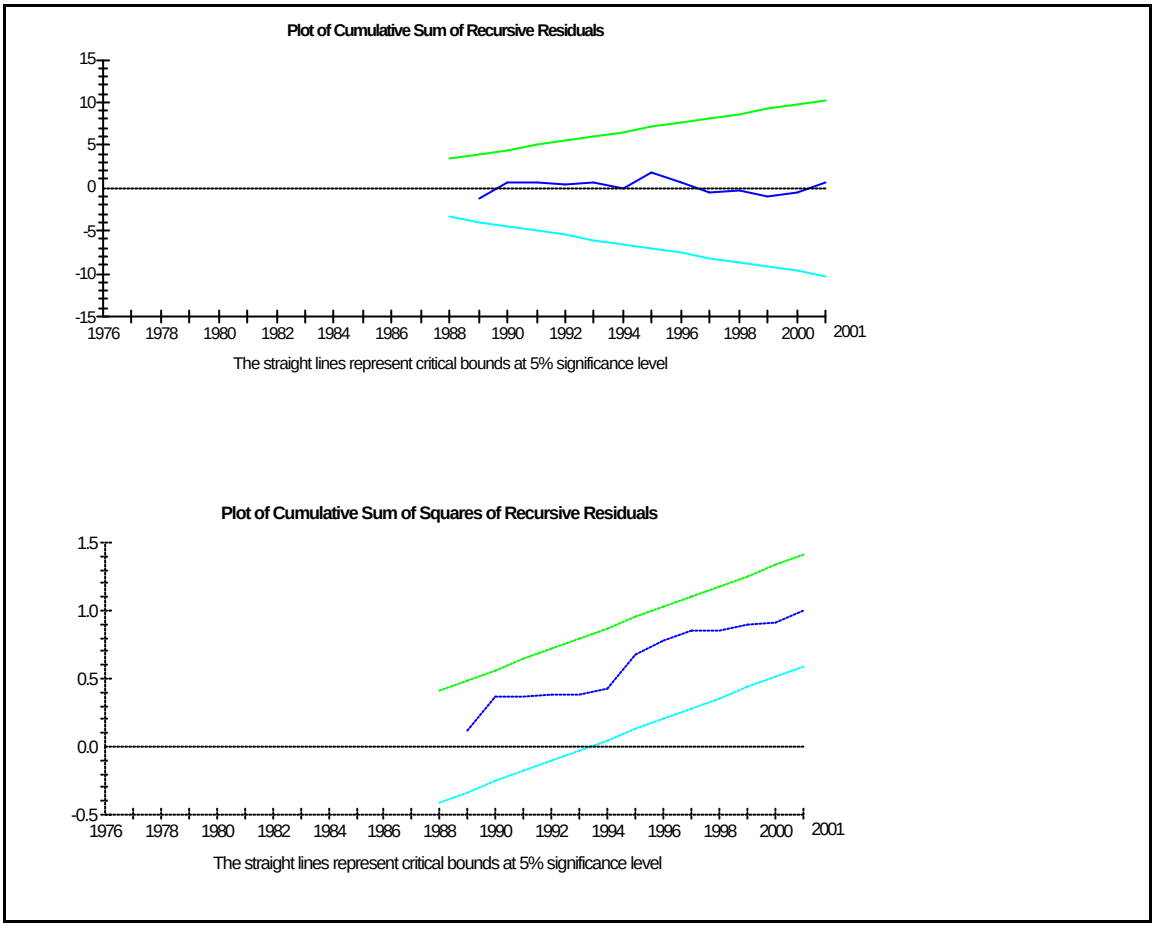
the short run deviation to the long run equilibrium income. More precisely, it indicates that around 49 per cent of the deviation from long run growth is corrected every year.

4. 3 Testing for Structural Break in the Model

To complement this study it is important to investigate whether the above long run and short run relationships we found are stable for the entire period of study. For this purpose, one needs to test for parameter stability. The methodology used here is based on the cumulative sum (CUSUM) and the cumulative sum of squares (CUSUMSQ) tests proposed by Brown *et al.* (1975). Unlike the Chow test, that requires break point(s) to be specified, the CUSUM tests can be used even if we do not know the structural break point. The CUSUM test uses the cumulative sum of recursive residuals based on the first n observations and is updated recursively and plotted against break point. The CUSUMSQ makes use of the squared recursive residuals and follows the same procedure. If the plot of the CUSUM and CUSUMSQ stays within the 5 per cent critical bound the null hypothesis that all coefficients are stable cannot be rejected. If however, either of the parallel lines are crossed then the null hypothesis (of parameter stability) is rejected at the 5 per cent significance level.

Figure 3 clearly indicates that both the CUSUM and CUSUMSQ plots lie within the 5 per cent critical bound thus providing evidence that the parameters of the model do not suffer from any structural instability over the period of study

Figure 3: CUSUM and CUSUMSQ Tests for Parameter Stability



5. Conclusion

This paper has investigated the impact of foreign direct investment in Mauritius over the period of 1975-2000, using a neoclassical production function and the bounds approach to cointegration developed by Pesaran *et al.* (2001). A number of findings were presented in this paper. Firstly, the econometric evidence suggested that the variables included in the underlying production function are bound together in the long run. Secondly, results based on the long run estimates showed that foreign direct investment, private

investment, human capital and financial sector development have a positive and statistically significant effect on per capita output. By contrast, public investment and openness were found not to have a significant effect on it. Thirdly, the error correction estimates indicated that changes in foreign direct investment and private investment have a positive and statistically significant effect on the growth rate of per capita output while the other variables in the model appear to have an insignificant impact.

What are the implications of these results for Mauritius? First and foremost Mauritius will have to continue to attract FDI given its role in the growth process and the government should continue to promote private investments. The latter have always been dynamic in Mauritius and everything else remaining equal, there is no reason to think that the trend should stop in the future. Given the complementarity between private domestic investment and FDI, in terms of promoting growth, joint ventures should be encouraged in sectors such as IT and finance so as to facilitate spillovers to the rest of the economy. While we do not advocate free entry of FDI, the Government of Mauritius will have to ensure that its FDI policies are more transparent. In particular, FDI should be welcome in sectors with potential competitive advantages and where complementarity with domestic investments is likely to be high. Also, the government will have to promote effectively the development of technological and human capital capabilities on order to attract FDIs in higher-value added activities, as well as to ensure Mauritius can assimilate these technologies effectively.

This might be the biggest challenge for Mauritius as the types of FDI Mauritius has been interested in since the late-1990s are very different to the type of FDI that entered Mauritius 15 years ago. Indeed, 15 years ago most FDI were in low-skill low-

value added sectors. Since the late-1990s, Mauritius has been trying to develop competitive advantages in higher value added sectors and therefore is looking to attract FDI in the higher value added activities of the industrial and service sectors (e.g. financial sector, EPZ and the Information Technology sector). The development of new competitive advantages in higher value added activities has become essential for Mauritius because the quotas of the Multi Fibre Agreement (MFA) will phase out in December 2004 and the Cotonou agreement will be implemented in 2008[3] (both agreements had helped the inflow of FDI into Mauritius as investors were looking for duty free access to the American and European markets). However, the current trend in FDI inflows in Mauritius is worrying. The 1990s were years of limited FDI inflows. Both the EPZ and tourism saw the inflows of FDI decrease substantially, being close to nil in 2001. Banking witnessed increasing investment in the late 1990s, with a peak in 1997 of Rs.1,122 million due to a single investment by a South-African bank in the State Bank of Mauritius, but fell back to no FDI inflows in the early 2000s[4].

In this paper we limited our study to a regression analysis of the effect of FDI on growth, and we argued that given the positive impact of FDI on economic growth, Mauritius should ensure it remains an attractive spot for foreign investors, especially as it is facing new challenges with the phasing out of the MFA and the implementation of the Cotonou Agreement. However more in depth analysis of the process in which small amounts of FDI inflows have succeeded in promoting growth would help in

[3] From 2008, preferential prices on sugar will disappear (the sugar industry is the main source of foreign exchange in Mauritius) and reciprocal total free trade should start being implemented between Africa-Caribbean-Pacific countries and the EU.

[4] However, offshore investments are not shown in the FDI data, and these have been dynamic since the mid-1990s (Bank of Mauritius, 2001).

understanding the condition for effective FDI in Mauritius and help in building effective investment promotion policies. Also it would be interesting to explore empirically the role played by export orientation, complementarity of investment and human capital in allowing effective FDI inflows in Mauritius.

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