البنك المركزي التونسي

Banque Centrale de Tunisie

Central Bank of Tunisia

Monetary policy vs fiscal policy and their impact on foreign direct investments: the Case of Tunisia

By: LOUAFI RAOUDHA

Motivation

- Previous inflows of FDI in Tunisia were meager despite the efforts made by Prior Governments, accounting for only 0.2% of GDP in 2018 against 3.6% in 2010.

- Tunisia needs to attract increased FDI in order to be able to finance its growing current account deficit which increased over the period from TD 8,298 million in 2010 to TD 15,592 million in 2017 and TD 19,049 million in 2018.

Main question

1. which domestic factors are important in driving FDI inflows to Tunisia?
2. does higher interest rates and lower inflation attracted FDIs?
3. can the fiscal stimulus be effective in attracting FDIs?

Data: Annual time series data on foreign direct investment inflows (FDI), the inflation rate (INF) measured in variation of consumer price index (CPI), the money market rate (TMM), direct tax (DTax), indirect tax (inTax) and Gross Domestic Product (GDP) which cover the 1986-2018 period, have been used in this study. The set of explanatory variables selection is based on data availability. Also, the use of annual time series is essentially due to unavailability of long period quarterly data, particularly for tax revenue.

The ARDL bounds testing approach introduced originally by Pesaran and Shin(1999)and then extended by Pesaran et al.(2001) is adopted to test the issue empirically for Tunisia.

On the basis of the vector autoregression (VAR) model, impulse response function (IRF) is used to simulate the dynamic response of FDI inflows after shocks over the endogenous variables.

Table1: The short Run Coefficient Estimates

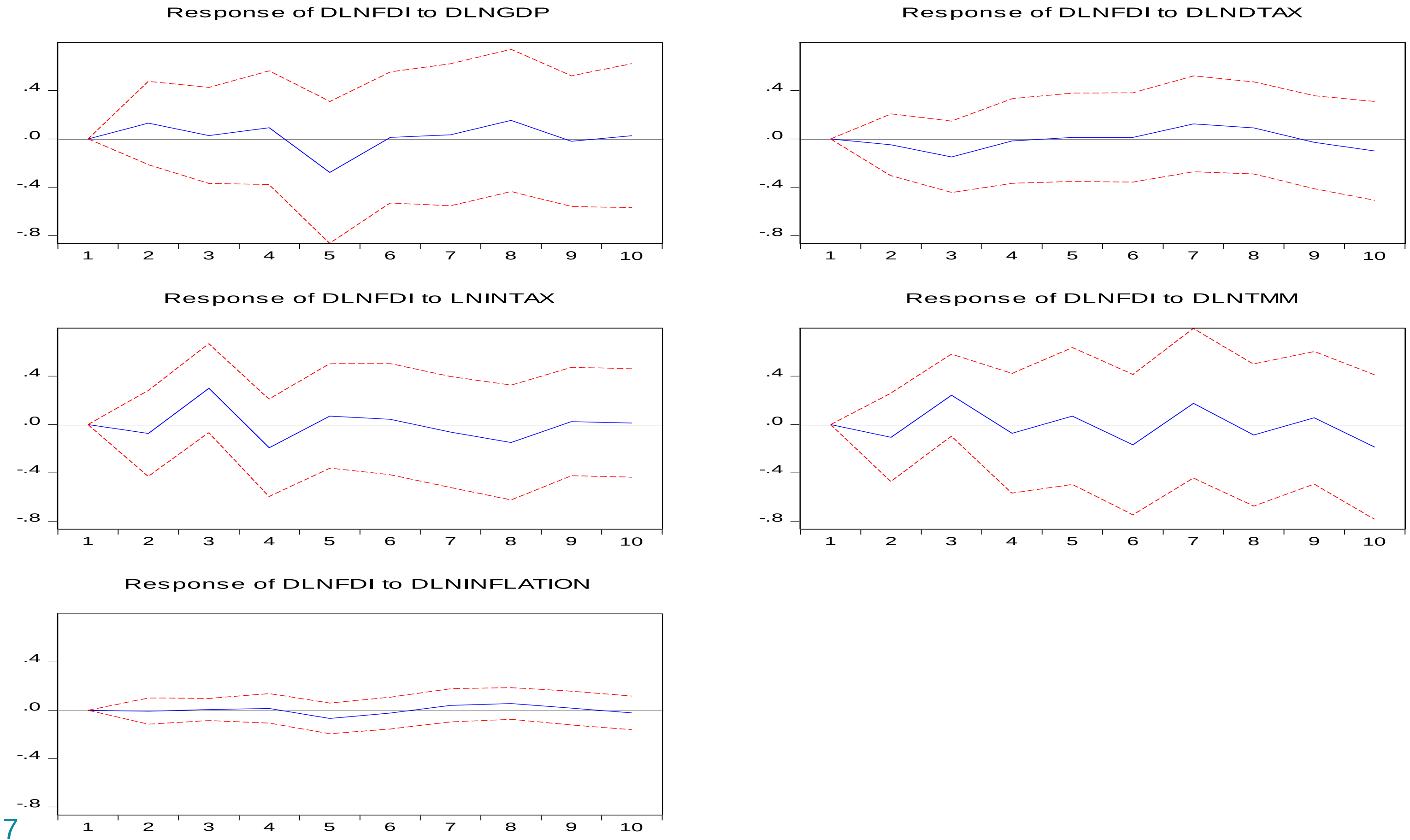
	Coefficient	Std. error	p-value
Panel B: The short-run dynamics			
C	-159.8652	15.43384	0.0000
TREND	-0.444656	0.042814	0.0000
$\Delta lnFDI_{t-1}$	0.334804	0.103728	0.0056
$\Delta lnGDP_{t}$	5.183955	1.937303	0.0173
$\Delta lnGDP_{t-1}$	-6.690601	2.699090	0.0256
$\Delta lnDTax_{t}$	1.108087	0.573659	0.0725
$\Delta lnINTax_{t}$	-0.390899	0.739307	0.6047
$\Delta lnINFLATION_{t}$	0.121383	0.164101	0.4709
$\Delta lnTMM_{t}$	2.792208	0.509986	0.0001
$\Delta lnTMM_{t-1}$	-2.510059	0.523829	0.0002
ECMt−1	-1.517304	0.146671	0.0000

Table2: The ARDL estimates of long run relationship.

	Coefficient	Std. error	p-value
Panel A: The long-run relationships			
$lnGDP_t$	10.45589	1.938966	0.0001
$lnDTax_t$	1.969628	0.841576	0.0535
$lnINTax_t$	-1.828007	1.051431	0.0026
$lnINFLATION_t$	-0.643494	0.183349	0.0032
$lnTMM_t$	3.613663	0.501820	0.0000

- We found evidence of the existence of long-run cointegration relationship between FDI, inflation rate , money market rate (TMM), indirect taxes and GDP.

Response to Cholesky One S.D. (d.f. adjusted) Innovations ± 2 S.E.



Impulse response function

- GDP impulse respond with immediately positive effect on the first 4 years and then effects becomes slightly lower.
- The FDI responds to indirect tax effects in 2Y and then keep in fluctuating with higher effects compared to indirect tax revenue.
- The response of FDIs to money market rate is immediate effect that did not disappear even after about 10 years.
- Increases in direct tax and inflation do not generate a significant effect on FDI.

- In Tunisia, empiric results have shown that monetary factors such as higher interest rates and lower inflation attracted FDIs. Fiscal factor (direct and indirect taxes) seem to play a less important role, being relevant only in the long-term.

- The effect of inflation is small then money market rate in the long-term and is not significant in the short-run.

- The indirect tax such as VAT or duty taxes seems to be much more important than tax on profit and on incomes . Those indirect taxes greatly influence consumption power. So, this may be a sign that foreign investors are interested in local consumption power .

- There is no statistically significant relationship between direct tax and FDIs in both short and long-term.

- The Gross Domestic Product play a more important role in influencing FDIs compared to all variables.

- The Gross Domestic Product and the money market rate are found to be the only significant variables that explain the FDI inflows in the short-run.

- Tunisia should also focus on improving the other non-financial factors that greatly influence the investment environment here (infrastructure, legal and political stability)