The Efficiency of the Fiscal Policy in the EU and Its Role in the Economic Recovery by Attracting FDIs

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The deep global recession has focused attention on the need for counter-cyclical macroeconomic policies. The scope for monetary policy was hampered by the credit freeze in the financial system, which was constrained by the accumulation of toxic assets awaiting a resolution to restore confidence and efficient intermediation. While a heated debate has emerged on the specifics, the need for fiscal intervention to support demand proved to be larger and of longer duration than initially envisaged. Further, there is a need to consider lags governing the fiscal policy transmission to decide on the speed of fiscal withdrawal without jeopardizing the recovery efforts. The aim of this paper is to establish some important factors for fiscal policy effectiveness and their role in attracting FDIs in the EU countries for sustaining economic recovery here based on literature review and the EU countries' experience. Even if the tax regime is not the only factor that determines decisions for foreign investments, reducing tax rates in some new Member States has increased the attractiveness of these countries for foreign investors.

Keywords: *FDIs, fiscal policy stimulus, automatic stabilizers, macroeconomic stability*

Introduction

The debate surrounding the effectiveness of fiscal policy is two-fold. First is the composition of fiscal stimulus. Choices have to be made between tax incentives and government spending, and the allocation of spending between current spending (extended unemployment benefits and transfers) and capital spending (infrastructure and new projects). Tax changes that improve incentives to work or induce greater private investment, and productive public investment in human capital and infrastructure contribute to productive capacity and improve the economy's potential output in the long-run. Sustained reductions in sales taxes and unproductive public consumption or measures that further artificially boost private consumption could run the risk of higher inflation and imports, increasing pressures on the current account and the international reserve position. Indeed, even poorly conceived infrastructure spending that generates a low rate of return may not generate sustained economic activity, while interfering with incentives for private activity.

Second is the concern about fiscal space. While fiscal expansion may be necessary to stimulate economic activity, not every country has the resources to finance fiscal stimulus. Some countries do not have enough fiscal space to run countercyclical policy during a recession with limited access to financing from international capital markets, and high concerns about policy credibility and debt sustainability.

The need for fiscal stimulus necessitates a careful evaluation of fiscal space and available financing. Fiscal policy in emerging market countries tends to be pro-cyclical because capital flows and commodity exports drive business cycles in these countries. So, when capital flows dry up and commodity prices plunge, financing an expansionary fiscal policy becomes increasingly difficult. Nonetheless, in response to the global slowdown, a number of emerging markets have announced fiscal stimulus plans to revive economic conditions and assist a speedy recovery.

The issue of affordability has turned attention to available international reserves. Countries with adequate international reserves would be seen as more credible and better positioned to respond with fiscal stimulus, with less concern about crowding out private activity. Reserves

availability would increase the scope for accommodating monetary policy, relaxing domestic financing constraints and reducing the risk of crowding out private activity. Furthermore, reserves adequacy would improve credit rating, reducing the risk premium on external financing. Among countries with abundant international reserves are energy-producing countries that have built cushions during the recent surge in world energy prices. Other emerging countries such as China and Brazil have also accumulated record high international reserves, benefiting from a surge in export prices, robust demand and sustained capital inflows (Kandil and Morsay, 2010).

Countries with a limited pool of international reserves tend to have less scope for fiscal stimulus. In their case, fiscal expansion tends to push up borrowing costs, which reduces the credibility of fiscal expansion as it crowds out private activity and offsets the effectiveness of the stimulus. A number of developing countries have become increasingly resource constrained as they continue to struggle to safeguard international reserves in the face of a surge in the cost of imports, particularly for food and fuel, and mounting external debt service costs, which present severe pressures on their limited foreign resources. Countries that have come into the crisis with excessive fiscal deficits or public debts—or that have current account deficits which can no longer be financed—had little room for maneuver. Likewise, loss of revenues—particularly commodity-related or import-related taxes—may also constrain fiscal space (Debrun and Kapoor, 2010.)
The aim of this paper is to establish some important factors for fiscal policy effectiveness and their role in attracting FDIs in the EU countries for sustaining economic recovery here based on literature review and the EU countries' experience.

Section 2 focuses on literature review regarding fiscal policy effectiveness and its role in achieving macroeconomic stability; section 3 presents conditions for fiscal policy effectiveness and section 4 focuses on fiscal policy conditions and stimulus in the EU countries and their role in attracting FDIs in this area. Section 5 concludes the paper.

Literature review

A number of studies have considered the cyclicality of fiscal policy, differentiating between emerging and high-income countries. A large empirical literature (Ilzetzki and Vegh (2008)) has found that fiscal policy in developing countries tends to be pro-cyclical, in contrast to high-income countries where it is more often countercyclical. IMF (2009a) suggests that policy has tended to be less countercyclical in emerging market economies with a fixed exchange rate. Hemming et.al (2002) conclude that the appropriate fiscal stance during a downturn will depend on a range of factors, and only a country by country approach, and indeed an episode-by-episode approach, can reveal whether a fiscal expansion or contraction is appropriate. Conditioning factors include the source of the downturn, the response of interest and exchange rates, accompanying policies, debt sustainability, the composition of the fiscal impulse, and influences on private behavior.

Others have focused on the limitations of effectiveness of fiscal policy. Freedman et.al (2009) emphasize that temporary fiscal expansion can be highly effective provided that monetary policy is accommodative, involve multiple-country coordination, and that the right fiscal instruments are used. Similarly, the IMF (2009b), highlights that discretionary fiscal policy can successfully stimulate output if stimulus packages are implemented in a timely manner and without interfering with debt sustainability. Spilimbergo et al. (2008) point that the optimal fiscal package to confront the global crisis should be timely, large, lasting, diversified, contingent, collective, and sustainable.

A third group of studies has focused on structural factors that differentiate the effectiveness of fiscal policy in industrial and emerging market economies. Theory suggests that an expansionary fiscal stance is likely to be more effective in stimulating aggregate demand if the economy is relatively closed, has a pegged exchange rate, substantial spare capacity, a high proportion of credit-constrained households or firms, and a sustainable public debt position. Taking these dimensions into account, conditions in emerging market economies could be less conducive to fiscal policy effectiveness, as supported by the empirical evidence (see, e.g., Ilzetzki and

Vegh (2008) and Freedman and others (2008)). Lane (2003) provides evidence that emerging market economies have been structurally more exposed to business cycles, and have coped less well in smoothing the impact of fluctuations. In such case, improving the quality of domestic institutions should take priority to establish a stable macroeconomic environment and enhance the effectiveness of fiscal policy.

Recent developments in macroeconomic modeling and pressing policy challenges have revived the classic debate on the effectiveness of fiscal policy as an instrument of macroeconomic stabilization (van der Ploeg, 2005). On the theory side, the rapid development of micro-founded general equilibrium models with non-Ricardian features has allowed researchers to assess the benefits of fiscal stabilization in a coherent and rigorous analytical framework (Botman et al., 2006). These studies confirm the conventional wisdom that a timely countercyclical response of fiscal policy to demand shocks is likely to deliver appreciably lower output and consumption volatility. However, well-intended fiscal activism can also be undesirable, when shocks are predominantly affecting the supply side or squarely destabilizing, when information, decision and implementation lags unduly lengthen the transmission chain.

On the policy side, a growing number of countries turned to fiscal policy as their primary stabilization instrument either because of changes in their monetary regime (currency board, hard peg, participation in a monetary union) or because financial conditions deteriorated to the point of making monetary policy ineffective (Spilimbergo et al., 2008).

Fiscal policy can contribute to macroeconomic stability through three main channels.

The first is the automatic reduction in government saving during downturns and increase during upturns, cushioning shocks to national expenditure. Such automatic stabilization occurs because tax revenues tend to be broadly proportional to national income and expenditure, whereas public spending reflects government commitments independent of the business cycle and entitlement programs specifically designed to support spending during downturns, including unemployment benefits. Also, to the extent that government consumption is less volatile than other components

of GDP, the public sector contributes to output stability through a mere composition effect of domestic expenditure.

Second, governments can deliberately change public spending and tax instruments to offset business cycle fluctuations. Finally, the structure of the tax and transfer system can be designed to maximize economic efficiency and market flexibility, thereby enhancing the resilience of the economy in the face of shocks. The notion of fiscal stabilization pertains to the first two channels.

The public's demand for government-induced stability reflects a number of factors that may vary over time and across countries, including the inherent resilience of the economy and the existence of alternative stabilizers, such as an effective monetary policy and unrestricted access of individual agents to financial instruments. During the recent crisis, the perceived need for fiscal stabilization has been unquestionably high: the resilience of national economies was impaired by the depth and the global nature of the shock, agents faced either limited access to or high cost of self-insurance through credit markets and financial institutions, and the firepower of monetary policy was constrained by the zero-bound on nominal interest rates. In the short term, the stabilizing role of fiscal policy relies on effective automatic stabilizers and on the capacity of governments to engineer (and credibly phase out) a fiscal stimulus in a timely fashion.

The studies builds on earlier work by Galì (1994, 2003), van den Noord (2002), and Fatás and Mihov (2001, 2003, 2009) investigate directly the cross-country relationship between fiscal policy indicators and output volatility. That approach has the advantage to incorporate various determinants of the stabilizing effect of fiscal policy, including policymakers' "reaction functions" and the actual impact of fiscal measures on output and private consumption. The resulting, reduced from empirical relations thus provide useful information on the effectiveness of fiscal policy, while avoiding the methodological issues related to the estimation of fiscal "multipliers."

Indeed, multipliers' estimates highly sensitive to the identification procedure of exogenous fiscal impulses, the nature of the shock (tax cuts, spending increases), and the behavior of monetary policy (Blanchard and

Perotti, 2002; Perotti, 2005; Romer and Romer, 2008; and Horton, Kumar and Mauro, 2009).

Existing analyses of fiscal stabilization tend to focus on the role of automatic stabilizers in industrial economies. Many of those draw on the seminal insights of Galì (1994) and revolve around the negative relationship between output volatility and government size, used as a proxy for the cyclical sensitivity of the budget balance. While the literature generally confirms the countercyclical impact of automatic stabilizers, the relationship appears to be a complex one. First, non-linearity seem to exist, suggesting that the adverse effect of high tax rates on an economy's resilience could more than offset the action of automatic stabilizers. Second, the relationship may be changing over time as structural changes moderating output volatility could be faster in economies with leaner governments. Finally, the relationship does not seem to hold beyond a narrow sample of industrial OECD countries. Debrun et al. (2009) confirm the effectiveness of automatic stabilizers in reducing output volatility.

Literature takes into account the potentially destabilizing impact of fiscal policy, as public finances are used to attain other goals than macroeconomic stability. It underlines the role of potential substitutes to fiscal policy as a macroeconomic insurance mechanism, including financial development, improved monetary policy credibility, and better economic policy governance. These variables may account for the decline in output volatility observed until the recent crisis and may prove important to properly identify the causal relation between automatic stabilizers and volatility (Debrun et al., 2009, and Mohanty and Zampolli, 2009). It investigates the extent to which fiscal policy contribute to lower private consumption volatility, as the latter is more closely related to welfare.

The main results can be summarized as follows. First, automatic stabilizers strongly contribute to output stability regardless of the type of economy (advanced or developing), confirming the effectiveness of timely, predictable and symmetric fiscal impulses in stabilizing output. Second, countries with more volatile cyclically-adjusted budget balances also exhibit more volatile output and private consumption. Third, access of individual consumers to credit appears to exert a stabilizing influence on output and private consumption. A weaker contribution of credit supply to smooth

cyclical fluctuations could thus increase the public's appetite for fiscal stabilization.

A series of studies in European countries suggests that taxation has a relatively low impact on FDI as a result of reduced influence of taxes on relocation costs (Edmiston, K., Mudd, S., Valev, N., 2003). Other authors show that a high level of corporate income tax discourages FDI inflows even though other factors, including volume and quality of goods and services, would be favorable to attracting foreign direct investments. Thus, further analysis of FDI flows between 7 origin countries of multinational companies (Austria, Germany, France, Italy, Netherlands, UK and USA) and 8 host countries (Bulgaria, Croatia, Czech Republic, Hungary, Poland, Slovakia, Slovenia and Romania) during 1995-2003, Christian Bellak and Markus Leibrecht concluded that the corporate income tax is a key factor in location decision of foreign companies, having almost equal importance to the labor cost factor. A one percentage point reduction in the effective rate of corporate income tax may lead to a maximum increase FDI inflows by 4.5% (Leibrecht, M., Bellak, C., 2005).

Agnès Bénassy-Quéré, Lionel Fontagné and Amina Lahrèche-Révil studied the sensitivity of FDI from the tax rates for 11 OECD countries over the period 1984-2000 and they concluded that tax rates play a significant role in investment location FDI. Thus, while the reduced tax rate contributes significantly to attracting foreign direct investment, high taxes discourage FDI inflows. On the other hand, the positive impact of differences between at the level of taxation is not the same in all countries that choose to reduce the tax rate to attract foreign capital. FDI flows are directly proportional to the differences existing between the level of taxation in different countries.

Disputes about the importance of corporate taxation on FDI location are lit, especially because many empirical studies regarding the elasticity of FDI to corporate taxation have focused most often on the issue of taxation. These studies ignored the possibility that FDI flows to answer not only at fiscal policies and bilateral agreements between countries origin and host countries but also at tax policies from countries that can provide alternatives for the location of foreign direct investments (Hajkova, D., Nicoletti, G., Vartia L., Kwang-Yeol Yoo, 2006).

If studies which attempted to measure the intensity of the relationship between taxation and the decisions location of foreign direct investments does not give relevant results, it is agreed that the corporate income taxation is a strong determinant of the foreign direct investment financial structure. Thus, the econometric modeling performed by P. Moore and F. Ruane in 1994-2002, showed that an increase of the taxation level of a country with 10 percentage points will generate the increase with 3.4 percentage point in the share of debt in the financial structure of subsidiary corporations in the country. Similar results have arrived and H. Huizinga, Laeven L. and G. Nicodème obtained similar results in 2007, showing that through intra-group loans, an increase with 10 percentage points in the level of taxation in one country will lead to an increase with 2.44 points percentage in the share of debt in the financial structure of subsidiary corporations in the country.

Conditions for Fiscal Effectiveness

Inflation

The inflationary environment does not affect the neutrality of the fiscal impulse in the long-run. High inflation counters policy credibility and the effectiveness of the fiscal impulse on output growth in the short-run. The implication of the analysis is that output growth declines with expansionary fiscal policy (a reduction in the fiscal impulse) in a high inflationary environment. Fiscal expansion increases inflationary expectations and raises the cost of credit, countering policy credibility and the effectiveness of the stimulus impulse in the short-run. Moreover, in the remainder of the sample (lower inflationary environments), the response of output growth to the first and second lags of the fiscal impulse is negative and significant. The implication is that fiscal policy is effective in low inflationary environments. An expansionary fiscal impulse increases output growth significantly over time. Underlying this evidence is higher policy credibility, reflecting the lower cost of borrowing as government spending is more growth inducing in a low inflationary environment. The expansionary

effects of exchange rate appreciation and broad money growth on output growth are robust in the short-run.

Debt Burden

The fiscal impulse has a long lasting negative effect on real growth where the debt burden is high. The implication is that an expansionary fiscal policy (a reduction in the fiscal impulse) has a negative effect on output growth in the long-run in countries with high initial debt levels. Higher spending that is financed by borrowing reduces policy credibility and increases the cost of borrowing and the debt ratio, countering the effectiveness of the stimulus. Rising concerns about the cost of debt service and debt sustainability crowds out private activity with long-lasting negative effects on growth in the long-run. In the short-run, however, the effectiveness of the fiscal impulse does not vary between countries with high versus low debt levels.

Exchange Rate System

The effectiveness of the fiscal impulse does not vary with the exchange rate system in the short- and long-run. The "conventional wisdom" is becoming that the response of exchange rate to fiscal expansion is crucial to evaluate multipliers. The results of the empirical analyses in the literature suggest that the effectiveness of the fiscal impulse on real growth is not altered by the exchange rate system. In contrast to theory's expectations, countries with a fixed exchange rate system do not seem to enhance the effectiveness of their fiscal policy. One explanation relates to the previous results demonstrating the negative effect of higher inflation on the effectiveness of fiscal policy. While a fixed exchange rate system forestalls a nominal appreciation in the face of expansionary fiscal policy, the resulting inflation would have a counter effect on competitiveness through its impact on the real exchange rate. The results also indicate that for fiscal stimulus to be effective under a fixed exchange rate system, the authorities would need to curb inflation and preserve competitiveness.

Openness

The effectiveness of the fiscal impulse in the short- and long-run does not vary with the degree of openness. The effectiveness of fiscal policy does not vary significantly in a more open economy. While more openness increases demand for imports and dampens the effectiveness of fiscal policy, higher quality government spending that targets capacity constraints and structural bottlenecks may stimulate exports. As both channels work in opposite directions on real growth, the evidence does not appear to be conclusive regarding significant variation in the effectiveness of the fiscal stimulus with the degree of openness.

Fiscal stimulus and FDI attraction into the EU countries

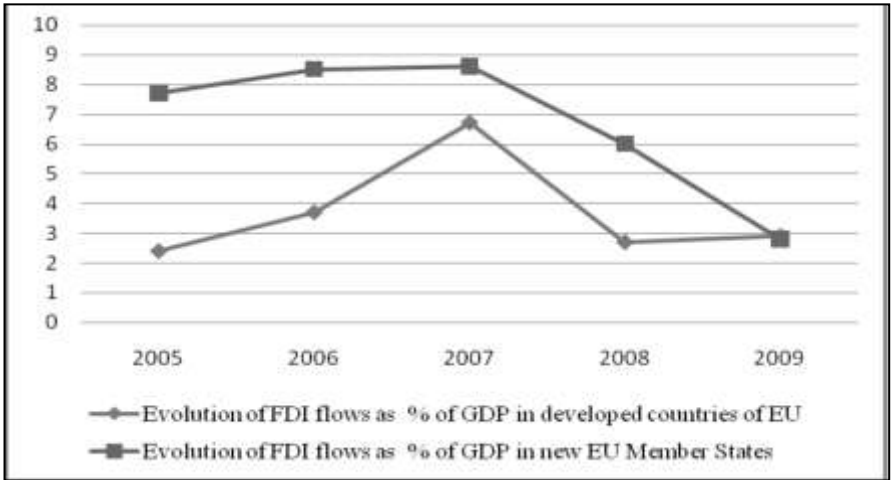
The role of taxation in attracting direct foreign investments in integrated economies has been somewhat neglected in European literature until it was found that the relaxed fiscal policy adopted by the Irish authorities after joining the European Economic Community created in a short time, the attraction of a substantial amount of foreign investment and a significant increase in prosperity compared with other countries (Greece, Portugal and Spain) which, upon accession, recorded a similar level of economic development.

Even if the representatives of the governments that reformed their corporate income tax systems (tax reduction) often assert that the major inflow of FDI in their countries is largely determined by the existence of a relaxed tax environment, there are controversies on the evaluation of the impact of taxation on FDI location, of scientific. It is clear that the level of taxation incentives the corporations to use different mechanisms (usually financial funds transfer) to move a portion of the tax base from one country to another.

According to information provided by UNCTAD, the European Union is the largest foreign investor in the world. Despite the growing importance of emerging economies in the world as recipients for companies with foreign capital, the European Union also remains the largest recipient

of foreign direct investment. Currently, in the European Union, the foreign direct investment stock is still largely concentrated in the first 15 members because they offer investors access to a developed market, strong industrial base, modern infrastructure and skilled labor. However, the strong growth of FDI flows are observed in the new Member States that have proved particularly attractive to foreign investors due to their geographical location and the relative cost advantages.

In Figure 1 we can observe significant differences between the flows of FDI as a % of GDP in developed countries of the EU and the flows of FDI as % of GDP in new EU Member States in the period up to the international economic crisis. Since 2007, these differences tend to diminish as a result of significant reduction in FDI flows in the new Member States, and in 2009 the differences in the flows of FDI as % of GDP almost disappeared.



Source: UNCTAD, World Investment Report, 2009

Figure 1: Evolution of FDI flows as % of GDP in developed countries of EU and new EU Member States during 2005-2009

FDI flows between Member States have a particular importance for the EU economy. These flows generated the creation of about 15% of existing jobs in the EU, representing a powerful driver of European productivity and economic integration. The situation of FDI flows between

European Union countries shows considerable variations of these flows from year to year depending on economic opportunities. During the period 2007-2009, we observe a trend of disinvestment (affecting in particular the new Member States) since the corporations focus more on activities in the markets where they are already operating, in recession.

In the current international economic context (new Member States are no longer able to support the dynamic of the investment activity in the single market), European Union must find ways to attract foreign direct investment from non Member States. Even without the recession, the adoption of some measures to stimulate foreign direct investments within the European Union became imperative in view of the following aspects (Matei and Pirvu, 2010):

- new EU Member States, which succeed to attract a significant volume of foreign direct investment because of its benefits (the low cost of production factors, facilities in connection with the access to capital, tax incentives, etc.), would gradually lose its attractiveness, with economic and social development;
- many countries situated near European Union (Russia, Ukraine, etc.) promote an active policy of attracting FDI, constituting an attractive location for investments in search of resources or markets.

The evolution of percentage changes in FDI inflows in one year to another in worldwide, in the European Union and in transition countries demonstrates the increased potential to attract foreign direct investments of EU neighboring countries.

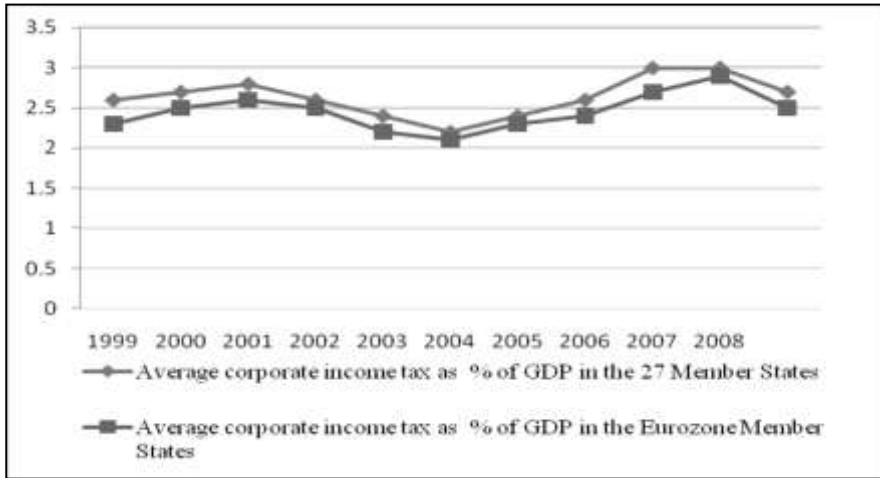
In the years 2007-2009, we observe a growth rate of FDI inflows in the European Union much lower than in the transition countries and sometimes even lower than in worldwide. Therefore, the improvement of fiscal conditions for multinational companies operating in the EU is necessary if we consider the European Commission's objective to improve the internal market efficiency, so as this market to become more competitive in the future.

The reduction of corporate income tax rates is a frequently practice in the new Member States that have been forced to adopt this measure to keep their economies attractive, in the context of the abolition' tax benefits

for foreign investors. Thus, in Poland the corporate income tax statutory level fell from 27% in 2003 to 19% in 2010, in Romania from 25% in 2003 to 16% in 2010, in Bulgaria from 23 5% in 2003 to 10% in 2010 (Matei and Pirvu, 2010).

These fiscal policy have received a similar response from the old Member States. The study "Taxation Trends in the European Union" in 2010 shows the average corporate income tax fell from 35.3% in 1995 to 23.2% in 2010 in European Union member states and from 37.5% in 1995 to 25.7% in 2010 in the Euro-zone Member States. In recent years, the most significant reductions were achieved by Germany (8.9 percentage points in 2008 compared to 2007), Italy (5.9 percentage points in 2008 compared to 2007) and Netherlands (4.1 percentage points 2007 compared to 2006). In the 27 European Union countries, the reduction of statutory corporate income tax rates of was accompanied by a reduction in revenue from those taxes expressed as a percentage of GDP in 2001-2004, followed by a revival of their in the context of some high growth rates recorded in 2005-2007 and a new decline in the context of international economic crisis (Figure 2).

In connection with the corporate income taxes as % of total taxes, we observe the same trend of dynamics and a greater difference between the corporate income taxes as % of total taxes in Euro-zone Member States and the corporate income taxes as % of total taxes in the 27 Member States (Figure 3).

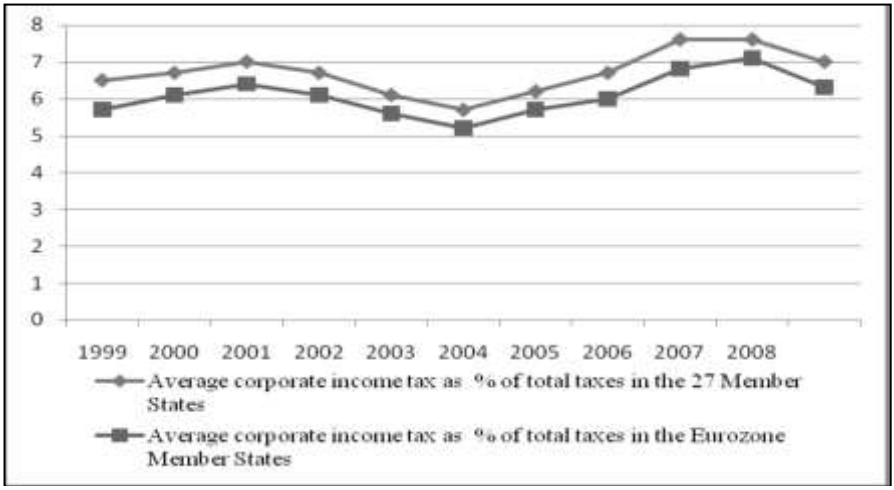


Source: UNCTAD, World Investment Report, 2009

Figure 2: Evolution of the average corporate income tax as % of GDP

As a general trend in 1999-2008, we noted an increase in corporate income tax receipts. This has been determined by the expansion of the business tax base by eliminating tax deductions and provisions, on the one hand, and rising corporate profitability, on the other part.

The corporate tax rates applied (CIT) vary significantly in the new EU member states. The lowest rate for the CIT in CEE region is 10 percent in Bulgaria, followed by the Latvia and Lithuania with 15 percent and, than, Romania with 16%. On the other hand are CEE countries with 19% CIT (Czech Republic, Slovakia, Poland), 20% (Slovenia), 20,6% (Hungary) and the highest CIT is in Estonia (21%). Romania, Bulgaria, Hungary, The large differences in rates in this group of countries may reflect in part the timing of the reforms. The Baltic countries applied the flat tax in a period of tight fiscal constraints in the mid-1990, and the danger of having a drop in revenues pushed the authorities toward higher rates. On the other hand, the countries which introduced the reforms from 2004 onward, enjoyed higher rates of economic growth and better fiscal balances at the time of implementation (Lane and Varoudakis, 2007).



Source: UNCTAD, World Investment Report, 2009

Figure 3: Evolution of the average corporate income tax as % of total taxes

In most European Union member countries a high level of the effective investment tax rate is accompanied by a low level of FDI inflows as % of GDP and vice versa. In 2005, Estonia has succeed to attract the largest stream of FDI inflows as % of GDP, practicing an effective tax rate on investment of 21.1% (higher than those in Romania, Bulgaria, Cyprus and Poland in the same period). The highest effective tax rate of investment observed in Spain (36.5%) was correlated with low levels of FDI inflows as % of GDP (2.21%).

In 2006, the countries with effective tax rate of investments was reduced (Bulgaria, Romania, Slovenia, Estonia) have achieved a level of FDI inflows to GDP also raised. This correlation is however not valid in all situations. For example, in Poland and Ireland, the low level of taxation on investment was not accompanied by a significant inflow of foreign direct investments.

In 2007, Bulgaria was in the top of countries that attracted the most foreign direct investments (29.6%), practicing the lowest effective tax rate on investment (8.8%). States where the tax rate on investment was high (Italy, Germany, France) attracted a small volume of direct foreign investments (to GDP). However, in Belgium and the Netherlands have

recorded inflows of foreign direct investments more than the EU average, even where there is a high rate of taxation on investment. In these countries there is, however, a special tax regime for holding companies.

Therefore, the statistical evidence on foreign direct investment inflows and the taxation of investments in European Union countries can not provide us clear results regarding the effects of taxation on FDI location, because there are exceptions to the rule of inverse correlation between the two factors. It is clear that during the period studied, the tax rate level diagram deforms more and more for the effective investment tax rate series, providing evidence of the existence of an EU tax competition. In most cases there is a positive correlation between tax rates and location of FDI in the EU.

Conclusions

During expansions, government spending increases relative to budgetary revenues, providing additional fiscal stimulus that may increase the risk of overheating, absent efforts to target government spending towards relaxing capacity constraints and structural bottlenecks. During contractions, government spending shrinks in response to inadequate budgetary resources, further exacerbating economic downturns and hampering recovery efforts.

The scope of counter-cyclical policies increases where international reserves are adequate. Indeed, where international reserves coverage exceeds three months of imports, the fiscal impulse can be counter-cyclical, indicating more fiscal efforts to stabilize the cycles. Reserves availability increases policy credibility as it relaxes financing constraints, increasing the possibility to implement a fiscal stimulus during downturns, without the risk of depleting limited reserves and jeopardizing external stability. In contrast, the degree of openness of the economy, rate of inflation, the debt ratio, or the exchange rate system do not appear to limit or support the pro-cyclical stance of fiscal policy. While fiscal space increases with reserves availability, other factors appear less relevant.

Reserves availability increases credibility and the effectiveness of fiscal policy. Fiscal policy is neutral in the long-run, indicating no significant

effect of the fiscal impulse on capacity building. However, in the short run, where reserves are less than three months of imports, fiscal expansion tends to increase the cost of borrowing and debt service, crowding out private activity with a negative net effect on output growth. If international reserves are adequate; resource availability increases policy credibility and mitigates these concerns about fiscal expansion, which enhances the effectiveness of the fiscal stimulus on output growth in the short-run (Kandil and Morsay, 2010).

High inflation decreases policy credibility and counters the effectiveness of fiscal stimulus in the short-run. Where inflation exceeds ten percent, expansionary fiscal policy further crowds out private activity with more pronounced contraction in real growth. Higher fiscal spending in a high inflationary environment increases inflationary expectations and the cost of borrowing, hampering policy credibility and the short-run effectiveness of the fiscal stimulus.

Fiscal expansion has a long-lasting negative effect on real growth where the debt burden is high. Mounting debt burden relative to GDP decreases policy credibility and increases concerns about debt sustainability and debt service obligations. Accordingly, persistent fiscal expansion under these circumstances crowds out private resources and decreases incentives for private activity, with negative effects on real growth in the long-run.

The evidence reaffirms concerns about policy credibility and the effectiveness of the fiscal stimulus where international reserves are not adequate. While fiscal spending should be prioritized to increase growth and limit inflationary pressures, the effectiveness of the fiscal stimulus depends on the perceived credibility and the availability of resources to finance private activity while ensuring debt sustainability. Countries that have accumulated a cushion of international reserves are in a more comfortable position to adopt the necessary stimulus to weather external shocks and counter the effects of the global slowdown on domestic activity. In contrast, where reserves availability appears to be critical, limited options are available for credible fiscal stimulus, including mobilizing additional revenues or prioritizing spending and/or securing affordable financing. Constraints on these options, amidst concerns about mounting debt burden and increased external vulnerability, may necessitate, however, limited

scope for credible and effective counter-cyclical fiscal policy (Debrun and Kapoor, 2010).

Outside fiscal policy, financial development seems to exert a moderating influence on income and, even more so, on consumption growth, but robustness analysis indicates that it may proxy the role of other country-specific features not included in our analysis. As regards monetary policy, central bank independence is associated with lower volatility, provided that the interaction between monetary and fiscal policies is taken into account.

That said, an exclusive reliance on automatic stabilizers as the channel of fiscal stabilization has limits and potential drawback. Given the difficulty to design effective fiscal stimulus plans and the incomplete credibility of subsequent consolidations, automatic adjustments in selected tax rates or expenditure programs could be envisaged (Baunsgaard and Symansky, 2009).

Looking forward, further research will need to address a number of pending issues. First, it has to be explored more systematically the apparently strong impact of monetary-fiscal conflicts on macroeconomic volatility, as this could have important implications for the design of macro-fiscal frameworks. In particular, alternative measures of the quality of monetary policy should be envisaged. Second, it should be considered the impact of expenditure and revenue composition on the size of fiscal stabilizers, possibly introducing measurement errors. Third, and related, more work is needed to improve measures of automatic stabilizers—particularly to have a better grasp of the role of expenditure composition—and of fiscal discretion.

In the European Union, the tax competition could come in the next period, a phenomenon with implications more important because the movement of production factors, especially capital, will become much easier on the global market. Under these conditions, dissensions between European countries will increase, increasing controversies about the limits of national sovereignty in the field of direct taxation and especially corporate income taxes.

Even if the tax regime is not the only factor that determines decisions for the relocation of foreign capital, reducing corporate tax rates

in some new Member States has increased the attractiveness of these countries for foreign investors. In these circumstances, the countries of Western Europe announced (and implemented) significant reductions in their rates, accusing the new-states have initiated a fiscal competition with adverse consequences in long-term. There is little evidence that the good economic performance of new EU states after the reform until the crisis period was due to the taxes themselves: this could be attributed to wider macroeconomic recovery, FDIs inflows, better tax compliance and tax administration as a consequence of EU membership requirements. But, in the field of direct taxation a certain degree of tax competition is not only inevitable but also desirable, if it take the form of a fair tax competition.

This stimulates the Governments to provide the best possible conditions for business at a certain level of taxation. Member States' efforts should focus on combating harmful tax competition that generates attracting corporate tax bases and hijacking capital flows.

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