

## **Fluctuating Paths and Controversial Issues of Fiscal Policy: Where do these leave us?**

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### **ABSTRACT**

Main changes have occurred in the comprehension and practice of fiscal policy over the last century. In this paper we do a brief historical account and show that the prominence of fiscal policy as a policy tool has waxed and waned, a condition that has hindered the capability of researchers to come to firm conclusions regarding the stabilization properties and impacts of it. Against this backdrop, we discuss and evaluate the several arguments on the impact of fiscal policy on output, inflation and the external accounts and also examine the very popular sustainability framework focusing on interactions and feedbacks among policy and endogenous variables affecting debt ratios. We conclude that there are good reasons to think that the potential usefulness of fiscal stabilization needs to be re-considered.

**Key words:** Fiscal Policy, anti-cyclical fiscal policy, fiscal deficits, twin deficits, fiscal multipliers, sustainability

**JEL Classification:** H3, H6, H60

### **1. Introduction**

Even though the issue of the need and scope for stabilization policy remains topical in macroeconomics, the view among academic circles regarding the usefulness of fiscal policy has dramatically changed over the last years. The heritage of the debate in the 1980s and 1990s has generated strong skepticism over the use of discretionary fiscal action to fine tune the economy and stabilize business cycles, and active and expansionary fiscal policy is seen as a costly effort in which expansion of aggregate demand can lead to severe macroeconomic problems without real effects on the economy. From this viewpoint expansionary fiscal policies lead to current account deficits and inflation, absorb domestic saving, displace private investment and thereby inhibit output stabilization and employment recovery. Moreover, active fiscal policies that lead to chronic fiscal deficits are supposed to be associated with high and explosive debt/GDP ratios, which undermine the general welfare of future generations.

Alan Blinder seemed to have perceived the sad state of the debate about the usefulness of fiscal policy when a few years ago asserted that “virtually every contemporary discussion of stabilization policy by economists –whether it is abstract or concrete, theoretical or practical– is about monetary policy, not fiscal policy” (Blinder 2006, p. 25). John Taylor very influential work -that represents conventional wisdom on discretionary fiscal policy- firmly concludes that “if the Fed has the power to move the aggregate

demand curve, and uses this power wisely to try to keep real GDP in line with potential GDP, then fiscal policy is not needed” (Taylor 2000, p. 27). This impressionistic view is confirmed in a recent report published by the IMF on the effectiveness and proper design of fiscal policy, in which it recognizes that “before the crisis, the consensus view was that fiscal policy should play a limited role as a stabilization tool” (IMF 2013, p. 4).

This neglect of fiscal policy is surprising for at least three reasons. First, very often policy makers are concerned about the role of fiscal policy and resort to fiscal policy changes in efforts to stabilize the economy. Contemporary country’s experiences are plagued of examples. Secondly, a historical account on the evolution of economic thinking on fiscal policy reveals heated debates about its conceptual foundations and practical relevance along the years, but also finds recent empirical work and experiences that indicate, especially after the global crisis, that the usefulness of fiscal stabilization needs to be re-considered. Finally, an assessment of the theoretical adequacy of the mainstream view regarding the counterproductive effects of fiscal policy runs into common misunderstandings and finds that none of the conventional arguments against fiscal activism is wholly convincing.

This paper first highlights the main changes that have occurred over the last century in the comprehension and practice of fiscal policy. The historical account allow us to notice how the prominence of fiscal policy as a policy tool has waxed and waned, a condition that has hindered the capability of researchers to come to firm conclusions regarding the stabilization properties and impacts of it. Against this backdrop, the paper then discusses and evaluates the several arguments on the impact of fiscal policy on output, inflation and the external accounts. We also examine the very popular sustainability framework and asses the consistency requirements that must be imposed on financing options. The paper begins, in the next section, with an overview of fiscal policy during the interwar and post-war period. Once the historical turns and issues are settle some frequently posed questions are addressed: How important is fiscal policy as anti-cyclical or stabilization tool? In what circumstances fiscal policy leads to inflation? What role does the external sector play in relation to changes in the fiscal gap? How active fiscal policy may affect budget sustainability and is the conventional notion of sustainability is both appropriate and necessary? These main issues are addressed in sequence below.

## **2. The wavy way of thinking about fiscal policy**

Before the 1930s fiscal policy was not part of the lexicon of economists. An approach of limited government, or *laissez-faire*, prevailed among classical and early neo-classical economists as they saw big governments more prone to incur large debts and preferred to concentrate their analytical efforts in some narrow problems of public finance. As public debt was mostly incurred in the course of war, it is not surprising that classical economists such as Hume, Smith, Ricardo and Mill perceived it as something negative. Some constituent elements of fiscal policy were known since the mercantilist era. William Petty’s remedy for unemployment in Ireland, for instance, was public works. Almost a century after Petty, James Steuart developed a primitive version of the balanced budget multiplier, and about the same time James Lauderdale had a developed idea that huge taxes would lower consumption, increase saving and put huge sums of money into the hands of bondholders who would not be disposed to consume them (see Brems 1982a, for interesting details). But in general, we could say quite safely that the public finance inherited knowledge only dealt with selective market failures in the provision of public goods.

### **2.1.Sound Finance**

Just before the 1920s fiscal policy and specifically government spending policy was discussed under the name “sound finance.” The principle of sound finance maintained that the government budget should be balanced except in wartime. The classical liberal tradition in which this principle was held viewed government with suspicion, so any policy that would make it easier to increase government spending during peacetime was seen as undesirable. This classical view on public debt achieved its most theoretically refined state just prior to the Keynesian revolution. In what became known as the “Treasury View” (set out in its 1929 memorandum) the British Treasury formulated the rationale for the balanced

budget norm. The staff of the Chancellor of the Exchequer, notably Ralph Hawtrey and Frederick Leith-Ross, argued against any increase in spending by putting forward the assertion that fiscal policy could only move resources from one use to another, and would not affect the total flow of economic activity (a primitive version of what is known today as the “crowding out” effects). Hawtrey, an official with a great reputation as an economist, saw the trade cycle as largely a monetary phenomenon to be treated by monetary measures rather than by public expenditure (Peden 1984). Indeed, the Treasury View shared a near consensus among economists of the time that monetary policy by itself could stabilize aggregate demand and keep the economy on its potential growth path.

The Treasury View was practiced in the aftermath of the 1929 crash, especially in the United States, Great Britain and Germany (see Arndt, 1949). However, challenged by that unprecedented fall in economic activity, and hence in tax revenues, governments were strongly recommended, and felt compelled, to rebalance their accounts by cutting back on expenditure. Subsequently, public expenditures began to rise again, but taxes were raised in parallel. In the U.S., President Hoover had stuck to the Treasury View until 1932, when the Federal budget went into red territory.

## **2.2. The Chicago/Cambridge Reaction**

But already in the late 1920s in Europe, and the 1930s in the United States, prominent economists, such as Frank Knight, Paul Douglas, Henry Simons (at the University of Chicago), and Arthur Pigou and John Maynard Keynes (in Cambridge, England) started questioning sound-finance principles and the treasury view as the economies of the world fell into a major ongoing depression. Moreover, during the 1930s liberal business leaders share the feeling that running government budget deficits could help stimulate demand and they saw this type of action as a way to save capitalism with the least amount of government intervention (Colander and Matthews, 2006).

The early generation of Chicago economists that argued in favor of the use of the fiscal policy to absorb changes in the business cycle, asserted that fiscal policy could play an important role especially in contractions and when the instruments of monetary policy had outlasted their purpose and usefulness. The reasoning behind their view also rested in the fragile financial structure that prevailed in the industrial economies at that time and in the presence of price and wage rigidities. The Chicago economists recommended injecting purchasing power through fiscal means that could restore the level of profitability (Perez, 2003). Over time, as the belief that the economy operated close to full employment levels of output gained prominence among them and their followers, they abandoned the idea of reflationary or countercyclical fiscal policies.

Keynes' initial support of fiscal policy predated the *General Theory of Employment, Interest, and Money* (GT) and consequently his views in that respect were not based on it. Since the time of “*Does Unemployment Need a Drastic Reform?*” in 1924 and “*Can Lloyd George Do it?*” in 1929, Keynes had advocated public works, government expenditure undertaken in special circumstances as distinguished from regular expenditures, as a way to provide a palliative measure for the practical consequences of laissez faire. But it was later in *The Means to Prosperity* (in 1931) that he argued for public works programs using the logic of the Kahn's multiplier. Keynes found no conflict between policies for increasing employment and schemes for balancing the budget. On the contrary, according to Keynes striving to balance the government's budget during a slump would make things worse, not better. By increasing employment and national income the budget get balance. Indeed Pérez (2003) identifies this pamphlet as the first place where Keynes suggested the use of deficit spending as a stabilization tool.

Brems (1982b), Chick (1984) and Colander and Matthews (2006) correctly point out that Keynes' GT was not about fiscal policy at all. In the GT there is really no trace of deficit spending as a policy recommendation or as a policy tool. Keynes certainly argues for a “comprehensive socialization of investment” but the discussion was far from complete. Keynes (1936) conceived private investment as driven by subjective evaluations of future profits and as inherently volatile, therefore; he concluded “that the duty of ordering the current volume of investment cannot safely be left in private hands” (p. 320).

Thus, public, or publicly-guided investment, was required to offset the fluctuations of full employment and maintain full employment.

In the discussion of post-war employment policies and consistent with his emphasis on counter cyclical public investment, Keynes drew a sharp distinction between stabilizing investment and stimulating consumption by public action. He argued for a separation of the current or ordinary budget and the capital budget (Camara and Vernengo, 2004). The first, according to Keynes, was related to government consumption and should be balanced on average or even in surplus to finance the capital one. The capital budget was related to public investment and should be used for counter cyclical purposes. Though anti-cyclical budgetary actions could be accomplished by changes in the capital budget, Keynes thought that it had to be balanced in the long-run (Guger and Walterskirchen, 1988).

### **2.3.Lerner's Functional Finance and Keynesian Optimism**

Though after WWII Keynesianism came to be considered as identical with fiscalism and fiscal policy became a form of demand management in a number of countries, we should say that in Keynes' thinking, fiscal policy did not occupy as central position as it did in the conventional Keynesian models and in policy-making in the 1950s and 1960s. Indeed Keynes' policy advice turned out to be much less straightforward than Lerner's concept of 'functional finance' which came to dominate fiscal policy in the early post-war period.

In proposing the rules of functional finance, Lerner's stated purpose was to show that the primary question facing governments is how to ensure that the impact of fiscal policy could be most beneficial upon the level of output and employment in the economy, regardless of whether it increases or decreases government debt. Though the accumulation of government debt by current deficit-spending imply that future generations would be burdened with its payment, functional finance meant that the national debt is not a burden on posterity because posterity pays the debt when fiscal policy decisions affect levels of economic activity. This emphasis in output and employment regardless the level of government debt is consistent with the so-called Chartalist view about how government fiscal policy operates.<sup>1</sup>

Most industrialized economies soon absorbed Lerner's functional finance ideas and, for most of the post-war period, government fiscal and monetary policies were indeed assessed largely in terms of their effects on output and employment, regardless of whether these increased or decreased the public debt. This is precisely what is done in standard IS-LM exercises: the purpose of taxation or government spending is to shift the IS curve around and of increasing/decrease the supply of money and bonds is to move the LM curve so that output and employment will be at full employment - and not because it is necessary to 'raise revenue', 'raise funds', 'close the deficit', etc.

For some twenty years after the Second World War, Keynesian economic policies in countries of the capitalist West were successful in generating rapid growth with high employment. At the beginning of the 1960s, in the U.S. Kennedy's tax reductions to weaken 'fiscal drag' and later on the Vietnam War acted as expansive global forces. Cornwall and Cornwall (2005), for instance, take a close examination of the data for the post-World War II period (1960-1973) for the main 18 OECD countries and show that using a 3 per cent rate as the full employment rate of unemployment all but four of the eighteen countries experienced full employment. They also note that during this period the low unemployment economies did not experience appreciably higher rates of inflation, indicating that the inflation rate was not merely a politically acceptable trade-off; and that these economies did not pay a higher inflation cost for their full employment.

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<sup>1</sup> Accordingly, taxes do not, and cannot, finance government spending since the government cannot collect more taxes than it has spent in one given year. If however the government were to limit its spending below the level that would provide citizens with the means of tax payment desired, there could remain an excess supply of goods and services to government and/or markets. From this viewpoint, resources are effectively unemployed because of insufficient government spending which is the source of means of tax payment.

## 2.4. The Repositioning of Sound Finance

The so-called 'golden age of capitalism' did not survive the economic traumas of the 1970s. When inflation in industrial countries went on rising after unemployment had stop falling, the composite model (the Keynesian/Phillips model) that appeared to be working satisfactorily in empirical terms until the second half of the 1960s proved to be inadequate. By the late 1960s and early 1970s the Keynesian remedies to ensure the stability of the macro-economy met with challenges from several quarters, primarily the monetarists. The resurgence of the quantity theory of money – under the new name of 'monetarism' – brought with both a renewed belief in the power of monetary policy and a resurgence of interest in the so-called 'crowding out' effect. Thus, monetarists clung to the view that fiscal policy was powerless.

There are several channels through which this crowding-out effect can occur. The most conventional form of crowding-out occurs when the deficit is finance by selling bonds. The price of the bonds is bid down (due to oversupply) which is equivalent to an increase in interest rates. The higher interest rate causes private investment to decline or to be crowded out as a result of higher deficit. Barro (1974) developed an interesting variation of the crowding-out effect (whose origin dates back to David Ricardo) using the hypothesis of rational expectation and a number of restrictive assumptions (people live forever, perfect capital markets, intergenerational altruism, lump-sum taxes and full employment) within the confines of a neoclassical intertemporal model.<sup>2</sup> Under the heading of the Ricardian Equivalence, Barro (1974, 1989) argued that the effect of expansionary fiscal policy on future taxes leads consumers to change their saving. Hence, recognizing that a tax cut today means higher taxes in the future, people will simply save the value of the tax cut they receive now in order to pay those future taxes. Thus, expansionary fiscal policy and an increase in debt cannot stimulate aggregate demand, and as a result, the increase in debt has no real effects.

The case for using discretionary fiscal policy to stabilize business cycles found further challenges when analyzed in the context of developing countries. After the Second World War, governments in developing countries (in the initial years of independence as for instance in African countries, or involved in some kind of planned development as in Latin America) had to spend a large amount of its resources in establishing the infrastructure in its broadest sense, viz., educational, financial, physical, technological and social investment programs. These countries had negative public savings and limited private investment. Despite large inflows of foreign aid, the increasingly large financing gap became the main concern of most government. The situation was further aggravated by the high exposition to shocks. Moreover, political incentives and external and fiscal constraints created a bias towards both high debt and high inflation. This gradually led to a weak fiscal structure and poor fiscal management raising vulnerabilities against the frequent internal and external shocks.

The policy approach that would eventually become the mainstream solution to these multifaceted problems in developing countries in the early 1980s was explicitly hostile to State intervention in the economy. The particular policies that were suggested—and then imposed in the context of international agreements—that eventually became known as the Washington Consensus (Williamson, 1990) included as a first item fiscal discipline. Somewhat it was a return to the principles of sound finance. The emphasis on fiscal discipline was associated with the concern that high fiscal deficits were behind macroeconomic instability generating, on one hand, inflation, and, on the other, balance-of-payments problems. Unfortunately, monetary and fiscal policy management under the IMF/World Bank adjustment programs became more procyclical, deepening the cycle particularly during recessions. This procyclical character of fiscal policy ended up generating unsustainable fiscal results over the cycle—as proved to be the case in several Latin American countries (Perry 2003). This may explain why most of the discussion on fiscal

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<sup>2</sup> By including government in the model of a decentralized intertemporal economy Barro (1974) initiated a long tradition in macroeconomics in which the effects of alternative fiscal policies on optimal consumption and capital accumulation paths could be analyzed.

policy in developing countries turned later to long term sustainability issues, largely ignoring the short-run effects on economic fluctuations and employment.

Arguments against State intervention in the economy had also strong overtones in the context of the American and British economy of the early 1980s. In the U.S., the inflation rate of the late 1970s was enough to convince President Reagan that the most acceptable measure against inflation seemed to be a curb of government expenditures. The subsequent 1981 tax cut (a landmark in the history of fiscal policy) was also justified not by the Keynesian aggregate demand considerations, which were denigrated, but by a new doctrine called supply-side economics. From a fiscal view, tax cuts were supposed to produce higher tax collections. Although the whole approach turned out to be about reducing the presence of the State in the economy as well as the fiscal deficit, the expectations were in blatant contradiction with later events. A buildup of defense expenditure, continued growth in spending on entitlement programs, such as Social Security and Medicare, and an effective lower tax collection combined to produce a huge deficit. Moreover, the period 1981-88 was one of recovery from the recession, bringing unemployment back down to 6%. This is the reason why American Nobel prize James Tobin understood Reaganomics as “the biggest and most successful demand-side fiscal gambit in peacetime U.S. history” (Tobin, 2001, p. 3). The deficit spiked early to reach 6.2 point of GDP in 1983 and 5 points in 1984, then it declined gradually in the second term of Reagan's presidency. In Britain, the advent of the Thatcher years heralded a major departure from State intervention which was accompanied by the downgrading of fiscal policy and the return to balanced budgets.

The Reagan legacy of huge deficits fostered a dramatic repositioning of fiscal policy in the United States. Blinder (2006) finds a new devotion to fiscal prudence, in 1985, when Congress passed the Gramm-Rudman-Hollings Act, which required adherence to annual targets for the federal budget deficit. A similar trend in Europe established a number of aims for macroeconomic policy specified in the Treaties around the European Monetary Union (EMU). The EMU was based on an original arrangement of public finance relations between member countries in which fiscal policy remained decentralized, but was subject to rules which were meant to combine discipline and flexibility. Thus, during the 1990s many EU countries undertook substantial fiscal adjustments that not only reflected the need/wish to comply with the convergence criteria of the monetary union but that were also the result of the generally accepted notion that without a sizeable fiscal retrenchment, the fiscal situation risked to become largely unsustainable in the long run and a major threat to the international competitiveness of the European economies. That the transition phase to EMU was accompanied by considerable fiscal consolidation efforts in the EU was clearly demonstrated by Van Aarle and Garretsen (2005) using a set of fiscal indicators. The picture contrasts to a large extent with the earlier experiences of the period 1975–1990 when many countries in the EU experienced considerable fiscal expansions and increasing fiscal deficits and government debt.

In July 1998 the so-called “preventive arm” of the Stability and Growth Pact (SGP) of the EMU entered into force, complementing and tightening the fiscal provisions laid down in the Maastricht Treaty (the backbone of fiscal discipline in EMU). The SGP is widely viewed today as the most stringent “commitment technology” ever adopted by sovereign governments on a voluntary basis in the attempt to establish and maintain sound public finances<sup>3</sup>. The fiscal rules of EMU were based on a simple predicament: government should reduce budget deficits and then let automatic stabilizers play freely. Fiscal discipline was seen as the precondition for a balanced policy mix, since high levels of debt were seen as inducing a restrictive stance of monetary policy (Buti et al. 1998; Thygesen 1999). In other words, the SGP would allow the European Central Bank to be less restrictive compared to the stance that it would otherwise have to adopt in the face of fiscal laxity (Beetsma and Uhlig 1997). Thus, as argued by Buti and van den Noord (2004), EMU is commonly seen as a regime of monetary leadership where the role for fiscal policy is to support the central bank in its task to keep inflation in check. Discretionary counter-cyclical

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<sup>3</sup> In March 2011, following the 2010 European sovereign debt crisis, the EU member states adopted a new reform under the Open Method of Coordination, aiming at straightening the rules. The new "Euro Plus Pact" is designed as a more stringent successor to the SGP, which was seen as implemented inconsistently. The measures are controversial not only because of the closed way in which it was developed but also for the goals that it postulates.

budgetary policy was not really considered integral to this system (surprising to some extent since monetary policy within a monetary union can no longer play this role).

Initial criticism of the rules-based approach to fiscal discipline contained in the SGP pointed out to its excessively tightness (and inflexibility) that hampers automatic stabilizers (Andersen and Dogonowski, 1999; Eichengreen, 1996; Eichengreen et al., 1998; Eichengreen and Wyplosz, 1998; Hagen and Eichengreen, 1996). The budgetary stance, it is argued, remains procyclical and there seems to be a considerable danger of deflationary tendencies occurring due to the rise in real interest rates (Hughes Hallett and McAdam, 1996). Moreover, as stated by Arestis and Sawyers (2003) the SGP has assumed that any level of output and employment is consistent with a balanced budget.

## **2.5. Is Fiscal Policy Activism gaining back its Role Today?**

Although the 'heritage' of the debate in the 1980s and 1990s casted a strong skepticism over the use of discretionary fiscal action to fine tune the economy, the potential usefulness of fiscal stabilization started to be re-considered in recent years. The debate on fiscal policy started to revive, for instance, in Europe where it centered on how to facilitate the workings of automatic stabilizers as a counter cyclical instrument, or in Japan where the prolonged slump saw a revival of the debate about its effects in stimulating economic activity. But it was the Great Recession that severely hit the world economies that allowed fiscal policies to gain back a central role in the debate as a tool to recover from severe slumps.

In fact, the American Recovery and Reinvestment Act (ARRA) in the U.S. and the European Economic Recovery Plan (EERP) in the EU are good examples of decisive actions to contain the severity of the Great Recession, but they were not the only ones. Many other countries also pursued active fiscal measures during this period. By and large, Latin American countries responded with fiscal expansion (Fernandez-Arias and Montiel 2010) and calculations made by the IMF (2015) based on ranges of multipliers suggest that output in 2009 would have been  $\frac{3}{4}$  to 2 percent lower in the absence of such fiscal easing. Countercyclical spending measures in this region were concentrated on infrastructure investment, programs to support small- and medium-sized enterprises weakened by the crisis, and social safety net programs (see CEPAL 2009 for details). In Asia, the discretionary fiscal stimulus packages implemented in the wake of the global financial crisis was sizeable, expenditure driven, and quickly delivered (Hong and Tang 2010).

In the U.S. the government's response to the financial crisis and ensuing Great Recession included some of the most aggressive fiscal and monetary policies in history. The response was multifaceted and bipartisan, involving the Federal Reserve, Congress, and two administrations. The effort to end the recession and jump-start the recovery included a series of fiscal stimulus measures. Tax rebate checks were mailed to lower- and middle-income households in the spring of 2008; the ARRA was passed in early 2009; and several smaller stimulus measures became law in late 2009 and early 2010. ARPA appropriated an additional \$787 billion that included \$288 billion in tax cuts and benefits to individuals and firms; \$275 billion in contracts, grants, and loans; and \$224 billion in entitlements. Among the latter, the White House enacted the longest-lasting emergency unemployment program in history that included the first benefit increase in a downturn in history. Furthermore, it supplemented the Temporary Assistance to Needy Families (TANF) program with emergency funds. This burst of fiscal activism halted the economy's free-fall by mid-2009, and even created demand growth sufficient to push down measured unemployment by late 2010.

In the European Union the fiscal measures were enacted by national governments in response to the crisis under the EERP. The European Commission presented in 2008 a plan scheduled on a period of two years that combined short-term measures to stimulate demand and maintain jobs, and longer-term measures to invest in strategic sectors, including research and innovation. The plan included targeted and temporary measures amounting to 200 billion euros, or 1.5% of EU GDP, using both the national budgets of the national governments, the budget of the EU and that of the European Investment Bank.

Thus, in reviewing the evolution of the major fiscal policy changes during this last and still very short period of time, it seems to be clear that policy actions favoring the use of discretionary fiscal policy have been more compelling than the theoretical arguments. There has been an uneasy relationship between intellectual and policy developments regarding the role of fiscal policy and the economic profession seems now to turn his attention to a critical analysis of the arguments in favor of the use of discretionary fiscal policy as a stabilization tool.

### 3. The Counter Cyclical Value of Fiscal Policy

The aim of stabilization policy is to keep the level of output close to its potential while inflation and the current account deficit are at acceptable levels. Since in recent years, monetary policy is increasingly focused on controlling inflation, most explicitly so in countries that adopted inflation targeting, it could be argued that under these conditions the management of the output gap becomes the task of fiscal policy. However, assigning to fiscal policy the task of stabilizing output has run into problems. There are at least three main reasons for concerns. First, there is the view that discretionary changes in fiscal policy are unlikely to do much good. The strong orthodox response to discretionary counter cyclical fiscal policy alleges the possibility of ‘crowding-out.’ This view is shared by emerging markets financial analysts who promote a new-found devotion to fiscal prudence. Secondly, it is argued that there are usually delays, or lags in the policies being implemented. Two types of lags can cause problems - inside lags and outside lags. Inside lags involve the time it takes to formulate a policy while outside lags involve the time it takes for the policy to actually work. The inside lag is estimated to be long for fiscal policy because very often the legislative branch must come to agreement about the appropriate action.<sup>4</sup> Presumably, inside lags will erode the efficiency of discretionary fiscal policy. Thirdly, discretionary counter-cyclical fiscal policy is sometimes very difficult to implement due to a combination of external shocks and political and institutional constraints. Indeed an increasing number of empirical studies for developing countries suggest that fiscal policy tends to be highly pro-cyclical (Vera, 2009)<sup>5</sup>. This is precisely the case of many developing economies in which an adverse external shock combined with pro-cyclical capital flows sometimes requires a reduction of absorption, making fiscal policy contractionary. Moreover, orthodox economists, financial market analysts and multilateral agencies very often argue that against an adverse external shock fiscal contraction is convenient because it gives international investors confidence avoiding capital outflows. Thus, as observed by Ocampo (2005) “the pro-cyclical swings in external and domestic financing generate strong incentives for fiscal policies to behave in a pro-cyclical way” (p. 9)

These three mayor concerns regarding the potential effectiveness of counter-cyclical discretionary fiscal policies should be qualified. The alleged possibility of crowding-out, for instance, is quite controversial. The form of crowding out that occurs in the context of the IS–LM model when the deficit is financed by selling bonds and the price of the bonds is driven down (due to oversupply) may not work. The recent experience in developing countries suggests that the story may be different and that causality between interest rate and fiscal deficit needs to be revised. A negative external shock —such as a reversal in the terms of trade or sudden stop in capital inflows— may generate monetary policy reactions. The Central Bank may tend to maintain high interest rates to avoid capital flight and protect the economy from strong exchange rate adjustments, depressing domestic demand. Since part of the public debt is indexed to the

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<sup>4</sup> Arestis and Sawyer (2004) clearly remark that fiscal policy is much more subject to democratic decision-making than monetary policy. Thus, what seems to be its strength in terms of social and political consensus, can also be its weakness in terms of its economic goals

<sup>5</sup> There are a limited number of empirical cross-country studies that show that fiscal policy has been historically strongly procyclical in developing countries (see, for instance Kaminsky, Reinhart, and Vegh 2004, Braun 2001, Gavin and Perotti 1997 and Akitoby, Clements, Gupta, and Inchauste 2004). Alberola and Montero (2006) compute structural primary balances for the nine main Latin American countries and compare their changes with their cyclical position during the period 1981-2004 confirming that fiscal policy was procyclical in the region. The problem seems to be worse in countries that build on the use of nonrenewable natural resources (see Gurvich, Vakulenko and Krivenko 2009, and Erbil 2011).

short-term interest rate, monetary policy translates into high debt service and higher budget deficits (Camara and Vernengo, 2004). Crowding out in this case depends on the response of the monetary authority. Its extent would depend on the size of the interest rate rise, its feed through to other interest rates, the interest rate responsiveness of expenditure, and the phase of the business cycle. It does not occur through the response of asset markets to fiscal policy actions.

The second form of crowding out, that emphasizes the Ricardian equivalence theorem, requires a number of assumptions that might not appear to be satisfied neither in developed countries nor in emerging and developing countries. First, the Ricardian equivalence proposition has been derived in the context of full employment, making it essentially irrelevant in the context of economies that exhibit idle resources. Second, the time horizon over which people take decisions may be relatively short, invalidating the underlying infinite horizon assumption that permeates the Ricardian equivalence world. Further, as Giorgioni and Holden (2003) have argued, capital markets are not perfect. If financial markets are far from perfect, households can discount future tax payments with a discount rate that is higher than the interest the government has to pay on bonds (as pointed out by Jansen, 2002). The present value of the future tax payments is thus less than the current tax cut and the tax cut can have real effects (see Blanchard, 1985). All in all, the Ricardian Equivalence is not empirically settled for industrial economies (Hatano 2010) and the evidence for developing countries is against it (Easterly and Schmidt-Hebbel 1993).

Another aspect that seems to be restrictive is to neglect a possibly complementary relationship between public and private investment. Public and private investment may be linked by a complementarity relationship if public capital provides positive externalities on the private sector. It was Aschauer (1989), who in a seminal empirical contribution, showed for the U.S. economy, that there was a strong positive relationship between private investment productivity and the ratio of the public investment to the private capital stock. After that, several authors have elaborated on the work of Aschauer and have look at the issue for other developed and developing countries. In this so-called crowding-in hypothesis many channels may be involved. Belloc and Vertova (2006) summarize three of them. With the first, the availability of economic and social infrastructures may create favorable conditions for private decisions to invest, by offering essential services to the production system both in the short and long run (transportation, communication, education, and so on). Secondly, higher public capital may lead, on the one side, to increments in total factor productivity and, on the other, to reductions in production costs (through availability of streets, highways, electrical and gas facilities, mass transit, and so on). And finally, public investment, by increasing total demand, may give rise to profit and sales expectations, so to spur private decisions to invest more.

Still, the inside lags problem as well as the procyclical bias have left waiting the possible role that discretionary fiscal policy could play in stabilizing output.

Inside lags may be a problem especially in democratic societies, but lags are not insurmountable or immutable. When lags are present changes in taxes and transfers are more effective fiscal instruments for stabilization than government spending. Moreover, the sources of many, if not most, of them lie in policymaking institutions that can be changed (Blinder, 2006). Lags in the countercyclical effects of fiscal policy can also be avoided through automatic stabilizers associated with tax and spending policies (Ocampo 2011). The adoption of a 'fiscal policy rule' allowing authorities to respond to output fluctuations through a fiscal policy reaction function (Taylor, 2000; and Budnevich, 2002) may be helpful so long as it emphasizes full employment (Arestis and Sawyer, 2004). Macro fiscal rules, stabilization funds and reform of budgetary institutions are also intuitively attractive solutions against the pro-cyclical bias. But despite progress in these areas, these institutional mechanisms are not always well designed to smooth business cycles and perfect enforcement is rarely the environment in which they are applied.

Though automatic stabilizers may seem in this case a better candidate for the stabilization job, their appropriateness and feasibility may vary according to the individual country circumstances. The popular view on automatic stabilizers relies on the assumption that fluctuations in GDP or income are partially smoothed by changes in taxes and transfers over the business cycle so that disposable income is less volatile than income. As the economy slides into a recession incomes are falling but collected income

taxes falls, unemployment is rising but transfers and payments of unemployment benefits also rises. In this setting automatic stabilizers have obvious appeal as a counter cyclical policy instruments since they are supposed to be not subject to time inconsistency problems. Moreover, in opposition to discretionary actions, automatic stabilizers are not affected by implementation lags. Precisely because they are not discretionary, they are also less likely to affect market expectations adversely. It is also argued that automatic stabilizers are more effective in stabilizing output fluctuations because they are more predictable and, unlike discretionary measures, they do not require political forecasting.

But there are a number of factors that may account for the weak automatic stabilizers. For example, automatic stabilizers may be constrained by the combination of low tax elasticity and relatively low share of taxes in GDP that tends to reduce the responsiveness of revenues to demand shocks. Their impacts depend on how strongly consumption demand responds to changes in disposable income and this in turn may depend on whether the shock is seen to be temporary or permanent. They are relatively ineffective when the source of the shock to the economy is from the supply rather than the demand side and since they are backward-looking by nature, they are less useful in preventing a demand shock. Furthermore, it is likely that automatic stabilizers are less important in developing countries. In these economies the revenue/GDP and expenditure/GDP ratios are far smaller than in advanced countries. Since the tax base in these economies is small, the share of income-elastic taxes is smaller than in industrial countries. On the expenditure side, few developing countries have significant social security, and unemployment benefits are not an important expenditure category that moves with the cycle. At the same time, improving automatic stabilizers poses an important challenge: it implies introducing additional welfare and unemployment programs, which countries may be unable to afford without raising their fiscal deficits.

While a positive view on the effects of discretionary fiscal policy gained some acceptance among governments and policy makers during the great recession, recent evidence also suggests that fiscal policy may be especially effective in recessions. The resurgence of countercyclical fiscal policy at the start of the crisis coincided with new empirical research on its macroeconomic effects. Some of this research, typically based on data covering the crisis period, concludes that fiscal policy can, under special circumstances, have powerful effects on the economy in the short run. A very recent comprehensive study conducted by IMF's staff summarizes most of these recent studies and questions the earlier evidence of negative fiscal multipliers associated with expansionary fiscal contractions (see IMF 2013).

The fact is that there is even stronger evidence than before indicating that fiscal multipliers are larger when monetary policy is constrained by the zero lower bound (ZLB) on nominal interest rates, the economy is in a slump, or the financial sector is weak<sup>6</sup>. The most known of these new studies, Blanchard and Leigh (2013), based on the relation they find between growth forecast errors and fiscal consolidation forecasts for 26 European countries, show that fiscal multipliers have been above 1 in economies at the ZLB, at least in the early years of the crisis. Auerbach and Gorodnichenko (2012) employ a regime switching VAR where transitions across recessions and expansions are smooth. By imposing the restriction that the U.S. economy is in recession 20% of the time, they estimate that the total spending multiplier is 0.57 during expansions and 2.45 during recessions. These results are confirmed by Arina, Korayc, and Spagnolob (2015) using a Markov switching model. Moreover, Ilzestki, Mendoza and Vegh (2011) based on a novel quarterly dataset of government expenditure in 44 countries, found that the output effect of an increase in government consumption is larger in industrial than in developing countries, and that the fiscal multiplier is relatively large in closed economies, not highly indebted and operating under predetermined exchange rate.

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<sup>6</sup> Here it is important to point out that much public and academic discussion of this issue was based in the past on models (both Keynesian and anti-Keynesian) that take little account of the role of intertemporal optimization and expectations in the determination of aggregate economic activity. However, during the last years the issue of the fiscal multiplier has been analyzed instead with New Keynesian DSGE models that are now commonly used in monetary policy analysis. See Woodford (2011) for a relevant presentation and synthesis.

#### 4. Counter Cyclical Fiscal Policy, Deficit Bias and Inflation

There is a further issue around the idea that counter cyclical fiscal policy may entail a deficit bias and, for a long time, economists and policymakers have worried about the relationship between government budget deficits and inflation. The orthodox view has been that the main culprit behind the inflationary process is the creation of high-powered money (and thus seignorage) to help finance fiscal imbalances. Through seignorage, the government appropriates an amount of real resources by means of base money creation. Under certain circumstances if a larger budget deficit translates into a larger money stock of money, then the money issuing authority will be in practice attempting to force agents to hold more real balances than they otherwise would. Inflationary expectations, and inflation, should then be adjusted upwards and real balances would fall further. This inflationary finance story, that occupies a distinguished place in descriptions and explanations of inflations and hyperinflations, was heavily influenced by the work of Philip Cagan (1956). Yet as remarked by Catao and Terrones (2003) empirical research has had limited success in uncovering this relationship. Fischer, Sahay, and Vegh (2002) suggest that a strong association between deficits and inflation can only be found in high or extremely high inflation countries, but not in low inflation countries. In fact, Grauwe and Polan (2005) examine the link between money supply and inflation in 160 countries using 30 years of data and claim that the link between inflation and money supply is strong only in countries with high inflation rates. This view has been confirmed by Thorton (2008) who examines the long-run money-inflation relation for 36 African countries using cross-section and panel data analysis.

Apart from the need of excess money balances, the inflationary finance story requires an economy with zero output variation (and a fixed productive capacity), a constant velocity of money (or money demand function) and fully flexible prices. Within the context of developing countries, analytical exercises based on these restrictive assumptions are not only poorly specified but are at best costly and misleading. It is not only that full employment output does not hold and the demand for money may not be a given in the short-run, but that a larger budget deficit that translates into a larger money stock does not need to lead to inflation if the long-run steady state effects of fiscal policy on growth are positive.

But there are also several reasons why the relationship between deficit financing and inflation is not straightforward or fails. One is that countries make different choices on printing money to finance the deficit, partly because they differ in the extent to which other means of finance are available, partly because the tax base (the stock of outside money) is often rather low. Some high-deficit countries finance the deficit with cheap domestic finance, some have access to extensive concessional external finance and some effectively eliminates printing money as a means of financing.

Another reason that may invalidate the inflationary finance story has to do with the fact that a surprising number of episodes of high seignorage are due to increases in real money balances instead of accelerating inflation. Therefore, seignorage may increase even when inflation is nil, due to increases in the demand for money, for instance. Moreover, money creation and inflation may be nonlinearly related. This may happen in a situation in which inflation increases with monetization but simultaneously the demand for money (and the tax base) decreases<sup>7</sup>.

In an open economy, inflationary finance would exist insofar as a flexible exchange rate system is assumed. Assuming zero output growth, a constant velocity of money and fully flexible prices in the economy, a deficit financed by money creation creates a situation in which agents find themselves holding excess money balances that they spend on foreign goods and/or external assets. As domestic residents sell their local currencies in exchange for foreign currencies, a nominal depreciation occurs. If the purchasing power parity holds then domestic prices will increase.

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<sup>7</sup> We need to mention that Bruno and Fischer (1990) were among the first to observe that seignorage models are characterized by multiple equilibria, in which different levels of inflation finance the same budget deficit

One important difficulty with the canonical inflationary finance approach in open economies arises from the fact that references to adverse shocks in the balance of payment are absolutely absent. In the orthodox approach the fiscal deficit would be the ultimate cause of the money creation and inflation. The prior question about what produces the fiscal deficit is left unanswered. But the fact of the matter is that reliance on fiscal austerity alone does not address the core of the problem. Heterodox economists of different persuasions have emphasized over the years adverse external shocks such as war reparation payments (in the early 20s) or foreign debt services (in the 80s) as basic causes of the exchange rate devaluations and of inflation. Indeed, in the presence of distributive conflict, the fall of real wages following a real devaluation would be resisted through increases in nominal wages, and accommodated with greater inflation. In this context, money is passive in the sense that money supply is adjusted to the evolution of the exchange rate and prices in sustaining higher nominal income levels. Solimano (1989) and Camara and Vernengo (2001), for instance, provide analysis of these alternative or challenging views to inflation that surged within the context of the European hyperinflation of the 1920s and 1940s, and in Latin America after the several high inflation episodes of the 1980s.

## 5. Fiscal Policy and the External Sector: On the Twin Deficits Hypothesis

The purported link between an economy's current account deficit and its budget deficit energized extensive academic debate and empirical testing in the 1980's and the early 1990 both in mature economies and developing countries. The fiscal deterioration in the U.S. during the first G.W. Bush administration coupled with persistent U.S. trade deficits, for instance, focused new attention about the relationship between these imbalances<sup>8</sup>. Moreover, the recent financial crisis has brought to the attention of the public at large the problem of growing fiscal and current account imbalances in a relatively large number of peripheral countries of the Eurozone. To explain this simultaneity the conventional view suggests that the budget deficit drives the current account into deficit. The situation has been analysed through the so-called twin deficits hypothesis in which the linkage is an automatic result of a national account identity that equals injections and leakages in terms of the circular flow of income.

$$\text{Current Account} = (S - I) + (T - G)$$

Where S = private saving,

I = private investment,

T = government revenues

G = government spending respectively

The identity became commonplace because it was supposed to entail a relationship between budget and trade deficits. The hypothesis states that a budget deficit caused, for instance, by an expansionary fiscal policy ( $G > T$ ) will lead to a current account deficit.

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<sup>8</sup> During the 1980s, U.S. authorities use expansionary fiscal policy and a growing fiscal deficit mixed with tight monetary policy to raise interest rate sharply. The high interest rates as well as a robust U.S. economy encouraged international investments in U.S. and dollar denominated assets and the exchange value of the dollar appreciated. As a consequence the external deficit grew larger. The deficits were thus twinned presumably through the mechanism linking fiscal deficits to interest rates to exchange rate to external deficit. As the 1990s unfolded, this apparent chain of causality broke, the fiscal deficit shrank, but interest rates and the exchange value of the dollar did not come down as far.

Standard economic theory would not find the situation surprising. A first theoretical explanation of the relation between fiscal policy and current account deficits can be found in the Mundell-Fleming framework (MF). The MF approach indicates that an increase in government expenditure or a decrease in taxation induces an upward pressure on interest rates that, in turn, will trigger capital inflows and an appreciation of exchange rates, ultimately leading to an increase in the current account deficit. A second theoretical explanation of the linkage between the twin deficits is the Keynesian absorption theory, which suggests that Keynesian absorption theory) suggests that when an economy is operating at or near full employment capacity an increase in the budget deficit would induce domestic absorption, that is an increase of total expenditures of domestic residents, and hence, import expansion, causing an increase or a worsening of the current account deficit.

Some lessons may be derived from expression (1), which is merely an accounting identity. Though the orthodox view presumes that causality has to flow from the saving variable on the right-hand side of identities (1) to the current account balance on the left, evidently, there are numerous other possibilities. It may happen, for instance, that the foreign account is balanced while the budget deficit has to match the borrowing of the private sector. It is perfectly possible also that a fiscal deficit may be caused in the first instance by an autonomous fall in exports, an autonomous increase in imports, or an autonomous rise in the international interest rate, quite independent of government decisions to spend. In this case fiscal deficits may respond to, rather than cause, changes in the external accounts. In commodity exporters for instance, what happens very often is that they face inherent instability from fluctuating export prices. Heavy reliance of corporate income taxes on exports of mineral products may explain the strong link between the foreign and the fiscal sector. In highly indebted countries, an increase in foreign interest rates of sovereign bonds deteriorates the current account and translates into higher budget deficits.

In the analysis of Latin American countries from the early 1980s, *grosso modo*, authors such as Arida and Lara Resende (1985), Bresser Pereira (1990), Bacha (1992) and Damill, Frenkel and Rapetti (2005) have argued, for instance, that foreign-determined variations in net financial flows, specifically in total interest paid on the foreign debt, have been a main factor explaining the increase in fiscal deficits. But as we have shown above the conventional analysis that derives from expression (1) ignores the net interest payments component of the external accounts. Damill, Frenkel and Rapetti (2005) analyze the role that external shocks played in the 1998-2001 Argentinean crises and argue that the impact of the Russian and Brazilian crises in 1998 resulted in a fatal jump in the country-risk premiums, and access to foreign funds became more problematic, leading to a deterioration of the fiscal accounts<sup>9</sup>.

A similar story played out for the peripheral countries in the Eurozone during the recent financial crisis. Since European treaties regulating the Eurozone prevented the European Central Bank (ECB) from intervening directly to fund liquidity crisis, governments had to raise funds on the market at whatever interest rate prevailed, markets started to demand an ever-increasing premium for acquiring government bonds, pushing these countries into a Ponzi-finance regime (in which additional borrowing is required to cover the cost of servicing the existing debt).

The examination of the Greek crisis has led some analysts to point out that at the root of the crisis both the hard-drachma policy and subsequently the introduction of the euro played a major role and led to a long period of capital inflows, loss of competitiveness and a deterioration of the trade account (Nikiforos, Carvalho and Schoeder, 2015). Capital inflows were sustained for one and a half decades, because of the general euphoria that predominated in global financial markets at the same time. Thus, public and private deficits followed the external deficit. Indeed, data collected by Zezza (2012) shows that although almost all countries of the peripheral Eurozone had large fiscal deficits before the Maastricht treaty was put in

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<sup>9</sup> The average interest rate of the total public debt went from 5.8% in 1996 to 9.4% in 2001 and an explosive trend in the public debt interest account drove the interest payments/tax collection ratio from 12.2 in 1998 to 23.4 in 2001

place, but years later in 2006 –before the crisis started– only Greece and Portugal had a deficit larger than 3 percent, while Ireland and Spain were actually running a surplus.

These events, in Argentina and later on in the peripheral countries of the Eurozone, found economies with a considerable appreciated currency, a significant and growing current account deficit and a visible lack of instruments to deal with these problems. Restrictive fiscal policy reinforced the recessionary trend, thus feeding the negative expectations that prevented the so much expected fall in country risk premium. If causality is reversed, then the policy implications are substantially different.

Moreover, budget and current account deficits sometimes follow quite divergent paths. One possible explanation for this divergence is related to the impact of output fluctuations on budget and current account deficits. For instance, if the economy enjoys a surge in productivity that prompts an expansion in economic activity, then to reap the opportunities of higher productivity, private investment increases. As investment expenditure typically reacts more strongly to the business cycle than private saving does, and the current account balance deteriorates. At the same time, the output expansion generates both an increase in tax receipts and a decline in government expenditure, due, for example, to a decline in unemployment benefits. Therefore, the budget balance improves.

## 6. Sustainable Fiscal Stance

Since the late 1980s and early 1990s debt sustainability has become one of the most used and abused concepts in recent discussions regarding international financial issues due to the substantial increase in the public debt/GDP ratio in many countries. Underlying the notion of fiscal sustainability is the idea that government should not continuously dissave as it causes a continuous increase in the debt/GDP ratio. Public debt sustainability is today an important issue to the countries belonging to the EMU, where the need to ensure fiscal sustainability has been often invoked as a rationale for the fiscal rules set out in the Maastricht treaty and in the SGP. Debt sustainability is also important in a number of developing countries, where the fiscal budget has been caught up in an explosive spiral of increasing indebtedness—a ‘snowball effect’ in which the debt generally absorbs a growing proportion of fiscal revenue.

Sustainability of the fiscal stance is a long-term problem and concerns the way in which budgetary viability may get eroded over time due to financing of government expenditure through borrowing. The most known concept of fiscal sustainability relates to the government’s ability to indefinitely maintain the same set of policies (regarding taxes and expenditure for instance) while remaining solvent. This means that the focus of fiscal sustainability analysis is frequently not on default itself—which governments frequently avoid—rather it is on the consequences of the policy changes needed to avoid eventual default.

The notion of fiscal sustainability is not new. In the beginning of the 20s, for instance, when writing about the public debt problem faced by France, Keynes (1923) alerted to the need for the French government to conduct a sustainable fiscal policy in order to satisfy its budget constraint. Keynes stated that the absence of sustainability would be evident when "the State's contractual liabilities (...) have reached an excessive proportion of the national income" (p. 54). In Keynes's words, there is a problem of sustainability when "it has become clear that the claims of the bond-holders are more than the tax payers can support" (p. 55). Thus, according to Keynes, at that stage the government "must come in due course to some compromise between increasing taxation, and diminishing expenditure" (p. 59). But Keynes was never in favour of repayment at whatever cost as he left it very clearly when denouncing the absurdity of the reparation question after the Versailles peace treaty (Keynes, 1920).

In the early 1940s, Domar (1944) developed the well established, although presently a bit underrated, strand of the literature that identifies sustainability with the dynamic stability of the public debt/GDP ratio around a constant steady state. Domar’s definition has a lot intuitive appeal since it is based on an

accounting approach<sup>10</sup>. A primary deficit (or surplus) is defined as sustainable if it does not generate an ever-increasing debt/GDP ratio, given a specified real GDP growth target and constant real interest rate. Accordingly, the dynamic stability of the debt-GDP ratio is ensured as soon as the rate of output growth in the economy is greater than the real interest rate on public debt. When this condition is not accomplished then fiscal policy should be reoriented to establish sustainability. Thus, the government should run a primary surplus sufficient to cover the excess caused by the real interest rate over the real growth rate.

In further contributions, Hamilton and Flavin (1986) and others developed the so-called present value budget constraint (PVBC) approach to fiscal sustainability. From this perspective fiscal deficits were understood as sustainable if the current market value of debt equals the discounted sum of expected future surpluses. But this definition, simple as it is, has faced the problem of not being operative, since it is quite difficult to derive the series of future fiscal balances or to impose a particular rate of discount on the future. What sort of fiscal policies are consistent with the PVBC approach? As emphasized by Chalk and Hemming (2000) the PVBC approach does not rule out either large primary deficits or high debt as long as the future primary surpluses required to respect the PVBC are a viable policy option.

A basic problem with these conventional sustainability approaches is the presence of critical assumptions about the behaviour of key macroeconomic variables. In the PVBC approach the theoretical framework employed (the representative agent) divorces the fortunes of the real economy from the activities of the government. Thus sustainability judgments are made without references to any economic variables except the stock of government debt, projected primary surpluses and deficits, and the interest rate on government debt (Chalk and Hemming, 2000). Indeed, as argued by Cuddington (1996) the econometric literature testing the PVBC focuses on time series properties of the primary surplus, debt, and in some cases, government spending and taxation, without explicitly relating them via an economic model to (presumably) endogenous variables like the real interest rate, GDP growth, inflation, etc. Moreover, in both approaches, a high and explosive debt/GDP ratio is supposed to be controlled by reducing government expenditure. However, as remarked by Jha (1994) and Das (2007) this may not be as simple as it looks at first glance. Reducing government expenditure may lower real national income and then tax revenues and exacerbate the debt situation. Thus, using sustainability targets to correct the size of the primary balance (to avoid default) may not be such a good idea since government spending cuts may be self-defeating. The fact is that conventional approaches to debt sustainability typically assume that changes in the primary surplus will have no effect on either real interest rates or GDP growth. This is surely unrealistic. Presumably, the equilibrium real interest rate depends positively on the level of government spending and/or the amount borrowed. To answer the above question, one would ideally use a model that endogenously determines real interest rates and the GDP growth rate. It would then be possible to analyze how these key macro variables are affected by changes in fiscal policy variables and how they in turn affect the fiscal position.

Efforts to provide more economic content to the present sustainability framework has been recently made by Taylor, Proaño, Carvalho and Barbosa (2012), De long and Summers (2012) and Fatás and Summers (2016)<sup>11</sup>. They show that, under certain conditions, a scenario of active fiscal policy may be self-financing and reduces the debt/output ratio in the long-run. In such a scenario, worries about the adverse impact of fiscal stimulus on the government's long-run budget are unwarranted, for there is no adverse impact. This central point is made substantially stronger if one allows for the possibility that the additional government spending raises future productivity, and thus future output, by increasing the

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<sup>10</sup> Blanchard (1990) tried to construct indicators of the sustainability of fiscal policy following this approach.

<sup>11</sup> In Taylor *et. al.* (2012) this result hinges on the assumption that the deficit/output ratio is affected by the growth rate and fiscal policy. In De Long and Summers (2012) it depends on the existence of a fiscal multiplier that is not near zero, the existence of a plausible hysteresis shadow on future potential output, low and unchanged government borrowing costs, and the assumption that a temporary boost to government purchases is possible. Fatás and Summers (2016) present empirical information for 34 advanced economies and show that attempts to reduce debt via fiscal consolidations have very likely resulted in a higher debt to GDP ratio through their long-term negative impact on output.

productive stocks of public infrastructure capital and private human capital. Indeed, it is sometimes argued (see, for instance, Blanchard and Giavazzi, 2004) that a deficit that results from high public investment will be sustainable since spending on public infrastructure often promotes growth (though inefficient public investment has been extensively documented in developing economies). In correspondence, Rakshit (2000) shows that when the government borrows in order to meet capital expenditure it accumulates assets and as a consequence, sustainability (in the Domar sense) now requires the growth rate to be higher than the interest rate less the return on assets being accumulated by the government - a much less onerous condition than the canonical one.

## 7. Conclusions

Although the heritage of the debate in the 1980s and 1990s casts a strong skepticism over the use of discretionary fiscal action to fine tune the economy and stabilize business cycles, deeper inspection reveals that the relationship between fiscal policy and the rest of the economy has remained one of great contested areas in macroeconomics. Indeed, economists' view of fiscal policy usefulness has fluctuated widely since the late 1920s.

There are good reasons to think that the potential usefulness of fiscal stabilization needs to be re-considered. We have even stronger evidence that fiscal policy is effective than we did before the global crisis. Concerns about crowding out, inflation, scarce saving, and international trade problems do not pose insurmountable barriers to the effectiveness of fiscal policy. At the heart of the debate lies the question of assumptions, economic structure, and causation mechanisms. Since each economy is unique, none of the links between fiscal policy and the rest of the economy is automatic, for there are institutional and structural configurations that imply specific causality mechanisms as well as choices in policy instruments and sources of financing that may have different macroeconomic effects.

Further analysis is necessary to be able to provide guidance regarding the form to integrate both macroeconomic stability and solvency considerations. The current method of integrating them, instituting restrictions on deficits, works pro-cyclically, and often worsens the fluctuations. The pro-cyclical character of fiscal policy is an increasing burning topic and the economic solutions in vogue today are biased in favor of the use of rules. But more research is needed here since any rule may entail a dilemma between flexibility and credibility and a too rigid one, in the pursuit of credibility, may lead to high cost in forgone flexibility.

Increasing interdependent and integrated markets presents a country's economy with a number of dilemmas as well. Changes in the external environment may improve or worsen the domestic fiscal situation. However, in mature economies the changes in the fiscal variables can be attributed to policy responses (an adverse oil price shock, for instance, reduces real incomes but may face a conscious discretionary government reaction) while in developing economies, the observed change in the fiscal variables may not be attributed mainly to policy changes but to the link that exists between the budget and the foreign sector. Several questions need to be addressed in this respect: what is the structure or institutional arrangement which a country's economy needs in order to be able to pursue an independent fiscal policy? Is this in fact possible in an increasing global economy?

Since the late 1980s and early 1990s, fiscal sustainability surfaced as an increasingly important issue because of the substantial increase in the public debt/GDP ratio in many countries. To restore order to public sector finances, many countries have put in train programs of "Fiscal Consolidation" oriented to reduce the budget deficits and ultimately directed toward bringing the debt-GDP ratio down to some tolerable level (though it is not clear why the longer term goal is not a zero debt-GDP ratio). But we have pointed out that both the accounting approach and PVBC approach on the government fiscal constraint has some important limitations and deficiencies. Further assuming, as in most of these models, that the rate of growth of the economy and the real interest rates remain unaffected irrespective of the government's fiscal stance may not be right at all.

Though fiscal policy remains a powerful instrument for regulating aggregate demand when the economy's resources are underutilized, research on the combination of public spending and revenues that is most helpful to achieve higher output and unemployment reduction is required. Moreover, the reader is not necessarily forced to accept the view that fiscal policy must face an immutable barrier by full employment. Recently, new endogenous growth literature have proposed a number of channels through which fiscal policy could induce increases in potential output (affecting factor accumulation or influencing technical progress). This is an area where the identification of the required fiscal policy instruments and prescriptions is needed.

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