

# The New Consensus under Stress: the Financial Crisis and the Fiscal Policy Comeback

## Novo Consenso sob Estresse: a Crise Financeira e a Volta da Política Fiscal

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**Abstract:** From the 1980s, mainstream macroeconomic thinking experienced a strong convergence in methodological assumptions and policy proposals for more than two decades. This “New Macroeconomics Consensus” was characterized by the role played by the monetary policy in macroeconomic adjustment. Fiscal policy was set aside; it should only be concerned with keeping public debt in a stable path in order to ensure the “economic fundamentals”. However, the need for active and unconventional policy measures during the 2008 global economic crisis brought fiscal policy back to the mainstream debate. This paper briefly describes this convergence, discussing the role it assigned for fiscal policy before the crisis, and then examines the issues the post-crisis debate concentrated on, showing how it differs from the previous mainstream conception of fiscal policy. We suggest that mainstream limitations to deal with fiscal policy may have opened a window of opportunity for a broader review of its role as a policy tool.

**Keywords:** Fiscal policy. Financial crisis. New macroeconomic consensus. Mainstream macroeconomics.

**Resumo:** Desde os anos 1980 o pensamento macroeconômico *mainstream* tem experimentado uma convergência metodológica sobre os pressupostos teóricos e sobre as propostas de política econômica por mais de duas décadas. O Novo Consenso em Macroeconomia se caracterizou pelo papel desempenhado pela política monetária no ajuste macroeconômico. A política fiscal foi deixada de lado, devendo se preocupar em manter a dívida pública numa trajetória estável para garantir os fundamentos da economia. Entretanto, a necessidade de medidas ativas e não convencionais durante a crise econômica global de 2008 trouxe a política fiscal de volta ao debate *mainstream*. O artigo apresenta brevemente essa convergência, discutindo o papel designado à política fiscal antes da crise para, na sequência, examinar os aspectos sobre os quais o debate pós-crise se concentrou, mostrando como esse debate difere da visão anterior sobre a política fiscal. Sugerimos que as limitações do mainstream em tratar da política fiscal podem ter aberto uma janela de oportunidade para uma revisão mais ampla do seu papel enquanto ferramenta de política econômica.

**Palavras-chave:** Política fiscal. Crise financeira. Novo consenso em macroeconomia. Macroeconomia *mainstream*.

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## 1 Introduction

The two decades preceding the 2008 financial crisis brought about a considerable convergence in mainstream macroeconomic thinking, known as the New Macroeconomic Consensus (NMC). This consensus upgraded the role of monetary policy as an effective policy tool, while downgrading the role of fiscal policy. As the argument goes, macroeconomic adjustment depends on the policy rate set by the monetary authority, while fiscal policy should be confined to ensuring the macroeconomic “fundamentals”, by means of “sound” fiscal accounts that would not threaten debt sustainability.

However, the crisis stressed the shortcomings of depending on monetary policy as the only macroeconomic policy tool and showed the need of an active fiscal policy to avoid a deep economic downturn and to support the initial economic recovery from the Great Recession. The rescue of fiscal policy as a stabilization policy tool and the implementation of the fiscal measures brought about an intense debate among mainstream macroeconomists.

This paper endeavors to assess such debate. To do so we concentrate the analyses on the period from 2008 to 2011. The crisis elicited an outbreak of papers concerning fiscal policy which arguably culminated in 2011<sup>1</sup>. Since then the mainstream contribution to fiscal policy debate has just repeated, without significant breakthroughs, the issues previously discussed. The paper has four sections, besides this introduction. The first section briefly presents the New Macroeconomic Consensus, emphasizing the role played by monetary policy. The second section discusses how fiscal policy is conceived in the mainstream framework. The third section deals with the impacts of the 2008 crisis on the mainstream debate about fiscal policy. It shows the fierce debate about the size and duration of fiscal multipliers, the relative convergence with regard to automatic fiscal stabilizers and the discussion about fiscal sustainability. After summarizing the (very discrete) changes brought about by the mainstream debate, the final section briefly sketches the current state and the challenges faced by heterodox economists, who still support a much more active and permanent role of fiscal policy.

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1 In December 2011 the National Bureau of Economic Research (NBER) organized a conference on fiscal policy held at Università Bocconi, Milan. Alberto Alesina and Francesco Giavazzi (2013) headed the conference gathering together the major mainstream authors who had discussed fiscal policy during the crisis. The discussion resulted in a book edited by both authors and published two years later (ALESINA; GIAVAZZI, 2013). The conference and the book represent a synthesis of the mainstream approach to fiscal policy elicited by the crisis. Also in 2011, IMF hosted a conference on Macro and Growth Policies in the Wake of the Crisis with a session dedicated to fiscal policy in which some prominent economists, such as David Romer (2011) and Robert Solow (2011), were present.

## 2 The New Macroeconomic Consensus and the Role of Monetary Policy

The development of mainstream macroeconomic thinking has been shaped by the intense debate between New Classical and New Keynesian theorists. Broadly speaking, in the 1980s, the heart of the debate was the validity of the market clearing assumption and the consequent need and/or efficiency of macroeconomic adjustment policies. For the New Classicals, as market clearing is guaranteed by the assumption of total flexibility of prices and wages, there is no need of stabilization policies for output and employment. For the New Keynesians, the rigidities of wages and prices of the “real world” justified the prescription of stabilization policy measures, at least in the short run<sup>2</sup>. A compromise was reached by mid-1990’s, as Woodford (2008, p. 2) points out:

I believe that there has been a considerable convergence of opinion among macroeconomists over the past ten or fifteen years. While the problems of the field have hardly all been resolved, there are no longer such fundamental disagreements among leading macroeconomists about what kind of questions one might reasonably seek to answer or what kinds of theoretical analyses or empirical studies should even be admitted as contributions to knowledge.

This convergence is conventionally called New Neoclassical Synthesis (GOODFRIEND; KING, 1997) or New Macroeconomic Consensus (NMC) (MEYER, 2001; ARETIS; SAWYER, 2002). It is a consensus because it conciliates New Classical theoretical contributions and New Keynesian policy prescriptions. According to Goodfriend and King (1997), from the New Classicals come the dynamic macroeconomic models, based on agents with rational expectations in an intertemporal optimization setting; from the New Keynesians come the rigidities of prices and wages, which cause the macroeconomic adjustment to be sluggish and costly.

The methodological convergence of NMC is expressed in a standard (or basic) model, with three equations and three unknowns<sup>3</sup>:

$$(y - \hat{y})_t = a_0 + a_1(y - \hat{y})_{t-1} + a_2 E_t(y - \hat{y})_{t+1} + a_3(i_t - E_t(\pi_{t+1})) + s_t \quad (1)$$

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2 Since the long run in this view is ruled by the non-accelerating inflation rate of unemployment (NAIRU).

3 The model here derives from Arestis and Sawyer (2002, 2008), Arestis (2007) and Carlin and Soskice (2006). Nonetheless, it was first presented in papers such as Clarida, Gali and Gertler (1999), McCallum (2001), Meyer (2001) and Woodford (2003).

$$\pi_t = b_1 \pi_{t-1} + b_2 E_t(\pi_{t+1}) + b_3(y - \hat{y})_t + s_2 \quad (2)$$

$$i_t = r^* + c_1(\pi_t - \pi^T) + c_2(y - \hat{y})_t \quad (3)$$

where  $(y - \hat{y})$  is the output gap, being  $y$  the current output and  $\hat{y}$  the potential output;  $E_t$  is the expectations operator;  $\pi$  is the inflation rate and  $\pi^T$  the inflation target;  $i$  is the nominal interest rate, set by the monetary authority, and  $r^*$  the real interest equilibrium rate;  $a_3 < 0$  and  $a_0$  a constant which captures exogenous effects on the output gap (as the ones caused by a fiscal policy measure);  $b_1 + b_2 = 1$ ,  $b_3 > 0$ ;  $c_1 > 1$ ,  $c_2 > 0$ ; and  $s_1$  and  $s_2$  capture exogenous random shocks.

The three-equation model describes an “IS-type demand curve” (1), a “Phillips curve-like” (2) (BLANCHARD, 2008), and a standard “Taylor rule” (3) (TAYLOR, 1993) in which the unknowns are the level of current output, the current inflation rate and the nominal interest rate. To solve the model one needs to consider the two macroeconomic goals: output and price stability. Such goals are attained when output gap closes to zero and the inflation rate equals the inflation target. The model assumes the nominal interest rate as the macroeconomic control variable, as expressed in equation (3).<sup>4</sup>

The nominal interest rate adjustment in response to output gaps and/or to the deviations of inflation rate from the target is the monetary policy nowadays in most of the countries. Every time current output departs from estimated potential output and inflation departs from the established target, the Central Bank adjusts its policy rate, in order to bring macroeconomic variables to the desired path.

While the NMC model gives the major role to the monetary policy, fiscal policy is left hanging, with no clear role – or, for that matter, rule – in what concerns the macroeconomic stabilization process. Indeed, in the NMC basic model, fiscal policy is captured by  $a_0$ , a constant, or by  $s_1$ , which considers the changes in public spending and/or tax collection as any other sort of exogenous shock. However, it is supposed to perform a crucial – though elusive – role among the “economic fundamentals”.

### 3 Fiscal Policy in the NMC: Pre-Crisis View

As pointed out by many authors,<sup>5</sup> the same process that led to the emphasis on monetary policy downgraded fiscal policy as a macroeconomic policy tool. However, the demise of fiscal policy as an countercyclical tool had long been

4 According to Lopreato (2006, p. 14 – freely translated into English): “Since the literature about *time-consistency*, the dominant theoretical vision made it relatively consensual that the adoption of rules in the conduction of monetary policy had great advantages [...]” over discretionary policies. See, for instance, Kydland and Prescott (1977), Barro and Gordon (1983) and Taylor (1993).

5 Such as Arestis e Sawyer (2002, 2003a), Tcherneva (2008), Fontana (2009), among many others.

prepared by a host of theoretical and empirical arguments, ultimately fed by the mainstream's general indisposition (of political and ideological nature) towards government intervention in the economy.<sup>6</sup> Such arguments encompassed the issue of implementation lags (raised in FRIEDMAN, 1968) and the many varieties of crowding out of private spending by public spending, culminating in the Ricardian Equivalence theory (BARRO, 1974).

It is no wonder that a policy deemed to be inefficient (because of the implementation lags), perverse (because of the putative impacts on private investment, inflation and the balance of payments) or even irrelevant (in the case of the Ricardian Equivalence) ceased to be the object of a serious and systematic discussion. According to Leeper and Walker (2013, p. 255), “[...] recent graduate textbooks [...] make scant mention of fiscal policy [...]”, while “[...] economic models at central banks [...] all but ignore fiscal phenomena [...]”. As Blanchard (2008, p. 15) acknowledges, “[...] a good normative theory of fiscal policy in the presence of nominal rigidities remains largely to be done [...]”. Indeed, several authors<sup>7</sup> contend that is not possible to define with precision *the* NMC approach to fiscal policy.

Nevertheless, it seems pretty safe to state at least that fiscal policy in the NMC is mainly concerned with predictability and with public debt sustainability, which is consonant with the New Classical assumptions about the behavior of economic agents and with its neoclassical views about the long run properties of the economy (SANTOS, 2011).

Fiscal authorities must be committed to the “rules of the game” or to the “strategy for economic policy”. Under the NCM, this means that the state of public finance must allow monetary authorities – free from “fiscal dominance” (SARGENT; WALLACE, 1981)<sup>8</sup> – to do what is necessary to control inflation. The implementation of a stable and predictable path for the fiscal variables<sup>9</sup> makes it easier for agents to validate their expectations and for their interaction to achieve the general equilibrium.

Even though this is not discussed in the basic NMC model,<sup>10</sup> public debt is considered sustainable if the government fulfills the budget constraint as required to guarantee its solvency and to avoid its explosive growth.

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6 See Arestis and Sawyer (2003b), Blinder (2004), Solow (2005) and Forder (2007).

7 For example, Allsop and Vines (2005), Balls (2006), Lopreato (2006), Blanchard (2008), Tcherneva (2008), Fontana (2009), among others.

8 As it was shown previously, in the NMC basic model fiscal policy is predetermined (the constant  $a_t$ ) or represent an exogenous shock ( $s_t$ ), and monetary policy is not supposed to react to fiscal policy. Interactions between fiscal and monetary policy are analyzed in mainstream literature and where inflation is the main macroeconomic goal the arguments always favor a fiscal policy that that follows, cooperatively, the lead of the monetary policy. See, for instance, Kirsanova, Stehn, and; Vines (2005), Leeper (1991) and Leeper and Walker (2013).

9 Such as its tax collection and spending programs, bond emissions, external financing and public debt.

10 Some authors point out such incompleteness. See for instance Arestis and Sawyer (2003a),

The government flow budget constraint is:

$$D = G - T + iB = \Delta B + \Delta H \quad (4)$$

where  $G$  stands for the public expenditure;  $T$  is the tax collection;  $B$  stands for the debt;  $i$  is the nominal interest rate;  $D$  is the deficit and  $H$  stands for the high-powered money.

The equation indicates that the public deficit must be financed by debt emissions or seigniorage. Disregarding seigniorage for simplicity and because it is negligible in modern financial systems (ALLSOPP; VINES, 2005; LEEPER; WALKER, 2013), public deficits imply a change in public debt. The public debt accumulation is described, as a ratio of GDP ( $Y$ ), by:

$$B_t/Y_t - B_{t-1}/Y_{t-1} = (r-g)*B_{t-1}/Y_{t-1} + (G-T)/Y_t \quad (5)$$

where  $r$  is the real interest rate ( $i = r - \pi$ , where  $\pi$  is the inflation rate) and  $g$  stands for the real rate of output growth. Making  $B/Y = b$  and the primary fiscal deficit ratio to GDP,  $(G-T)/Y = x$ , the equation becomes:

$$\Delta b = b(r - g) + x \quad (6)$$

Equation (6) shows how real public debt to GDP ratio behaves according to the previous debt stock, the rate of output growth, the interest rate and the primary fiscal deficit (all in real terms). In the NMC approach, government must keep a diminishing or zero (or even a negative)  $\Delta b$  in order to show that its debt is sustainable<sup>11</sup> (solvent) over time. The argument is that, besides the default risk and the possible macroeconomic instability if the default comes to happen, a rising debt, assessed as unsustainable by the bondholders, exposes the economy to several problems: countercyclical (monetary) policy weakens, external financing becomes costly due to a rise in the sovereign risk, the required nominal interest rates to (re)finance the debt rises, the country's ability to capture external investment decreases.<sup>12</sup>

Supporters of the so-called Fiscal Theory of Price Level<sup>13</sup> (FTPL) propose a peculiar connection between a rising public debt and inflation. In equation (7),

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Allsopp and Vines (2005), Chari, Kehoe and McGrattan (2008), Fontana (2009) and Arestis (2009).

11 There is no consensus in the literature about maximum sustainable levels either of the debt/GDP ratio or the growth rate of public debt. See for example the discussion brought about Reinhart and Rogoff (2010) in the following.

12 See Heller (2002), IMF (2009b) and Devereux, (2010).

13 For example, Leeper (1991), Woodford (1998) and Christiano and Fitzgerald (2000).

$$B_t/P_t = E_t[PV(\text{surpluses})] \quad (7)$$

$P$  is the price level and  $PV$  (*surpluses*) is the present value of expected government primary surpluses.

To many mainstream economists, equation (7) is the intertemporal government budget constraint, assuming that the public debt will be eventually redeemed by means of primary surpluses. To FTPL supporters, the equation describes an equilibrium condition that can be (temporarily) violated, when the increase in government expenditure creates a deficit that is not expected to be compensated by a future increase in taxes. As the newly issued bonds will be perceived as an increase in private wealth, the wealth effect will increase consumption, pushing (after a temporary effect in quantities)<sup>14</sup> prices and eroding the real value of government debt, until the equilibrium is restored (TCHERNEVA, 2008).

In equations (6) and (7) the adjustment variable is deemed to be the fiscal balance. In (6) it is argued that government can affect  $x$  more directly than  $r$  or  $g$ ; in equation (7), since controlling inflation is a macroeconomic goal, government must show commitment to an expected future path for primary surpluses to guarantee today an unchanging real value of public debt and avoid a rise in the price level. So, in order to keep a stable debt/GPD ratio and/or to show the agents public deficits are not disproportionate to its financing capacity, in the mainstream approach government must control the public accounts so that debt/GDP path will be assessed as sustainable. So, having dismissed fiscal policy as a stabilization tool, the remaining discussion about it focuses on issues concerning public accounts, the efficiency and the quality of public spending and collection, and the execution of (and the credibility about) the measures that guarantee the fiscal behavior announced by the government.

## 4 The 2008 Crisis and the Impacts on the NMC View

The 2008 crisis revealed two sorts of failures of the NMC model. First, it made clear that changes in the policy rate may be unable to affect the real economy in the way the model predicted, especially if the rate is already at a low level and the economy faces the risk of deflation. Second, the resort to fiscal measures to mitigate the crisis made explicit the deficiency of the discussion about fiscal policy in mainstream economics. Even though some mainstream authors had already predicted the use of fiscal policy in some specific situations,<sup>15</sup> the scale of the 2008

14 Which, as Tcherneva (2008) remarks, at least breaks away from the logic of the Ricardian equivalence and suggests that fiscal policy can reappear as a useful anticyclical policy tool at least in deflationary contexts in which the nominal floor of the policy rate has already been attained.

15 For instance, when nominal interest rates are close to zero, when the economic crisis is severe or when countries that are part of a monetary union suffer individual crises. See Bernanke (2002)



crisis and the urgency to take fiscal measures to avoid an even greater global downturn revealed impressive disagreement about which measures to take and their impacts over the economy.

To present the mainstream debate on fiscal policy during the crisis we organized the issues in increasing order of convergence. We start with the most contentious theme: the fiscal multiplier. We then show the building up of some consensus on the relevance of automatic fiscal stabilizers. We conclude by presenting the strong agreement among mainstream macroeconomists about the need to secure fiscal sustainability in a way that allows the use of active fiscal measures in the reasonably narrow scope of circumstances in which they are deemed to be appropriate.

#### 4.1 Fiscal Multipliers: Disputes

Monetary and fiscal measures adopted around the world to face the 2008 financial crisis were based neither on the theoretical structure of NMC nor on their models. They were supported by *ad hoc* arguments about how liquidity creation measures affect the system, on the monetary side, and about the size of fiscal multipliers, on the fiscal side.

The theoretical and empirical literature about the size, duration and the effects on the economy of the fiscal multipliers provided, during the crisis period (2008-2011), a wide range of results. A survey of the literature by IMF officials (SPILIMBERGO; SYMANSKY; BLANCHARD; COTTARELLI, 2008) reported results varying from negative or insignificant to significantly positive. Later that year, the IMF (2008a) own calculations obtained again values ranging from negative to above four (positive). The results depend on the kind of assumptions taken in each model, on the policies specifically implemented (which includes of course the monetary policy stance), on the macro conditions where the stimulus happens and on the country under consideration.

The difficulties to estimate fiscal multipliers start on their very definition. Broadly speaking, a fiscal multiplier describes the effects of a discretionary change in fiscal instruments on real GDP. These effects are generally captured as a GDP percentage change due to a change in the instrument adopted or in a change in the fiscal balance (FREEDMAN; KUMHOF; LAXTON; LEE, 2009). However, as it is recognized, it is not a trivial task to consider all the factors that could influence the results of a specific measure. Firstly, as stressed by IMF (2008a), it is hard to isolate the effects of fiscal automatic answers from those of discretionary measures, since changes in fiscal balances reflect them both<sup>16</sup>. Secondly, fiscal multipliers can have

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and Krugman (1998, 2005) for example.

16 "The empirical estimates of fiscal multipliers are dispersed over a very broad range, reflecting



long-lasting dynamic effects. Measuring such effects is an additional challenge, depending on whether the policy change is sustained or not (SPILIMBERGO; SYMANSKY; BLANCHARD; COTTARELLI, 2008).

As just mentioned, the model adopted for the study of fiscal multipliers also influences the estimated results.<sup>17</sup> Structural Vector Auto Regressive (SVAR) models have difficulties in isolating the effects of spending and tax collection changes and almost never reach a clear conclusion about the relative size of fiscal multipliers (BLANCHARD; PEROTTI, 2002; SPILIMBERGO; SYMANSKY; BLANCHARD; COTTARELLI, 2008; SPILIMBERGO; SYMANSKY; SCHINDLER, 2009). But Auerbach and Gorodnichenko (2013) confirmed in a direct-projection model the same general results they had using SVAR in a previous paper (AUERBACH; GORODNICKENKO, 2010): multipliers for government purchases are greater in recession than in expansion. New Keynesian Dynamic Stochastic General Equilibrium (DSGE) models present multipliers values that vary according to the assumptions about the endogenous answers to the policy adopted and to the projected economic behavior. Cogan *et al.* (2010), Christiano, Eichenbaum and Rebelo, (2011), Eggertsson (2009), Devereux (2010) and Woodford (2011), among many, used these models to ascertain the actual size of fiscal multipliers aiming to prescribe the proper policy to deal with the crisis. Estimates showed that, in general, spending fiscal multipliers were bigger than the tax-reduction ones and when monetary policy does not offset fiscal stimuli effects.

Many of the papers written during the crisis and under the DSGE approach were motivated by Romer and Bernstein's (2009) estimates of the impacts of the American Recovery and Reinvestment Act (ARRA) on the US economy. According to the paper, ARRA's multipliers would be significant, raising GDP by 3.7 percent and reducing unemployment by 2 percent in 2010Q4 (when the plan was expected to have its maximum effect).<sup>18</sup> Although Krugman (2009) argued that the plan was too weak, his own estimations (increase in GDP of 2.5% and lowering unemployment by 1.7%, on average in 2009-2010) were in line with Romer and Bernstein's (2009). Cogan *et al.* (2010), in turn, argued that Romer and Bernstein (2009) did not have the necessary rigor and did not "represent modern research",

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the inherent difficulty of identifying a fiscal impulse and its propagation through the economy. In particular, simultaneity problems (most notably the two-way linkages between economic activity and fiscal balances) make it very difficult to pin down the effects of discretionary fiscal actions." (FREEDMAN; KUMHOF; LAXTON; LEE, 2009, p. 4). Auerbach and Gale (2009a), however, claim their model can isolate both effects.

17 See, for instance, Spilimbergo, Symansky and Schindler (2009) where the extensive survey covers different models and the related-values for fiscal multipliers.

18 Romer and Bernstein's (2009) estimations are important because they were used to justify fiscal policy formulation in the USA. The debate this publication raised evinces the academic and political concerns about the way fiscal activism should be executed.

as they used “Old Keynesians” models, whose assumptions imply inherently bigger multipliers,<sup>19</sup> to justify publicly and politically the size of the stimulus package.<sup>20</sup>

Drautzburg and Uhlig (2015)<sup>21</sup>, Christiano, Eichenbaum and Rebelo, (2011) and Erceg and Lindé (2012), joined Cogan *et al.* (2010) criticism. Although they found different numerical results, Woodford (2011) justified the similarities presented in those papers and gave more cohesion to the discussion using simple analytical mechanisms in a New Keynesians DSGE model approach. The general conclusion of these papers is that the multiplier can be greater than one when the zero lower bound constrains monetary policy and if the fiscal stimulus is ceased as soon as the constraint on monetary policy is no more binding – so monetary authority adjusts the interest rate and lower the fiscal multiplier.

Comparative analysis suggested that multipliers differed significantly among countries. According to Freedman, Kumhof, Laxton e Lee (2009), the biggest multipliers were found in emerging Asia and in the group named “remaining countries”.<sup>22</sup> The reason is that in such countries the proportion of hand-to-mouth households is bigger than in advanced economies, implying a bigger effect on consumption expenditure. Another important finding is that a fiscal stimulus taken in an isolated country has smaller multiplier effects when compared to the ones globally conducted, so the authors defended a worldwide action, to generate more powerful global multipliers.

In a similar vein, IMF (2008a) argued that in emerging countries multipliers would tend to be bigger, given the weight of liquidity and credit-constrained households. However, according to the institution, stimuli might, in the case of highly indebted governments, foster a rise in the risk premium, which would negatively affect the multiplier.

In closed economies, with none or few public-financing constraints, it is theoretically and empirically possible to assert that fiscal multipliers are greater than one, mostly if monetary policy accommodates fiscal actions (FREEDMAN;

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19 Romer and Bernstein (2009) estimated a government purchase multiplier of around 1.6 and a tax cuts multiplier of around 1% in 2010Q4. CBO (2015), while recognizing the difficulties in isolating the effects of ARRA on output and employment, estimated that the stimulus package had increased GDP by between 0.7% and 4.1% in calendar year 2010 and diminished unemployment by between 0.4% and 1.9% in the same year, compared with what would have occurred otherwise. Zandi (2011) estimated that ARRA added around 2 percentage points to US GDP in 2009 and around 0.5 p.p. in 2010.

20 Cogan, *et al.* (2010) and Cogan and Taylor (2010) seem to believe that the reasons why Romer and Bernstein (2009) defended ARRA were not quite sound academic ones, but reflected their positions as members of Obamas's government. Christina Romer was the Chairperson of the Council of Economic Advisers, and Jared Bernstein was the Chief Economist and Economic Policy Adviser for the Vice President of the United States from 2009 to 2011.

21 The paper was firstly published in 2010 as a working paper. The 2015 version is a reviewed one, with the same results though.

22 The authors divided the global economy into 5 economic areas: USA, Japan, Eurozone, Emerging Asia and Remaining Countries.

KUMHOF; LAXTON; LEE, 2009). In smaller, more open, and more susceptible to financing constraints economies, multipliers are smaller, because of the effects of fiscal stimuli on international transactions or on the real interest rates (IMF, 2008a).

As most of the publications analyzed show, public spending measures often have bigger multipliers than the ones related to tax reduction. This effect is amplified, as just mentioned, if the monetary policy does not offset the fiscal measure or in the case of the impossibility of changes in the policy rate, as in the “zero bound case”. Devereux (2010) argues that when the Taylor rule is effective or, in other words, when the economy is on a “normal path”, as predicted by NMC models, fiscal multipliers are generally low. Christiano, Eichenbaum and Rebelo, (2011) and Eggertsson (2009) also say that public spending has higher multiplier effects when the economy faces the liquidity trap. The values are also positively related to the time expected for the interest rate to continue in the lower bound. If, because of the implementation lags, the stimuli are expected to continue in a future where interest rates are expected to be low, the multiplier effects would be higher than when the rates are expected to increase (CHRISTIANO; EICHENBAUM; REBELO, 2011).

Assumptions on expectations about the duration of fiscal stimuli would also influence the multiplier estimates. Using the same model as Cogan *et al.* (2010), Eggertsson (2009) found bigger multipliers. While the former presupposed a permanent fiscal stimulus (which could raise concerns about future crowding out), the latter assumed the fiscal stimulus as a temporary response to a contractionary shock.

Even with all the divergence among the studies elaborated during the crisis, and even being almost impossible to reach a consensus about the size of fiscal multipliers, or about the proper model to use, some major statements were prevalent in mainstream literature:

- a) in general, public spending (consumption and investment) has higher fiscal multiplier effects than other fiscal measures;
- b) multipliers derived from public investment are not substantially higher than the public consumption ones in the short run, but they have the advantage to increase potential output in the long run;<sup>23</sup>
- c) to any size of fiscal stimulus, multipliers are smaller in smaller and more open economies;
- d) the more susceptible to financing constraints is the public sector, the smaller the multiplier;
- e) fiscal policy effects on the economy are more effective when monetary policy accommodates them;
- f) in the zero bound interest rate case fiscal multipliers are potentially bigger.

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23 See Freedman, Kumhof, Laxton and Lee (2009) for a broader discussion.

The discussion about fiscal multipliers did lead NMC authors to reconsider the consequences of active fiscal measures on the economy, but in quite a chaotic way. An additional issue was pointed out in IMF (2012c): papers tended to underestimate the fiscal multipliers to minimize the effects of fiscal contraction on GDP growth.<sup>24</sup> As pointed out by Solow (2011, p. 2), a priori beliefs would have to be set aside if this debate is ever to produce some convergence:

There is a perceptible tendency for those who a priori disapprove of discretionary fiscal policy to find smaller multipliers and those who approve to find larger ones. But I think this tendency can be turned into healthy criticism, and lead, if not to consensus, then to a narrower range.

## 4.2 Automatic Fiscal Stabilizers: the Imminence of a Consensus

NMC authors do not seem to disagree about automatic fiscal stabilizers. However, since the economic shock in 2008 made clear that automatic stabilizers were insufficient<sup>25,26</sup> to cope with deep crises, the theme has gained new contours. The NCM improved the discussion about automatic fiscal stabilizers based on two approaches.

The first approach defended the strengthening of the conventional automatic fiscal stabilizers and is related to the government's capacity to change its tax collection and spending policies. In a broad sense and in most economies, the conventional automatic fiscal stabilizers result of the combination of somewhat rigid government expenditures with tax revenues with income-elasticity of approximately one, as well as of social insurance programs (such as defined-benefit pension and unemployment benefit systems), and of progressive income taxes (BLANCHARD; DELL'ARICCIA; MAORO, 2010). So, the traditional way to improve automatic fiscal stabilizers is to take measures that increase the progressivity of the tax system and the establishment of more generous social programs (BLANCHARD; DELL'ARICCIA; MAORO, 2010; CLAESSENS; DELL'ARICCIA; IGAN; LAEVEN, 2010). Such policies involve political economy issues, namely the ones about the size of the government and about the efficiency of public spending. They tend (IMF, 2008a) to arouse old debates about the alleged dichotomy between the increase of economic stability (since more robust stabilizers help to diminish output

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24 "The main finding, based on data for 28 economies, is that the multipliers used in generating growth forecasts have been systematically too low since the start of the Great Recession, by 0.4 to 1.2, depending on the forecast source and the specifics of the estimation approach. Informal evidence suggests that the multipliers implicitly used to generate these forecasts are about 0.5. So actual multipliers may be higher, in the range of 0.9 to 1.7." (IMF, 2012c, p. 41)

25 Some authors defend the adoption of discretionary fiscal actions because of the insufficiency of the automatic fiscal stabilizers, such as Auerbach and Gale (2009a) and Feldstein (2009).

26 According to Feldstein (2009), only 1/3 of the total output loss during 2009 in USA was offset by automatic fiscal stabilizers.

volatility) and the decrease in efficiency (because it is argued that a bigger government is associated to lower growth rates). Claessens, Dell'Ariccia, Igan and Laeven (2010), for instance, believe that a tax system reform, a change in the composition of public spending, and a reform in social security system must be motivated by issues other than economic stability and might not be primarily seen as a way to improve automatic fiscal stabilizers.

Baunsgaard and Symansky (2009) summed up the discussion presenting the possibilities and the difficulties of improving conventional automatic fiscal stabilizers. According to them, permanent changes in taxes or in public spending might not be efficient and could even have undesirable side effects. The example was the increase of income taxes: despite of their high elasticity, they do not increase automatic stabilizers in a significant way.<sup>27</sup> While acknowledging that an increase in unemployment insurance payments or in public healthcare spending could strengthen the countercyclical power of automatic stabilizers, the authors emphasize the need for timeliness, avoiding lagged effects and an efficiency loss.<sup>28</sup>

The second approach, seen by most authors as a promising one, followed what Solow (2005) proposes: the pre-establishment of a set of fiscal measures to be used in critical times. According to the proposition, every time a chosen macroeconomic variable reaches a pre-determined level, a pre-determined discretionary fiscal policy would be triggered to help conventional automatic fiscal stabilizers. The main goal of such measures would be to speed up the decision processes, protecting them from political disputes and ensuring a proper and timely fiscal answer.

On the tax collection side, the examples of such fiscal measures were: a reduction in wage taxes for low-income households; a reduction in consumption taxes, to foster consumption in the short run; and an overall tax burden relief for all taxpayers. Concerning firms, the examples were temporary credit easing and incentives to countercyclical hiring.<sup>29</sup> On the public spending side, two kinds of temporary transfers were suggested: to low-income households or liquidity/solvency-constrained ones; and from the federal government to sub-national entities (BAUNSGAARD; SYMANSKY, 2009; BLANCHARD; DELL'ARICCIA; MAORO 2010; CLAESSENS; DELL'ARICCIA; IGAN; LAEVEN, 2010).

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27 "A shift in the composition of tax revenue by 5 percentage points (which is a very large change) from indirect taxes to personal income tax across G-20 countries would increase the automatic stabilizers on average by about 0.05 percent of GDP." (BAUNSGAARD; SYMANSKY, 2009, p. 8, note n. 6).

28 The authors acknowledged the benefits of the rise in unemployment insurance payments in the USA during the crisis, brought by the "Extended Unemployment Compensation Program" in July 2008. According to them, this has been a recurring policy during recessions in that country. See also Burtless (2009).

29 Baunsgaard and Symansky (2009) pointed out that such measures could encourage firms to dismiss the employees in crisis-time so they could rehire than in better terms.

The arguments in favor of these “semi-automatic” fiscal stabilizers also encompassed the uncertainty reduction on fiscal policy structure: agents would know in advance what would be the government’s actions when the economy reached the trigger point.

In what concerns the choice of the trigger-variable and of its proper limit, some authors pointed out to a fall in output (CLAESSENS; DELL’ARICCIA; IGAN; LAEVEN, 2010) or in employment (FELDSTEIN, 2007) for consecutive periods as possible triggers. Baunsgaard and Symansky (2009) however believe that the triggers should be based on projections of those variables, in order to ensure a timely and proper fiscal reaction and to avoid time-inconsistency issues.<sup>30</sup> Forward-looking “semi-automatic” fiscal stabilizers could then be used in a preventive rather than in a corrective way.

Credibility – of the estimates and of the policy implementation itself – might be an issue, according to some authors. Solow (2005) pointed out that private sector could be skeptical about fiscal packages to be used in crisis-time<sup>31</sup> and IMF (2008a) defended that these packages should carry a high level of transparency. Both works argued in favor of a change in fiscal policy governance, involving the creation of an independent and nonpartisan governmental agency, which would be responsible for recognizing the changes on business cycle, for providing the policy mix in anticipation and for evaluating the consistency of the implemented short-run measures with the medium/long-run macroeconomic goals.

In fact, mainstream authors’ concerns about transparency, credibility and efficiency in the development of the semi-automatic fiscal stabilizers seemed similar to their concerns about any kind of discretionary fiscal policy – only smaller, given their automaticity. Any measure that departs from conventional fiscal stabilizers is thus seen as a potential threat to the sustainability of public accounts. However, the way the fiscal sustainability issue was presented during the crisis debate in mainstream was a little different from the conventional one. The peculiarities are the subject of the next section.

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30 The authors also argued the triggers should be activated only in severe recessions. To avoid the debt bias, the automatic measures should be symmetrical: fiscal accounts should be balanced over time, with an expansionary fiscal policy during the downturn replaced by a contractionary one during the recovery. However, the cost of policy changes should be taken into account in face of the advantages of the measure implemented, mainly in the case of tax changes. Besides, the chosen policies should have the highest multipliers so the maximization of fiscal policy would be guaranteed (BAUNSGAARD; SYMANSKY, 2009, p. 15-18).

31 According to the author, the arguments are the same as the ones used against a discretionary fiscal policy package: the package is never neutral, since there are political and distributive issues and the perception of such issues affects the agents’ choices; agents’ reactions to changes in the tax system are costly, and can be themselves the cause of inefficiencies; temporary changes on taxing can be inefficient if they do not affect or if they just marginally affect the agents’ permanent income or their intertemporal decisions. Solow (2005, p. 512-513).



### 4.3 Fiscal Results of the Crisis: the Strengthening of Conventional View?

Fiscal stimuli were crucial to avoid a deep depression of the world economy. Given the size of the crisis and the corresponding fiscal packages governments implemented around the world, the natural consequence was the deterioration of public accounts in most economies – though one must not forget that a significant part of the increase of public debt resulted from the socialization of private debt.<sup>32</sup>

The rise in world general government debt from less than 60% of GDP in 2007 to more than 75% in 2009 (IMF, 2010b, 2016) revived mainstream concern about debt sustainability. At the crisis' trough (2009) more attention was paid to the advanced economies because they were already in a weaker fiscal position around 2007 and their public deficits had just shown a significant rise. The downturn in economic activity and, "to a much lesser extent, stimulus measures pushed fiscal deficits in advanced economies up to about 9 percent of GDP" (IMF, 2010b, p. 6) and general government debt to 92% of GDP.<sup>33</sup> In emerging markets and middle income economies the picture was less worrisome since public deficit and general government debt reached 3.7% and 39.7% of GDP, respectively, in 2009<sup>34</sup> (IMF, 2016). Such countries had a relatively better fiscal position before the crisis, mainly because some of them had come from a long period of fiscal adjustments (IMF, 2009b; GHOSH; CHAMON; CROWE; KIM; OSTRY, 2009; DEVEREUX, 2010) and had strengthened "policy frameworks and institutions in response to earlier crises" (IMF, 2010b, p. 8).

Whereas the pre-crisis level of indebtedness did not curb the fiscal packages implemented to deal with the downturn, countries that entered the 2008 crisis with sounder fiscal positions had, according to some authors (BLANCHARD DELL'ARICCIA; MAORO, 2010; EICHENGREEN, 2012), better performance than the ones with high levels of public indebtedness and/or financing constraints. This perception reinforced the discussion about how to conciliate the fiscal measures

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32 Eichengreen (2012, p. 194) acknowledged the problem: "[The policy makers] socialized bad debts of the financial and nonfinancial sectors by taking them onto the public-balance sheet, transforming a problem of private debt sustainability into a problem of public debt sustainability but without resolving the underlying issues."

33 The latest data show that advanced economies were able to reduce their overall deficit to 2.6% of GDP in 2015 and remained unchanged since then (IMF, 2018). IMF's (2010b) projections for a debt/GDP ratio over 100% in the years following the crisis were confirmed: advanced economies' General government debt reached 102.6% of GDP in 2011, the maximum value of 106.7% in 2012 and from 2013 to 2017 it was about 105.4%. Projections show that the debt will fall to 103.9% of GDP in 2018 and reach 100.4% by 2023 (IMF, 2018).

34 Emerging markets and middle-income economies reduced their overall deficit to 0.9% of GDP in 2011 (the minimum value since 2009) but after 2012 the deficit started increasing, reaching 4.4% of GDP in 2017. As a consequence public debt/GDP also increased, reaching 49.0% in 2017 (IMF, 2018).



needed to overcome the economic downturn with long-run fiscal sustainability<sup>35</sup> (SPILIMBERGO; SYMANSKY; BLANCHARD; COTTARELLI, 2008).

Freedman, Kumhof, Laxton, Lee (2009) stated that the key for a well-suited fiscal stimulus was to implement measures that would not undermine medium-run sustainability of fiscal policy. Cottarelli and Viñals (2009) argued that, even if the crisis' trough was not a proper moment to suspend fiscal stimuli, it would be the proper time to design the strategies governments and central banks should adopt to take their fiscal and monetary positions back to the normality. Wolf (2010), Bornhorst, Budina, Callegari (2010) and IMF (2010a; 2013b) were concerned about the balance between market fears about the sustainability of public accounts and the removal of public incentives, since both could compromise economic recovery. Several papers restated the conventional concern about the negative impacts of a high debt and/or a rising debt on growth rates, reinforcing the arguments in favor of fiscal adjustments<sup>36</sup>. Basically the arguments restated the conventional NMC view that high public debt pushes long run interest rate up while the economy is recovering. This would lead to the crowding out of private investment, reducing growth rates and potentially increasing inflation (IMF, 2009b; Devereux, 2010). Woo and Kumar (2015, p. 716)<sup>37</sup> estimates that “[...] a 10 percentage point increase in initial debt-to-GDP ratio is associated with growth slowdown around 0.1% – 0.15% in advanced economies, compared to 0.2%–0.3% in emerging and developing economies [...]” and that the same increase in debt-to-GDP ratio “[...] is associated with decline in domestic investment by about 0.4 percentage points of GDP [...]” (id. p 729): non-trivial amounts specially among countries with already low potential output. Reinhart and Rogoff (2010, p. 577) argued that “[...] across both advanced countries and emerging markets, high debt/GDP levels (90 percent and above) are associated with notably lower growth outcomes [...]” and used the findings to defend a pro-austerity fiscal package. The paper, used as a reference for the Republican proposal to USA's 2012 Budget<sup>38</sup> was widely criticized<sup>39</sup> as much for its methodological faults as for its proposal for austerity in a moment when the economy still needed growth stimuli.

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35 Eichengreen (2012) argued that governments around the world avoided an economic collapse in 2007-2009 postponing it to the following years when investors would realize the fiscal and debt sustainability issues and force a fiscal tightening to highly indebted governments.

36 According to IMF (2010a) it would be possible for the market to lose its confidence on government responsibilities over public debt and react in an abrupt way, leading to a new financial crisis. See also Auerbach e Gale (2009b; 2009c) and Everaert, Fouad, Martin and Velloso (2009).

37 The paper was firstly published as Kumar and Woo (2010) in IMF Working Paper series in July 2010, following the discussion started with Reinhart and Rogoff (2010).

38 *House Committee on the Budget* (2011).

39 Wray (2013), Krugman (2013) and Smith (2013).

Perotti (2013) recanted his previous views on austerity<sup>40</sup> admitting that fiscal contractions should be implemented with caution since the effects may differ according to the country's specificities and since the results of previous adjustment programs might not be replicated in a different macroeconomic environment. The author also recognizes, as Krugman (2010), that the alleged cases of expansionary fiscal contractions were in fact related to export booms and not to an increase in confidence and consequent rise in investment as advocated by the theory.<sup>41</sup> Alesina and Ardagna (2010), IMF (2010c) and Romer and Romer (2010) argue that fiscal contractions are, in fact, contractionary in the short-run. The latter two papers present some historical evidence showing that fiscal tightening implemented immediately after a great fiscal stimulus compromise growth and worsen the economic situation, since it always reduces output and raises short-run unemployment rates.<sup>42</sup> Also, when the zero lower bound on interest rates is reached, central banks cannot further reduce them in order to mitigate the contractionary effects and that makes the fiscal consolidation periods even worse.

Since the crisis the trade-off between keeping the fiscal stimulus for economic recovery and the proper time to implement a fiscal consolidation plan to put debt/GDP back on track has been an ever-present issue in IMF official publications. They express a relative consensus that the proper timing for fiscal adjustment seems to be different across different economies, depending on the strength of the economic recovery, on the external imbalances, on the debt/GDP levels and on the fiscal primary balance, as well as on a set of economic variables that could influence markets' judgment about economic conditions (IMF, 2010b, 2016).

The debate between fiscal contraction and fiscal stimuli tended to a near-consensus on a slightly less conventional argument, stressing the need to generate fiscal space as a precondition for governments to run bigger public deficits when necessary:

[...] the sustainability of the eventual debt burden constrains the scope of expansionary fiscal policy, and it will not be possible to support demand for an extended period in economies that have entered recession with weak fiscal balances and large levels of public debt (IMF, 2009a, p. 132).

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40 That is, the expansionary fiscal contraction thesis that he started to discuss in Alesina and Perotti (1995).

41 As first introduced by Giavazzi and Pagano (1990). But, although recognizing this was not the case of the 2008 crisis, Perotti (2013) defends that a budget consolidation in the short run may be a necessary condition for output expansions. The argument is that previous fiscal consolidations induced a reduction of nominal interest rates, provoked wage moderation, with impacts in reduction of expected inflation and, finally, caused a depreciation that generated an export boom.

42 In the same line, Auerbach and Gale (2009a) analyzed the Great Depression and Japan's crisis in the 1990's. In both cases, they contend, economic recovery was discontinued because of premature measures. The authors argued that the Great Depression's great teaching was that fiscal tightening just after fiscal stimuli worsened even more the crisis.

[...] the lesson from the crisis is clearly that target debt levels may need to be lower, or at least the fiscal spaces need to be higher, than those observed before the crisis. The policy implication for the next decade is that, should economic growth recover rapidly, this should be taken as an opportunity to reduce debt/GDP ratios substantially, rather than to finance expenditures increases or tax cuts. (CLAESSENS; DELL'ARICCIA; IGAN; LAEVEN, 2010, p. 19).

The defense of fiscal consolidation in this renewed view embodied a concern about the ideal timing of the adjustment: policymakers should avoid fiscal consolidation while the economy is recovering, but they should commit to do so in the near future.<sup>43</sup> As the argument goes, the efficiency of fiscal expansion depends on the adoption of some parallel measures to demonstrate governments' commitment to future sustainability of public accounts.<sup>44</sup> Provided these measures enhance markets' trust on government and also on their future yield prospects, the measures would support activity during the adjustment process, mitigating negative short-run effects during the future fiscal consolidation (IMF, 2010a).

Since IMF (2010b), the Fund has encouraged countries to find a proper balance between fiscal discipline and the needed flexibility for discretionary actions (see, for instance, IMF 2016). This proposal differs from the traditional one because it accepts that fiscal policy can have some discretionary role, while the previous view was just concerned with public accounts sustainability and, consequently, with rules supposed to guide fiscal behavior at any time. Mainstream authors did not abandon the sustainability view, but added some kind of flexibility to allow for punctual fiscal departures from a pre-established path. We believe that this change in the mainstream perspective, though clearly a minor one, can however pave the way for a wider discussion of fiscal policy.

## 5 Concluding Remarks

The 2008 crisis confirmed quite a robust stylized fact: pragmatism and open-mindedness among policymakers and mainstream economists have a positive correlation with the perceived seriousness of the economic juncture. However, while the Great Depression brought *The General Theory*, the Great Recession did not go much beyond a conditional rehabilitation of mild discretionary fiscal policies, seen as an in-extremis tool to cope with crisis situations. To cope with the Great Recession, mainstream economists dared to turn their prescriptions counter clockwise

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43 IMF (2009b, p. 16) stated: "The premature withdrawal of stimulus seems the greater risk in the near term, but developing the medium-term macroeconomic strategy beyond the crisis is key to maintaining confidence in fiscal solvency and for price and financial stability."

44 Such measures should necessary involve the strengthening of fiscal institutions, the development of fiscal rules and the reform of some public services, such as healthcare and pensions systems in advanced economies, for example.

– but just a bit. They still contend that an active fiscal policy has no role in “normal” situations, when the monetary policy is still supposed to dominate.

At any rate, this illustrates another stylized fact. When the future is clouded, it may be useful, in a discipline such as Economics, to take a look at the past, which may reveal roads not taken or prematurely abandoned. As in many other social sciences, one should not assume that the “frontier” presents a reliable synthesis of every valuable contribution made in the past.

The recent mainstream debate, has, in fact, paid tribute to at least two of the British Economic War Cabinet proposals for the post-war macroeconomic policy. One was to the idea of an “instantaneous automatic stabiliser”, suggested by James Meade in 1943 (Keynes, 1978, p. 318). The other was to the predefinition of fiscal measures to be used in critical times. This is similar to one of the main pillars of Keynes’ full-employment policy proposals: a predefined “long-term investment programme” (Keynes, 1978, p. 357; our emphasis) should be accelerated or dimmed according to the government’s forecasts about the future behaviour of private investment.

Had they dug deeper, mainstream economists might have found occasion to reconsider Keynes’s (much more heretic) disbelief both in the self-adjusting properties of the economic system and in the powers of monetary policy as a countercyclical tool.

Of course, dispensing with the idea that the economic system tends towards a “natural” rate of interest or that the monetary authorities can easily achieve such a rate makes room for acknowledging the potential uses of fiscal policy as a permanent tool, as conceived by Keynes. However, one must admit that Keynes did not leave much more than scattered thoughts about the features and the implications of such a policy. He certainly did not provide definitive (or even definite) answers to worries that continue to haunt economists (even heterodox ones): what are the economic and/or political conditions for an active fiscal policy to be “sustainable”? What are the implications of “too big a deficit” or of “too big a debt”?

The persistence of either “vague” (mostly in the case of heterodox economists) or adamant (in the case of orthodox ones) “panic fears” (KEYNES, 1937) about public accounts suggests the interest in revisiting another old master, Abba Lerner. Indeed, Lerner’s “functional finance” was meant to explore the policy implications of *The General Theory*. The implications he extracted, as definite as bold, were carefully and unabashedly presented: “[...] the national debt, when it is not owed to other nations, is not a burden on the nation in the same way as an individual’s debt to other individuals is a burden on the individual [...] the absolute size of the national debt does not matter at all [...]” (LERNER, 1943, p. 43, 47, our emphasis). Bold as they are, statements such as these deserve to be read with at least an initial “suspension of disbelief”. They may well provide a fresh re-start to

our “preconditioned ears” (LERNER, 1943, p. 38). Moreover, they may help to extricate the purely economic aspects of the fiscal policy – which Lerner discusses with an (to quote Keynes) “impeccable” logic – from the political ones, which Lerner tended to dismiss with a certain nonchalance.

Lerner’s functional finance has become, in fact, quite a popular destination to post Keynesian (most especially the researchers gathered under the banner of the “modern monetary theory”, or MMT) and Sraffian economists.

MMT theorists have contended that, provided a country possesses a “sovereign currency” (see, for instance, WRAY, 2015), it can (and it should) have its government “[...] directly involved continuously over the cycle, by putting in place structural macroeconomic programs that directly manage the labor force, pricing mechanisms, and investment projects, and constantly monitoring financial developments [...]” (TYMOIGNE; WRAY, 2013, p. 44). The employer of last resort is one (and probably the most notorious) of these structural programs. The MMT vindication of Lerner has elicited an intense controversy among heterodox economists. One of the bones of contention is the feasibility of functional finance in open economies, most especially for developing countries, with their low-ranking currencies in the money international hierarchy (PRATES, 2017; VERGHANANI; CONTI, 2017).

Sraffian economists have rescued from oblivion yet another past master: Haavelmo (1945) and his balanced budget multiplier, which shows (as some of us were taught in old-fashioned macroeconomic courses) that an increase in public expenditure does not need to create a deficit to be expansionary (SERRANO, 2008).

Moreover, the so-called Sraffian supermultiplier, pioneered by Serrano (1995), and recently embraced by economists such as Lavoie (2016) and Allain (2014), has allowed for a new take on growth-related issues. Being demand-led (both in the short and in the long run), supermultiplier models are entirely compatible with the Keynesian tradition. However, in order to describe medium- and long-term trajectories, they assume the creation of productive capacity by private firms to be a completely induced expenditure – given the fact that, ultimately, firms endeavour to adjust productive capacity to demand. The implication is that other autonomous demand variables can emerge as the leading actors in dynamic processes, for example, exports (as in the preceding and better known Thirlwallian models), consumption out of wealth (or debt), residential investment and, of course, government expenditure. Now, each of these possible trajectories has its own specificities (behavioural, technical, financial...), and must be studied and modelled accordingly (SERRANO; FREITAS, 2016).

Certain aspects of government-led growth regimes will be surely hard to model – as, for instance, the irrational feeling of impending doom that tends to plague both pundits and the laymen whenever the public debt increases. This does not

mean that, as economists, we are entitled to assume these aspects away. There is – as there was already in the times of Keynes and Lerner – a battle for public opinion, to be fought with patience and pedagogy (as with policy measures, such as capital flow regulations). But, as heterodox economists, we will be much better prepared if we have acquired some clarity about the objective and strictly economic aspects of such regimes. As Lerner (1943) himself acknowledged (as many MMT and Sraffian economists do), increases in public debt may have important (and possibly negative) distributive implications, for they have wealth and income effects. However, to the best of our knowledge, these effects have not been given due attention. To study the dynamic implications of an increasing public debt, a precise description of the initial distribution of financial wealth between agents is required, as well as of its evolution over time, with their possible implications on savings and expenditure patterns and on tax policy. We believe that such a research may well help heterodox economists to understand the political economy problems elicited by fiscal policy. This may seem an exacting task, but our guess is that full-fledged stock-flow consistent models would be up to it (CAVERSAZI; GODIN, 2015).

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