Rethinking fiscal policy : lessons from the european monetary union

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International Labour Office
Geneva

Employment Policy Department

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Preface

The primary goal of the ILO is to work with member States towards achieving full and productive employment and decent work for all. This goal is elaborated in the ILO Declaration 2008 on Social Justice for a Fair Globalization,[1] which has been widely adopted by the international community. Comprehensive and integrated perspectives to achieve this goal are embedded in the Employment Policy Convention of 1964 (No. 122), the Global Employment Agenda (2003) and – in response to the 2008 global economic crisis – the Global Jobs Pact (2009) and the conclusions of the Recurrent Discussion Reports on Employment (2010 and 2014).

The Employment Policy Department (EMPLOYMENT) is engaged in global advocacy and in supporting member States in placing more and better jobs at the centre of economic and social policies and growth and development strategies. Policy research and knowledge generation and dissemination are essential components of the Employment Policy Department's activities. The resulting publications include books, country policy reviews, policy and research briefs, and working papers.[2]

The Employment Policy Working Paper series is designed to disseminate the main findings of research on a broad range of topics undertaken by the branches of the Department. The working papers are intended to encourage the exchange of ideas and to stimulate debate. The views expressed within them are the responsibility of the authors and do not necessarily represent those of the ILO.

Azita Berar Awad
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[1] See http://www.ilo.org/global/about-the-ilo/mission-and-objectives/WCMS_099766/lang--en/index.htm

[2] See http://www.ilo.org/employment

Foreword

The slow and uneven pace of economic and employment recovery since the 2008 global financial crisis highlights the need to reconsider macroeconomic policy thinking. There is a need to find policies that are more pro-employment, ensuring fast, inclusive and sustainable economic growth. This is all the more important in view of developed and developing countries' commitment to achieving the Sustainable Development Goals (SDGs), especially Goal 8 "to promote inclusive and sustainable economic growth, employment and decent work for all".

The International Labour Organization (ILO) has been working on pro-employment macroeconomic policies for a number years, assisting member States' efforts towards decent work and productive employment for all. Constituents asked the ILO to identify pro-employment macroeconomic policy frameworks, notably in the 2003 *Global Employment Agenda*, the 2008 *ILO Declaration on Social Justice for a Fair Globalization* and the 2009 *Global Jobs Pact*. More recently, the 2014 International Labour Conference *Conclusions concerning the Second Recurrent Discussion on Employment* specifically called for assistance to policies that "support aggregate demand, productive investment and structural transformation, promote sustainable enterprises, support business confidence, and address growing inequalities" (ILO, 2014: 7(a)).

This paper challenges the ideological and empirical basis of the "New Consensus" to macroeconomic policy, which advocates limited government intervention to correct short-term deviations from the growth path constrained by a rules-based framework. Based on the recent experience of the United States and the Economic and Monetary Union of the European Union (EMU), the paper argues that the New Consensus has yielded a policy stance that is excessively "hands off", slow to respond to economic downturns, and has led to premature austerity, all of which have stifled the recovery. This provides lessons for not only developed countries, but also developing and emerging economies seeking to design macroeconomic policy frameworks to cope with the economic cycle and spillovers from the globalized economy.

This paper was authored by Professor Francesco Saraceno, Deputy Department Director at the French Observatory on Economic Conditions (*Observatoire français des conjonctures économiques* - OFCE) at Sciences Po in Paris, and member of the Scientific Board at the LUISS School of European Political Economy in Rome.

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Abstract

This paper gives an assessment of the current state of the debate on fiscal policy effectiveness. I begin with an account of the theory of fiscal policy, and how it has evolved from the pre-Keynesians to the emergence of a "New Consensus" that dominated theory (and policy-making) until the crisis of 2008. Fiscal policy, a critical underpinning behind the full employment policies of the Post-WWII period, was removed from the policy-makers' toolbox by the New Consensus, and preference given to rules over discretion in government interventions.

The paper then highlights how the Economic and Monetary Union of the European Union (EMU) is an incarnation of the New Consensus, and argues that this had a rather negative impact on the growth performance of the Eurozone. The Stability and Growth Pact, the EMU fiscal rule, is then dissected to conclude that it is far from optimal even if it was never really applied. The paper then shows how the crisis has shaken the Consensus, and is leading to a reassessment of the utility of fiscal policy.

Key words: Fiscal rules, fiscal policy, EMU, multipliers, history of economic thought, United States

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Abbreviations

DSGE	dynamic stochastic general equilibrium
ECB	European Central Bank
EMU	Economic and Monetary Union of the European Union
EPL	employment protection legislation
Fed	Federal Reserve (United States)
IS-LM	investment–saving (IS) - liquidity preference–money supply (LM) model
OECD	Organisation for Economic Co-operation and Development
RBC	Real Business Cycle
SGP	Stability and Growth Pact (European Union)

1. Introduction

In the 1990s, the debate among macroeconomists settled on a "'new consensus" that depicted the economy as fluctuating around a natural growth rate, essentially determined by the supply side of the economy. Demand factors (savings, investment, fiscal and monetary policy) could only have an impact in the short run, when the economy was away from the natural rate - the rate at which the economy would converge in the medium-to-long run.

The crisis has shaken this consensus, to the point that the former IMF chief economist Olivier Blanchard is thoroughly revising his best-selling undergraduate textbook to take into account the insights gained from the deepest recession in advanced economies since the 1930s (Blanchard, 2016). This reassessment may have a strong impact on our understanding of how macroeconomic policy impacts on growth and unemployment, and lead to a different consensus on the best institutional framework for advanced and developing economies.

This paper gives an account of the ongoing discussion, with a particular emphasis on fiscal policy, which the New Consensus had eliminated from the policy maker's toolbox. I will first see (Section 2) how the current Consensus has its roots in the debate between Neoclassical and Keynesian economists that characterized the twentieth century. I will show how the Consensus represents a substantial rejection of Keynesian views, and how it concludes in favour of strong constraints on macroeconomic policy, and in particular in favour of fiscal rules (Section 2.3.1). Sections 3 and 4 will then take the Economic and Monetary Union (EMU) in Europe as a case study. After showing that the EMU has been consistently performing worse than the United States, I will argue that macroeconomic policy inertia – a consequence of its institutional setting – may go a good deal in explaining the differences in performance. In Sections 5 and 6, I will then discuss macroeconomic policy after the crisis, and draw some conclusions on advanced as well as on emerging and developing economies.

2. The role of macroeconomic policy: A century-old debate

In his (1962) *Structure of Scientific Revolutions*, Thomas Kuhn defines a paradigm as a "Constellation of beliefs, values, techniques and group commitments shared by members of a given community, founded in particular on a set of shared axioms models and exemplars" (p. 175). Kuhn argues that at any given moment in time there exists a dominating paradigm providing the conceptual framework within which scientific advances take the form of refinements of the paradigm itself (the "normal science"). Sometimes new facts appear that are incompatible with the existing dominant paradigm, therefore requiring a new framework. The adoption by the scientific community of a new paradigm is a scientific revolution. Kuhn explains scientific progress as the succession of paradigms, each of them becoming the "mainstream" when the previous one proves incapable of explaining new phenomena.

At the price of some simplification, the debate on economic policy during the twentieth century can be seen as the struggle between two paradigms, (i) the Neoclassical and (ii) the Keynesian schools, that yield radically different conclusions on the role of markets and governments respectively in ensuring that the economy reaches the optimal equilibrium. We will see that, consistently with Kuhn's framework, each of these paradigms was supplanted when it came across phenomena that would not fit within its framework.

The very specific focus on macroeconomic policy explains why many streams of research, that cannot be associated with either the neoclassical or the Keynesian schools, were left out of this section: it does not have any pretense to be exhaustive.

2.1 The birth of macroeconomics: Keynes vs the Classics

2.2.1 The Neoclassical School

The beginning of the Neoclassical theory dates back to the second half of the nineteenth century, in opposition to the classical school. The tumultuous development of scientific discoveries constitutes the background against which the Neoclassical School moved its first steps.

The pillars: The scientific method and methodological individualism

From its beginning, with Jevons (1871), Menger (1871), and Walras (1874), the neoclassical theory has been rooted in two methodological pillars that, given the extreme variegation of successive developments of the theory, may be seen as the main elements that Neoclassical economists have in common: the first is *methodological individualism*, and the second the *scientific method*.

The concept of *methodological individualism* has quite obviously been the subject of considerable controversy among philosophers, economists and sociologists[1]. For our rather general purposes it suffices to take its most common definition, as the claim that the rational agent (the *Homo Œconomicus*) is the ultimate starting point to analyse the behaviour of societies that do not exist above or beyond the individuals who compose them. All social sciences should therefore study aggregate behaviours as the simple aggregation of individual decisions and actions. There is no role for the so-called *emergent properties*, i.e. for the dynamics generated by social interaction.

The *scientific method* in its simplest definition is the three-step process by which (1) a theory is constructed starting from first principles; (2) normative and positive conclusions are drawn from this theory; and finally (3) through a process of empirical falsification, the theory is compared to the facts that the theory was meant to explain. The scientific method is a pillar of natural sciences, like physics and chemistry that blossomed in the second half of the nineteenth century. It is therefore embraced by economists that try to "clean" their discipline from its social connotation, thus building it on laws of nature that are not affected by historical and social conditions:

> In the closing quarter of the last century, great hopes were entertained by economists with regard to the capacity of economics to be made an "exact science". According to the view of the foremost theorists, the development of the doctrine of utility and value had laid the foundation of scientific economics in exact concepts, and it would soon be possible to erect upon the new foundation a firm structure of inter- related parts which, in definiteness and cogency, would be suggestive of the severe beauty of the mathematico-physical sciences. (Moore, 1914: pp. 84-85)

Neoclassical economists move from the notion of maximization to derive a number of individual behavioural rules (supply and demand) for all economic agents. The *Homo Œconomicus* maximizes his utility by equating at the margin the costs and benefits of any given action, starting from a set of first principles such as tastes or technology. In the

[1] For a discussion of different uses of the term, see Hodgson (2007); and for a critique, Kirman (1992).

benchmark neoclassical model, agents take their decisions in *perfectly competitive markets*.

Representative agents maximize their utility, under a number of constraints. The theory usually assumes that goods can be substituted for each other in the consumption bundle of consumers, and likewise production can be obtained with different combination of production factors. Thus, given the prices they observe, consumers and firms will compose bundles (of consumption goods or of production factors) that maximize their utility. This maximization yields individual demands and supplies (of goods, of labour and capital, and so on). Demands and supplies for society at large, then, simply result from the aggregation of the choices by the representative agents.

A meta-agent (the "auctioneer", see Walras (1874)) is then invoked to mimic the functioning of markets that adjust prices in order to absorb disequilibria that may arise at any given price. Excess demand (supply) of a good will lead to an upwards (downwards) adjustment of its price by the auctioneer. Once this *tâtonnement* ("trial and error") process is over, and prices in all markets are at equilibrium, transactions can take place. Thus, trade never happens at disequilibrium prices.

Market efficiency and full employment

The Neoclassical theory is characterized by two main theoretical results that have shaped the field of economics to our days:

1. *Existence* - First, under rather general conditions (mostly on the shape of utility and profit functions), it can be proved that a vector of prices exist such that all markets clear. Said differently, the *tâtonnement* process described above will eventually lead the auctioneer to announce a set of prices such that in each market the sum of individual demands is equal to the sum of individual supplies. This result was first obtained by Walras (1874).
2. *Optimality* - Second, under a number of hypotheses on the functioning of markets, such an equilibrium is "Pareto efficient", meaning (broadly speaking) that no one can be made better off without someone being made worse off. While a Pareto efficient equilibrium may not be socially desirable (e.g. in terms of fairness), a second result states that any Pareto efficient allocation may be reached by markets after an appropriate redistribution of initial endowments. These two result go under the name of "Fundamental Welfare Theorems" first proposed by Vilfredo Pareto (1896).

The conditions for efficiency to be attained boil down to the absence of *rents and market frictions*. One such rigidity is market power. Absent perfect competition, monopolists (or oligopolists) can take advantage of their position to extract rent from consumers, thus moving the economy away from its Pareto optimum. For the same reason, agents should not have informational advantages (for example on the quality of a good they sell), because this informational asymmetry would also lead to extracting rent from the exchange. In a famous paper George Akerlof (1970) showed that the existence of "lemons" in a market characterized by asymmetric information may lead to the withdrawal from the market of the owners of good quality goods, thus leading to the collapse of the market itself.

Besides the absence of rents, the optimality of market allocation also requires the absence of rigidities (like missing markets, price stickiness and so forth), that would prevent convergence to the Pareto optimal equilibrium.

The general principle that price variations will ensure that the demand and supply of any good eventually converge is, for our purposes, particularly important concerning the labour market. In that market, real wages will change until labour demand and labour supply are equal. Labour supply, more specifically, stems from workers' choice between

leisure and income. Under fairly standard conditions wages eventually reach the level at which labour supply and demand are equal. In the Neoclassical equilibrium, *all unemployment is voluntary*.

Macroeconomic equilibrium and Say's Law

Once wage flexibility brings about full employment equilibrium in the labour market, the prevailing technological conditions allow to determine the amount of goods that the economy is capable of producing, what today would be called *potential output*. The Neoclassical theory rests, then, on the well-known *Say's Law* (Say, 1803); the law is nothing else than the simple and trivial principle that the very fact of producing and selling a good generates an income for the factors involved in the production process, and this in turn generates a corresponding demand of the same value for other goods.

Within the Neoclassical framework, nevertheless, Say's Law leads to the result – which is not trivial at all – that prices will move in such a way that an amount of demand corresponding to the full employment equilibrium production will be always be generated: in markets free from frictions and rents, demand will always "adapt" to full employment output.

If we look at the economy as a whole, Say's Law takes a very specific form, which is that investment decisions always adapt to savings decisions. Most of the controversies on macroeconomic equilibrium and the role for economic policy may in fact be seen as different views on how savings and investment come to become equal. The decision of firms to invest depends on the interest rate: either directly, when firms seek funding from a financial institution or on bond markets; or indirectly, because the interest rate is an *opportunity cost*.

Savings will also depend on the interest rate, as the decision to save is a decision to postpone consumption, and therefore entails a cost that is balanced against the remuneration of savings. The interest rate is therefore the price that allows the levels of investment and savings to equalize.

Thus, the macroeconomic equilibrium in the Neoclassical model is reached in two logically separated steps: (i) wage flexibility allows to reach an equilibrium wage at which all workers willing to work will be able to find a job. Then, (ii) revenues will yield consumption, that absorbs part of the production, and savings, that in the market for loanable funds will be channeled into investment. This will ensure that demand absorbs all full employment production[2].

Thus Say's Law, together with the Neoclassical assumptions of representative agent optimization and wage and price flexibility, yields convergence to the full employment, Pareto optimal equilibrium.

The (limited) role of policy

The existence and optimality theorems were the backbone of the Neoclassical theory as it developed until the late 1920s. As such, the theory leaves very little space for macroeconomic policy: representative agents' maximization will determine demand and supply of goods; price variations will ensure that the economy converges at the equilibrium in which each good's demand and supply coincide. If the economy is unable

[2] These two logically separated steps collapse, in a general equilibrium setting, into a simultaneous determination of equilibrium prices and quantities in all markets.

to generate enough investment to absorb all savings, interest rate variations will take care of ensuring that savings and consumption are matched.

These mechanisms work without external interventions: markets, if left free to operate without distortions, tend to converge to the optimal equilibrium. If on the other hand, markets fail to spontaneously head to equilibrium, this is because some agents in the economy are in position to extract rents from the market process. We saw above that this happens when markets are not competitive or if some agents have an informational advantage over others.

The existence of a Pareto superior equilibrium to which the market economy spontaneously tends once the appropriate conditions are met has a very strong policy implication: governments need not to tamper with the economy. In terms of the national accounting identities, the equality between investment and savings yields that government savings need to be zero: there is no need for government intervention aimed at correcting market disequilibria, or at moving away the economy from a sub-optimal equilibrium. The only effect of government expenditure, and of taxation, is to get in the way of market adjustments, and to introduce distortions in the decision process of agents.

A crucial corollary of the Neoclassical framework is that money, whose intrinsic utility is zero, is only demanded because it reduces the transaction costs of exchange.

It stems from this corollary that money is *neutral*, i.e. that it has no impact on the real sector, and only affects prices and inflation through Irving Fisher's quantity equation (Fisher, 1911), linking the quantity of money in circulation with the total value of production: if total production is determined by the equilibrium in the labour market, there is no reason why a change in the quantity of money available would change the choice of consumers between goods, or between goods and leisure.

The Neoclassical system is therefore dichotomous: the fundamentals of the economy determine the quantities produced and relative prices, while the quantity of money and credit institutions determine the general price level (inflation). Monetary policy is therefore, like fiscal policy, ineffective in affecting the activity level of the economy. The central bank needs to steer it so that the quantity of money available for exchanges follows the evolution of the real economy, so that inflation is constant.

But if macroeconomic policy is ineffective – if not outright harmful – does this mean that the government has no role to play in the economy? Not really. Very few Neoclassical economists would argue that we are close to the Walrasian ideal world[3]. The main role for economic policy then is to shape economic institutions in such a way that markets can work in an environment that is as close as possible to the ideal Walrasian world. Governments need to implement, to use a modern term, "structural reforms" that remove barriers to free competition (monopolies, asymmetric information, wage and price rigidities). If reforms are successful, and the real world becomes sufficiently close to the Walrasian ideal, then governments can take the back seat and observe markets converge to the optimal equilibrium path.

The Great Depression and the crisis of the Neoclassical paradigm

When discussing scientific revolutions, the already cited Kuhn (1962) argues that dominating paradigms tend to increase their field of application until they hit their own

[3] Two of the economists more closely linked with the development of general equilibrium theory, Walras himself and Kenneth Arrow, were famously concerned with market imperfections and with the role of government in compensating for them.

boundaries: an empirical challenge to the paradigm appears when it is confronted with some event that is impossible to explain through normal science, i.e. through refinements of scientific knowledge that remain within the paradigm.

The empirical challenge to the Neoclassical paradigm was the crisis of 1929, when market forces fail spectacularly in assuring a fast return to full employment, after the Wall Street crash. Gjerstad and Smith (2014) highlight the pattern of real estate appreciation, increasing house-hold debt and booming consumption in the period leading to the financial crisis of 1929, followed by a "Great Depression" in which falling house prices fed back into wealth contraction, and led to a contraction of consumption and investment. The "Great Recession" that started in 2008 shows a strikingly similar pattern.

But the crisis of 1929 was just the endpoint of a difficult decade, marked by the return of the pound Sterling to the gold standard, by decreasing wages and increasing debt, and in general by economic instability. This boom and bust cycle was difficult to reconcile with a theory postulating perfectly rational, forward-looking agents. And equally hard to explain was the persistence of the recession and of mass unemployment, hardly compatible with the optimal allocation of resources and the impossibility of involuntary unemployment.

Nevertheless, Kuhn argues, empirical difficulties for a paradigm are not enough to trigger a scientific revolution. An alternative paradigm, capable of overcoming those difficulties, needs to be ready to take over from the previous one.

The alternative to the efficient markets paradigm came from a group of economists working under the guidance of John Maynard Keynes. The turbulent decade that culminated with the crisis, well exemplified by the British strikes of 1926, led Keynes (1925; 1926) to question the Neoclassical faith in *laissez-faire* and self-regulating markets. With the publication of the *General Theory* in 1936, the British economist centred the theoretical challenge to the Neoclassical paradigm on the rejection of the Neoclassical dichotomy between nominal and real variables, which in turn entailed refuting Say's Law and the capacity of markets to attain full employment equilibrium.

2.1.2 Uncertainty, money, and aggregate demand: The Keynesian revolution

The publication of Keynes' *General Theory of Employment, Interest and Money* in 1936, is usually identified with the birth of macroeconomics. Faced with the disruption caused by the Great Depression, Keynes challenges the Neoclassical paradigm regarding the capacity of markets to spontaneously converge to optimal, full employment equilibria.

To challenge the Neoclassical theory, Keynes does not focus on the postulate of rationality, which he accepts. Rather, he argues that Say's Law is flawed, and that markets may be unable to generate, through interest rate variations, enough investment to match the level of savings corresponding to full employment output. In other words, aggregate demand may fail to absorb the full employment level of production. In that case, Keynes argues, the equilibrium is reached by a drop of economic activity, and of savings, that adapt to "autonomous" investment. The economy settles on an equilibrium characterized by involuntary unemployment. Keynes' message is therefore that, if the policy-maker's objective is full employment, monetary and (especially) fiscal policy need to be used actively.

But why is the interest rate unable to reach the level such that investment absorbs all savings corresponding to full employment production? The reason is, according to Keynes, that we live in a world in which both firms and households face radical uncertainty. The necessity to make choices in a context of radical uncertainty, in turn,

implies that money acquires a role that it did not have in the Neoclassical framework. Building on the work of authors such as Wicksell (1898), as well as on his own (1930), Keynes argues that money has an intrinsic utility as a *store of value* because, while it is true that it does not yield a return, it is liquid and safe, if compared to bonds[4]. In other words, money holdings do not only depend on the transactions that agents wish to perform, but also on a portfolio choice between money and other assets. Households who saved part of their income need to choose between the safety of holding money, at the cost of earning no interest, and the interest earned on other assets (for example bonds), at the cost of risking a loss on their capital. The interest rate becomes then the opportunity cost for holding cash balances. The more consumers feel uncertain, the higher will be the interest rate that they ask for in order to give up the safety of cash.

In a Neoclassical world hoarding would be irrational, because the economy manages to eventually converge to full employment, and there would be no space for uncertainty and for valuing the safety of cash. Keynes argues that this happens only in very specific situations, in which agents do not face radical uncertainty. In that case, full employment savings are channeled to firms via the financial sector, and transformed into investment. But in general, radical uncertainty may induce people to prefer money, a safe and liquid asset, to bonds ("liquidity preference"), hence Keynes' claim that his own is the real "General Theory" of which the Neoclassical model is a particular case.

The interest rate plays a marginal role in affecting the choice of how much to save (or invest), but a major role in determining the choice of how much of their savings consumers want to keep as cash. The interest rate, in other words, is not the price that brings to equilibrium savings and investment; rather, it is the price that equilibrates demand for money with its supply (jointly determined by the central bank and by the banking sector).

The rest follows easily: savings hoarded by agents in the form of money balances cannot be transformed in demand for investment goods by firms, thus breaking Say's Law: not all income generates a corresponding demand. Liquidity *leaks out* of the flow of income, and *effective* demand is lower than *notional* or full employment demand. Investment is "autonomous", and the adjustment needs to take place through a reduction of savings. Income will then fall, bringing savings down and re-establishing the equality *ex post* between savings and investment. This is the essence of the difference between Keynes and the Neoclassical theory. In the latter, whenever the savings and investment decisions are not consistent with each other, price changes (in particular the interest rate) will bring about the equality of the two quantities at full employment level. In Keynes on the other hand, the interest rate plays a very limited role in the loanable funds market[5], and as a consequence the *ex ante* disequilibrium will be reabsorbed by a change of quantities, i.e. by a fall of production to the level determined by effective demand.

Faced with unsold goods, firms will reduce production and employment: workers may wish to work at current wages, but aggregate demand being insufficient to absorb production, firms will not be interested in hiring. Contrary to the Neoclassical case, unemployment may be involuntary.

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[4] A more detailed account of Keynes' theory of money, and its intellectual background, can be found in Gaffard and Saraceno (2016).

[5] The interest rate may not be the only channel at work, though. We will see in Section 2.2 that, at least in theory, a *wealth* (or *Pigou*) *effect* may be at work and bring about full employment even in a Keynesian case.

But in fact, the Neoclassical theory also admits involuntary unemployment, as a result of market imperfections, or – sometimes related – of wage rigidities. If contracts between workers and entrepreneurs are stipulated at the "wrong" real wage, then involuntary unemployment will appear at equilibrium, and persist as long as the wage is not free to adjust to its full employment level. But then, structural reforms introducing flexibility in the labour market would solve the problem. Keynes forcefully rejects this view: in Chapter XIX of the *General Theory*, he writes that whenever uncertainty and liquidity preference yield insufficient demand, not only would wage flexibility be incapable of restoring full employment, but would be harmful:

> If money-wages were to fall without limit whenever there was a tendency for less than full employment, [...] there would be no resting place below full employment until either the rate of interest was incapable of falling further, or wages were zero. In fact, we must have some factor, the value of which in terms of money is, if not fixed, at least sticky, to give us any stability of values in a monetary system (Keynes, 1936: p. 303).

In other words, wage flexibility could trigger a deflationary spiral of wage reductions, lower income and increased uncertainty, further reduction of expenditure, unemployment, and more wage reductions. Keynes therefore reverses the common wisdom on wage rigidity that, in his theory, rather than a source of disequilibrium, becomes a *necessary institutional feature* to avoid the implosion of the system.

It is interesting to notice, nevertheless that the labour market remains at the margins of Keynes' analysis. Most of the action happens in the market for savings and investment, that determines the level of activity, and – via technology and the production function – employment. Somewhat paradoxically therefore, unemployment, which justified the Keynesian challenge to the Neoclassical paradigm, is a "derivative phenomenon" with its roots in the goods market (sub-optimal) equilibrium. But this paradox is also the main theoretical innovation of the British economist. Savings and investment depend on monetary and real factors, on prices and income, on expectations by households, and on firms' animal spirits. Keynes therefore develops a real "General Theory of Employment, Interest and Money", in which labour market interventions (increased flexibility, wage decreases) may not lead to an increase in employment.

A role for activist macroeconomic policies

If markets do not necessarily converge to the optimal equilibrium, then macroeconomic policy has a role to play to restore full employment. Keynes argues at length that temporary government intervention in the form of expansionary monetary or fiscal policy, may fill the gap between effective demand and supply, thus sustaining economic activity.

It is important to notice, furthermore, that these policies have a double objective. The first is to substitute for missing private demand. The second is, by sustaining economic activity, to trigger a change of expectations and set the condition for resumed private expenditure. Missing public aggregate demand support, the economy remains trapped into a deflationary trap of falling prices, persistent unemployment, gloomy expectations and falling private expenditure.

Monetary and fiscal policy are not alike, though. Keynes ranks fiscal policy higher than monetary policy[6]. While both instruments are in principle capable of lifting the economy out of the slump, fiscal policy directly impacts on economic activity through

[6] For a detailed discussion and somewhat different view, see Leijonhufvud (1968).

government purchases, while monetary policy only operates by changing agents' behaviours, and as such can run into some difficulties.

The limits of monetary policy

As money demand is central to Keynes' analysis, the British economist considers whether monetary policy could help the economy converge to full employment. A monetary expansion has the same impact of a drop in wages: by lowering the interest rate, it increases profitability for a given state of expectations and hence, in principle, it could trigger an increase in investment and fill the gap with savings.

Nevertheless, there are a number of reasons why Keynes believes that there exist "limitations on the ability of the monetary authority" to effectively steer the economy towards full employment.

The first source of trouble that Keynes considers is the most extreme – the so-called *liquidity trap*:

> There is the possibility, [...] that, after the rate of interest has fallen to a certain level, liquidity-preference may become virtually absolute in the sense that almost everyone prefers cash to holding a debt which yields so low a rate of interest. In this event the monetary authority would have lost effective control over the rate of interest. (Keynes, 1936: p. 207)

The interest elasticity of money demand is near-infinite: no matter how much liquidity the central bank injects into the economy it is entirely hoarded by agents and hence it leaks out of the system in its entirety. Monetary expansion is not effective in lowering interest rates.

By looking at the Great Depression Keynes argued that this usually happens at very low (but not necessarily nil) levels of the interest rate, because in this case agents would expect interest rates to rise in the future and thus would be willing to hold any extra amount of money and postpone the purchase of bonds to the moment when interest rates will be up again. More recently the liquidity trap has been defined as a situation in which the interest rate that equates savings and investment is negative, and therefore cannot be attained by the central bank (the so-called Zero Lower Bound, see e.g. Krugman (2000)). This last definition leaves some room for monetary policy effectiveness: if the central bank manages to trigger the expectations of positive inflation, the real interest rate will become negative and lead to the full employment equilibrium.

The liquidity trap has long been considered a subject for economic historians. It is true that over the 1990s, as Japan progressively reduced its interest rates, trying to kick-start the economy after the deep recession caused by a housing bubble burst, monetary policy progressively became ineffective. Japan had nevertheless been considered a very peculiar case. The financial crisis of 2008 promptly brought back the liquidity trap from the history books to the front of the scene, right in the core of the world economy. At the outbreak of the crisis in 2008, central banks reacted by flooding the markets with liquidity. But this liquidity was hoarded by banks, households, and firms, that were attempting to deleverage. As a consequence, liquidity injections, while they avoided the collapse of the financial system, did not fuel lending, investment and consumer spending. This is why in a second phase most governments intervened with fiscal stimulus packages.

While the liquidity trap is an extreme situation, a second source of problems – including in normal times – relates to the capacity of monetary policy decisions to impact private expenditure decisions: the *transmission channel*. Keynes argues in Chapter XV of the *General Theory* (pp. 203-4) that in order to have an impact on long term rates, monetary policy needs to be predictable and stable. The difficulty for monetary policy lies therefore in the contradiction between the need to accommodate intrinsically "fickle and highly unstable" expectations by firms, and provide a stable policy environment to financial markets.

The importance of "managing expectations" can better be appreciated when the transmission mechanism is broken. The recent attempts of the European Central Bank (ECB) to revive inflation in the Eurozone have so far been unsuccessful precisely because they did not succeed in re-anchoring expectations (for more details, see Saraceno, 2016a).

Furthermore, even when successful in influencing market interest rates, monetary policy faces an additional difficulty in that it is unclear how sensitive private expenditure is to the interest rate. As we saw above, prices play a lesser role in the Keynesian analysis than they play in the Neoclassical framework. Savings and consumption decisions mostly depend on income, and even for investment the interest rate plays a rather minor role (as the cost of capital) if compared to expectations about future demand and revenues. Hence, changes in the interest rate may fail to boost private expenditure.

Fiscal policy and the multiplier

While the effect of monetary policy on economic activity goes through its capacity to influence expectations and private expenditure, and as such may be ineffective (especially at times of crises), government expenditure is a component of aggregate demand, and hence it directly influences output. Government expenditure can fill the gap between private demand and full employment supply, thus reabsorbing the excess of savings over investment.

But how much will output increase following a government expenditure boost? In Chapter X of the *General Theory*, Keynes lays down his theory of the multiplier: the increase of production will lead to an increase of income (wages and profits) available for consumers to spend, and hence to a further increase of aggregate demand.

Thus, Keynes concludes that fiscal policy should be the preferred instrument for macroeconomic stabilization, a view shared by economists influenced by his work in the following decades (Leijonhufvud, 1968). This is a rather interesting conclusion in view of the doctrine that emerged starting from the 1980s, when the struggle between the Neoclassical and Keynesian paradigms eventually converged towards a consensus giving more weight to monetary policy than to fiscal policy (see Section 2.3 below).

Keynes' very strong policy conclusion goes against the common wisdom of the time, the so-called "Treasury View", which argues that any increase in government expenditure will be ineffective because it *crowds out* private expenditure. To increase expenditure the government will have to borrow, and to compete with firms and households for funds. This will drive up interest rates, and reduce private expenditure.

Keynes argues, on the contrary, that fiscal policy is necessary precisely when there is no private demand for funds (i.e. savings are sitting idle), and therefore public expenditure will have no effect on interest rates, as there is no competition with private agents for scarce funds. We will see in Section 5.1 that the size of the multiplier has been a source of ever-going controversy since the publication of the *General Theory*.

It is interesting to notice that Keynes is not necessarily in favour of *big* government. The *General Theory* is mostly dedicated to understanding the reasons for demand-led business cycles, and he advocates stabilization policies to reduce the size and persistence of economic slumps. What Keynes seems to have in mind, therefore, is an *active* government, capable of intervening in the economy when private demand falters, and to withdraw when, thanks to its own intervention, the economy recovers. There are in the *General Theory* a number of instances in which he advocates a different role for the government (most notably in Chapter XXIV, when he discusses "social investment"). But even in these cases he seems more focused on compensating for possible market failures, than on advocating an important role of the government per se.

2.1.3 From the New Deal to stagflation: The rise and fall of Keynesian economics

Keynes wrote the *General Theory* in the midst of the Great Depression, when most governments were still following the Treasury View. With a few exceptions, the early response to the crisis was in fact consistent with the prescriptions of the Neoclassical theory. In the United States, monetary policy was initially strongly contractionary (see the classic account by Friedman and Schwartz, 1963). Like in most countries, the attempt to maintain the international gold standard did not allow the utilisation of monetary policy to stop the fall in credit and in the money supply (Fishback, 2010). In the meantime, both under the Hoover administration and even more with the Roosevelt administration, public expenditure increased substantially, but government revenues also grew through a number of taxes increases, so that the deficit increased very little and fiscal stimulus was rather limited. In fact, the recovery that started in 1933 is attributed to a monetary expansion (Romer, 1992): large gold inflows in the mid-1930s yielded an increase of the money supply, lower interest rates, and an increase of investment spending and purchases of durable goods. The policy reversal of 1937 was due to the attempt to eliminate the even modest deficits that had appeared in the early 1930s, and to the fear of inflation triggered by the modest recovery. That episode, that reminds of the ill-timed switch to austerity in 2011 (Krugman, 2010), yielded a second recession.

In fact, only a few countries embarked in Keynesian policies at the outset of the Great Depression. In all of these countries expansionary policies took the form of increased military spending (Almunia et al., 2010). Fiscal policy in the US only turned expansionary after the country started preparing for war in the late 1930s. Interestingly enough, the Keynesian episode was rather short-lived, as the large fiscal and monetary stimulus boosted the economy that quickly reached its full employment level. The war preparation effort led to higher inflation starting from the end of 1941 (Gordon and Krenn, 2010).

By the end of the war, the pendulum had swung towards heavy intervention of the government in the economy. Better equipped to explain a crisis that was essentially due to demand factors, the Keynesian paradigm displaced the Neoclassical theory to become the new reference in academia and in policy circles alike.

The *General Theory* inspired the proactive policies that would find their justification in the emergence of "hydraulic Keynesianism" (Coddington, 1976). The IS-LM[7] model (see Section 2.2.1 below) represented the economy at stable equilibrium conditions that, among other things, would depend from policy-makers' actions: a mechanical system in which each action of the government would correspond to a reaction by the economy. Monetary policy would have an impact on the equilibrium in the money market, while fiscal policy would be able to affect the equilibrium in the goods markets. An appropriate combination of fiscal and monetary policy would therefore allow to reach any level of income (and of the interest rate) desired by the government.

[7] This model was developed by Hicks (1937) and Modigliani (1944) to illustrate the relationship between the interest rate and output based on the investment–saving (IS) and liquidity preference–money supply (LM) curves.

Oil shocks and stagflation: The crisis of the Keynesian paradigm

For three decades governments succeeded in managing the economy and in "fine tuning" the business cycle in order to smooth economic fluctuations. This contributed to a long period of tumultuous growth, whose roots nevertheless are only partially to do with activist macroeconomic policies; rather, they can be traced to technical progress, a boom in trade, economic convergence, and the fast accumulation of capital to replenish the stock destroyed by the war. The long period of steady growth and the Keynesian paradigm dominance contributed nevertheless to the myth of the almighty policy-maker that could steer the economy at its will.

As the great recession had been the empirical challenge for the Neoclassical theory, the Keynesian theory ran into serious difficulties when inflation and subdued economic activity appeared at the beginning of the 1970s due to the two oil shocks, and the period of unstable prices that followed, as well as the increase of the so-called natural unemployment rate due mostly to demographic factors (Shimer, 1998); the slowdown in productivity growth. All these shocks originated on the supply side of the economy, and the growth slowdown that they triggered had nothing to do with insufficient aggregate demand.

A wrong diagnosis about the slowdown in growth, and the erroneous belief that the economy was running below potential, led policy-makers to react to supply shocks by increasing aggregate demand through expansionary fiscal and monetary policies. This widened the gap between aggregate demand and aggregate supply and further fuelled inflation, without lifting the economy out of the slump. *Stagflation* became the new word of the 1970s.

The crisis of Keynesian theory triggered a new paradigm shift. The empirical challenge would have not been enough to displace the Keynesian paradigm, had it not also encountered theoretical difficulties. Keynesian theory came to be criticized – somewhat unfairly given that Keynes had never wanted to go beyond a theory of depression – because it neglected the supply side of the economy, and most notably the link between macroeconomic policy and inflation. Furthermore, the vulgarization of the *General Theory* carried out by hydraulic Keynesianism paved the way to a reabsorption of Keynes into Neoclassical theory.

2.2 Expectations and the Neoclassical counterrevolution

The comeback of Neoclassical theory, in a new and revised form, exploited the weaknesses of the Keynesian construct. Three streams of research emerged, all challenging the Keynesian paradigm and its reliance on macroeconomic policy to ensure convergence to full employment. The first, monetarism, challenged Keynes on the ground of money neutrality. The second, rational expectations, introduced a treatment of agents' expectations consistent with the principle of rationality and optimization. The third, Real Business Cycles (RBC), invoked technology and supply shock sides as the sole determinants of output fluctuations. Their target, rather than the original Keynesian theory, was its IS-LM "vulgarization".

2.2.1 The Neoclassical synthesis

The post-war period saw the triumph of the so-called Neoclassical synthesis, built around Hicks' (1937) and Modigliani's (1944) IS-LM model. This representation of the Keynesian system, while it proved to be a formidable pedagogical tool, also contributed to the reabsorption of Keynes within the Neoclassical theory.

The IS-LM model is a simple characterization of the demand side of the economy in the short run, with fixed prices and wages[8]. The model was seen as a faithful representation of Keynes because the income level is determined by aggregate demand, which in turn depends, among other things, on the liquidity preference of agents.

Aggregate demand is determined by the simultaneous equilibrium in two markets: the goods market and the money market, where the preference for liquidity captures Keynes' idea that money may be demanded because it is a safe store of value. Savings can be used to buy bonds, or kept as cash, depending on the yields offered by the former. The demand for money is therefore the result of a portfolio choice between yields and safety.

The main result of the model is that the simultaneous equilibrium of money and goods market may yield a level of activity which is inferior to full employment. In the labour market, demand for labour is too low, and wages too high. The IS-LM is therefore faithful to the "Keynesian" message that unemployment is determined in the goods market by insufficient demand, and therefore involuntary. But it departs in a fundamental way from the British economist, because it posits wage rigidities as the ultimate source of this unemployment.

In the IS-LM model fiscal and monetary policy can be used, alone or jointly, to increase aggregate demand and reabsorb unemployment. Which of the two tools is more effective would then depend on the hypotheses about the behaviour of agents. Economists leaning towards Keynesian ideas would tend to believe that investment is relatively insensitive to interest rate variations, while the contrary holds for money demand (the limiting case being the liquidity trap, see p. 9). In this case, fiscal policy should be preferred because it is more effective. On the other hand, if investment responds to the interest rate more than to expected demand, and if money demand mostly depends on income – as a Neoclassical economists would believe – then fiscal policy would be largely ineffective as it would lead to increases of the interest rate and the crowding-out of investment. Thus, the choice of the preferred policy instrument depends on an empirical assessment about the value of elasticities.

The IS-LM model was instrumental to the "normalization" of Keynes: on one hand the role of radical uncertainty, that in the *General Theory* was the source of leakage and aggregate demand deficiencies, is strongly reduced; money demand is the simple result of a portfolio choice. On the other hand, assuming the existence of stable equilibrium relationships that determine aggregate demand, it opens the way for the possibility of market adjustments that bring the economy to full employment without government intervention.

Suppose that the economy settles on an equilibrium characterized by insufficient demand and involuntary unemployment. In the medium run, this will put downwards pressure on wages and prices, yielding an increase of the real quantity of money (the "*Real Balance effect*") - the same effect that a monetary expansion would have. But then, it is impossible for the economy to remain stuck at the low employment equilibrium. Once real balances increase, the demand for bonds will increase, driving the interest rate down, and eventually resulting in an increase of investment. This is the so-called *Keynes effect*. If on the other hand the economy is in a liquidity trap, in which the transmission channel from the quantity of money to investment is broken, the adjustment can still

[8] While Hicks was ambiguous on this, Modigliani made clear from the very beginning that the hypothesis of fixed prices was central for the model.

happen through the *Pigou effect* (Patinkin, 1948): real balances are part of households' wealth, so their increase will push up consumption expenditure and aggregate demand.

Thus, either via investment (Keynes Effect) or consumption (Pigou Effect), a wage and price decrease will trigger a market adjustment, and lead the economy back to full employment. Keynesian underemployment can be an equilibrium only in the short run, and if prices are sticky. The *General Theory* is not general after all, but rather a particular case of the neo- classical theory:

> The Keynesian message appeared as specific to a situation, as dependent on restrictions imposed upon a more general proposition: price rigidity, money illusion, liquidity trap, the non intersection of function on a positive plan etc. [...] The Keynesian system is then perceived as a malfunctioning Walrasian system and the study of some pathological states of a Walrasian model is called Keynesian economics. The way is thus open for the re-integration of the Keynesian message into a more general system of interpretation: the neoclassical synthesis. (Fitoussi, 1983: p. 4)

2.2.2 Monetarism

Monetarism, associated with the work of Milton Friedman and his co-authors (Friedman, 1957; Friedman and Schwartz, 1963), starts somewhat paradoxically by challenging Keynes' argument about the ineffectiveness of monetary policy. Friedman argues that at least in the long run, it is hard to argue against the quantity equation linking prices and the quantity of money, and therefore against money neutrality.

Relying on the standard representation of Keynesian theory as a short run fix-price case of the Neoclassical model (Section 2.2.1), Friedman links Keynesian unemployment to the rigidity of wages that, he argues, is hard to defend in the long run. Macroeconomic policies, therefore cannot be relied upon beyond the short run in which, at any rate, their impact on the economy is rather unpredictable. In particular, monetarists argue, a proper consideration of expectations – that in Keynes while crucial to justify liquidity preference, were left exogenous – leads to unintended consequences of stabilization policies.

The most famous application of the monetarist critique is the debate on the Phillips curve that was born as a statistical inverse relationship between wages and unemployment (Phillips, 1958), but had gradually come to be interpreted by policy-makers as a menu available for the almighty policy-maker: any level of employment could be chosen, as long as the policy-maker was ready to pay the price in terms of inflation.

Phelps (1967) and Friedman (1968) famously show that, once expectations are made endogenous in the IS-LM version of the Keynesian model (through an adaptive learning scheme), the economy tends to converge to the Neoclassical long-term equilibrium. Governments could of course surprise markets and lead the economy away from its "natural" equilibrium. But this has to be done at the price of ever-increasing inflation and is eventually bound to be undone by markets once learning has taken place.

The monetarist conclusion hence runs against the Keynesian common wisdom: the impact of fiscal and monetary policy would be zero in the long run (the Phillips curve is vertical in the long run), and uncertain in the short run. Fiscal policy, in particular, could not be used to "'fine tune" the economy as argued by the hydraulic Keynesians (Friedman and Heller, 1969). The inverse statistical relationship highlighted by Phillips, conclude the monetarists, was stable only because it corresponded to a period of moderate inflation and prices.

The monetarist critique is important for our analysis because its policy conclusion - carried into the "new consensus" to be analysed later in Section 2.3- is that governments should restrain from using discretionary policies, that are ineffective in the long run, and bound to perturb agents. Sticking to rules is the best that governments can do to allow the smooth functioning of markets. The actual rule proposed by Friedman, a constant growth

rate of money aggregates, came to be discredited (see, e.g., Woodford, 2003). But the shift of focus from discretionary policies to predictable rules was an enormous change, and still has an influence on the current debate on macroeconomic policy, especially in Europe.

2.2.3 Rational expectations and the "New Classical" macroeconomics

Rational expectations, introduced by John F. Muth in 1961, made it into macroeconomic models mostly through the work of Robert Lucas in the early 1970s (1972; 1973). This strand of literature, that dubbed itself "new classical" to mark its opposition to Keynes, goes back to the fundamentals of the Neoclassical model, namely perfectly competitive markets populated by rational maximizing agents.

Like the monetarists, new classical economists reject Keynes' main innovation, radical uncertainty, in favour of a notion of uncertainty based on risk. And like the monetarists, they argue that expectations change in response to government action; as such, considering them as given as Keynes did, is unwarranted.

Lucas and co-authors argue that there is no reason for rational and perfectly informed agents to overlook the information they possess when forming expectations. Backward expectations formation neglects the knowledge of the model agents possess, and as such cannot be labeled as "rational". Taken together with Friedman's natural rate hypothesis, rational expectations lead to the rejection of activist macroeconomic policy in the short as well as in the long run. Loosely speaking, rational expectations shorten the transition towards the natural equilibrium described by the monetarists, up to the point where it becomes an instantaneous jump. If agents know the model of the economy, they also know that following an expansionary policy, the economy will eventually converge to an equilibrium characterized by the same level of activity, and higher inflation. Thus, they will adapt their behaviour to this knowledge and the economy will directly jump to the new equilibrium without undergoing the transition described by Friedman and Phelps.

The monetarist claim that policy is irrelevant is therefore strengthened by rational expectations (Sargent and Wallace, 1975). Governments may have an impact on the economy only if their information set is different (and richer) than the information set of private agents. But a fully transparent government will need not to intervene, as the economy will be able to self-correct following a shock and converge quickly towards the new equilibrium.

Nevertheless, like the monetarists before, the rational expectations counter-revolution is incomplete. While the "natural" output of the economy is determined by the supply side of the economy in the Neoclassical tradition, for Lucas and his co-authors the cycle remains fundamentally driven by demand factors. These range from price rigidities that prevent agents from optimally reacting to shocks, to (vain) fiscal and monetary attempts to influence the path followed by the economy.

New classical macroeconomics pose a serious challenge to Keynesian analysis, but do not push the consequences of rational expectations to their limit. Fluctuations in new classical models still stem from the economy's slowness in responding to a shock, be it real or monetary. Agents' incomplete information (as in Lucas, 1972; 1973), or rigidities of some sort, determine the gap between the economy's level of activity (demand) and the "natural" optimal level of production. While rational agents quickly learn and return to equilibrium without government intervention, the observed fluctuations remain demand-driven and sub-optimal. To complete the dismissal of the Keynesian revolution, a last step is needed: a theory that removes aggregate demand from the determinants of business cycle fluctuations.

2.2.4 Real Business Cycles (RBC)

The Real Business Cycle (RBC) literature, initiated by the seminal articles by Kydland and Prescott (1982) and Long and Plosser (1983), departs from the view, shared by Keynesian and new classical economists alike, that business cycles indicate a failure of the market to reach an optimal equilibrium, and argues on the contrary that output fluctuations stem from the optimal response of markets to random technological shocks.

The emphasis on supply side factors to explain business cycles is not new[9]. Its revival in the 1980s was not fortuitous, as the preceding decade had seen wild income fluctuations associated with the oil shocks and the fluctuations in aggregate supply they had triggered. Shocks which had been tackled with demand side policies had led to stagflation (see p. 12).

If agents are perfectly rational, RBC theorists argued, it is hard to justify significant deviations from the optimal path of the economy. Therefore, as these fluctuations are observed in the data, they must originate in the optimizing behaviour of agents. Like new classical macroeconomists, RBC authors go back to the rational consumer arbitraging between labour and leisure, as well as between present and future consumption (savings), based on real wages and the interest rate. Furthermore, rationality also suggests that monetary factors play little or no role in explaining real outcomes (as money carries no direct utility, see p. 5), so that the old Neoclassical neutrality and dichotomy result is revived, even in the short run.

RBC models all share two elements: first, the sources of fluctuations are technological changes that, via the interest rate, trigger a response of optimal consumption and of labour supply, thus yielding equilibrium fluctuations in output. More specifically, an increase in capital productivity yields higher interest rates (rejecting Keynes' theory of money, the new classical theory goes back to the interest rate as the return on capital) and more savings by rational consumers, who will also supply more labour because of higher productivity. Thus, RBC models go back to a number of pre-Keynesian results: (a) fluctuations in employment are voluntary and optimal; (b) money is neutral; (c) price flexibility guarantees instantaneous adjustment of markets that are continuously in equilibrium.

The second feature of RBC models is that they are built around a few equations describing household and firm behaviour, together with their equilibrium interaction. They can therefore easily be tested with data, and used to fit macroeconomic time series. "Calibration" of the model with parameters describing agents' behaviour, allows to use them to predict the behaviour of macroeconomic variables such as GDP, employment, and so on.

To summarize, the rebuttal of Keynes happened in two steps. First, the introduction of rational expectations eliminated the need for government intervention in a framework that still recognized the importance of demand in explaining business cycles. Second, RBC models revived the pre-Keynesian view that supply is all that counts in explaining both the short and long run behaviour of the economy.

With the RBC stream of literature, the counterrevolution has come full circle, and by the mid-1980s, the intellectual defeat of the Keynesian paradigm seems definitive:

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[9] Goodhart (1992) details how Dennis Robertson in 1915 described business cycles originating in the behaviour of farmers adapting their labour supply and consumption patterns to the fluctuations of productivity.

> The task now facing contemporary students of the business cycle is to sort through the wreckage, determining which features of that remarkable intellectual event called the Keynesian Revolution can be salvaged and put to good use and which others must be discarded. (Lucas and Sargent, 1979: p. 1)

The dismissal of Keynesian ideas in academia was accompanied by a conservative revolution. On one side, monetary policy was geared towards fighting inflation, consistently with the monetarist neutrality creed. On the other, privatization, deregulation, and supply-side policies reflected the renewed dominance of the classical paradigms in macroeconomics, aimed at minimizing the role of the government in the economy.

2.3 The New Consensus

> I believe that there has been a considerable convergence of opinion among macroeconomists over the past 10 or 15 years. While the problems of the field have not 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 be admitted as contributions to knowledge.[...] Progress in macroeconomic analysis has made it possible to see that the alternatives between which earlier generations felt it necessary to choose were not so thoroughly incompatible when understood more deeply. (Woodford, 2009: p. 268)

Real Business Cycle (RBC) theory dominated the intellectual (and political) landscape for more than a decade. RBC models nevertheless ran into methodological and empirical problems, such as the fact that long business cycles seemed difficult to explain if agents were rational and fully informed. Furthermore, the ambition of RBC models to explain co-movements in macroeconomic variables turned into a major problem when the approach was shown not to fit some basic regularities, such as the fact that interest rates – or the propensity to save – move in the opposite direction during slumps than predicted by the theory (Phelps, 1990: pp. 86-90). This incapacity to fit data hid a more fundamental problem, though. As Larry Summers (1986) puts it:

> In [the RBC] model, the central driving force behind cyclical fluctuations is technological shocks. The propagation mechanism is intertemporal substitution in employment. [...] there is no independent evidence from any source for either of these phenomena. (p. 25)

Together with the difficulties of RBC models, emerged the attempt to recover Keynesian features in microfounded models, in which market imperfections could cause departures from the Walrasian equilibrium. These imperfections could be of a different nature. For example real wage rigidities due to asymmetric information (the so-called efficiency wage models), or the market power of unions (insider-outsider models) would yield equilibria in the labour market with involuntary unemployment. At the same time, nominal price and wage rigidities, that could be due to the costs involved in the price setting mechanism (the small menu costs), or to articulation in time of the wage contracts mechanism (staggered prices models), would yield fluctuations of income around the natural equilibrium[10]. Neither real nor nominal rigidities can, by themselves, explain involuntary unemployment and business cycle fluctuations. But, New Keynesian economists argue that their joint influence can help explain the patterns of GDP growth and unemployment observed in the data (Ball and Romer, 1990).

[10] To have an idea of the wealth of contributions to this literature the reader can refer to the papers collected in Mankiw and Romer (1991).

The economics profession therefore evolved towards what might be called a "New Consensus" that, relying on both nominal and real rigidities, blends a short run with Keynesian features, and a long run where supply-side factors are dominant (Blanchard, 1997). This consensus has a representation in standard macroeconomics undergraduate textbooks that are usually split in two independent parts.

The typical tools of the New Consensus, widely used by academics and by international institutions, are the so-called dynamic stochastic general equilibrium (DSGE) models that embed in a RBC structure a number of nominal rigidities and imperfections. These models are built around three main blocks: (i) maximising households, who choose consumption/savings and hours worked, subject to a budget constraint; (ii) maximising firms, who decide how much labour and capital to demand; and (iii) the central bank, which controls the interest rate, and hence affects the consumption and investment choice. The models can then include other institutions such as fiscal policy and banks, depending on the type of problem they want to study. But the three main blocks capture the "monetary policy dominance" of the New Consensus.

DSGE models most commonly feature price and wage rigidities, accompanied by the existence of a number of consumers who are unwilling or incapable of maximizing utility over time, the so-called Non-Ricardian consumers. Rigidities in turn allow for the appearance of significant demand shortages, and hence of Keynesian features, that are nevertheless limited to the short run. Furthermore, central banks have an impact on the economy, because sticky prices fail to instantaneously adapt to nominal interest changes and the real interest rate therefore can be impacted by monetary policy choices at least in the short run.

Going through the many facets of the New Consensus is well beyond the scope of this paper[11]. What is relevant for our purposes is that the New Consensus has developed a number of results that are independent of the features of individual models:

1. The baseline model is the RBC model in which fluctuations are determined by the optimal reaction of agents to supply side shocks, most notably technological shocks, and are hence to be considered "natural". Market imperfections and rigidities may cause this natural equilibrium to be different from the Pareto first-best outcome. Rigidities and imperfections may have different sources: efficiency wages, staggered price and wage setting, incomplete markets, search and bargaining costs, information asymmetries, imperfect competition, liquidity constraints or coordination problems. These are some of the many imperfections that can be embedded in otherwise standard rational expectations models to yield departures of the natural rate from the Pareto optimum.
2. To increase the natural growth rate of the economy, and to make the natural equilibrium converge to the first-best, policy needs to eliminate the rigidities through the very same structural reforms that were called for by New Classical macroeconomists.
3. Market imperfections, mainly nominal rigidities, also cause short run departures from the natural growth rate, to yield demand-driven business cycle fluctuations in the short run. More precisely, when the economy is hit by a shock, imperfections prevent agents from reacting to the shock optimally, and remaining on the natural output path.

[11] A good starting point for the interested reader are two papers by Olivier Blanchard (2000; 2009); see also Woodford (2009).

4. The short run deviations from natural output tend to be reabsorbed in the medium run by markets through (mostly price and wage) flexibility.
5. Discretionary macroeconomic policies are ineffective in stabilizing economic activity. Rules are to be preferred because they make policy predictable and hence easier to embed in agents' expectations.
6. Monetary policy should be preferred to fiscal policy mostly for two reasons. First, it is less subject to lags in decision-making and in implementation; second, it can be delegated to independent and technocratic bodies that are not subject to political biases and capture by vested interests. Furthermore, monetary policy aimed at stabilizing inflation will in most cases also keep output at its optimal level (what Blanchard and Galí (2007) call "divine coincidence"), thus making any further policy intervention unnecessary.
7. Short run fluctuations of natural output have little, if any, influence on long run growth, as there is no reason for supply side determinants to be affected by temporary deviations from the optimal path.

The New Keynesian theory that lies beneath the New Consensus only allows temporary deviations from equilibrium within a framework in which market forces spontaneously tend, if left alone, towards a first (or second) best that constitutes the best of all possible worlds. In this sense the pendulum of output determination is much closer to the neoclassical supply-side theory than to the Keynesian demand-side view. Like the neoclassical synthesis that grew out of the IS-LM model (see Section 2.2.1), it relies exclusively on rigidities to determine short-term departures from the long run natural equilibrium.

In particular, the New Consensus embraces the RBC rejection of sustained and persistent excesses of full employment over the natural rate, and of savings over investment, which were the central feature of Keynes' *General Theory* (1936). Precisely the impossibility of generating such persistent demand shortages, explains the fact that, after the crisis the New Consensus has been challenged in many quarters, including by economists that contributed to its development (see Section 5).

While monetary policy may play some role in smoothing the cycle, the New Consensus removed fiscal policy, even in the short run, from the set of tools available to policy makers. Theoretical and empirical work on fiscal policy, therefore, focused on the design of "optimal" rules aimed at preventing opportunistic behaviours and excessive (distortionary) weight of the government in the economy.

2.3.1 Fiscal Rules

Fiscal rules may take different forms and arrangements, depending on the institutional setting and on the objective they are meant to serve. They may target the headline deficit, or focus on structural figures, thus focusing public finances on the business cycle. They may constrain expenditure, or focus on the long term debt objective. Finally, they may distinguish between different types of expenditure, like the "Golden Rule" that is meant to preserve public investment. A discussion of the different types of

rules is beyond the scope of this paper[12], which focuses on the EMU, and on challenges for the New Consensus coming from the crisis.

What is a "good" fiscal rule? In a seminal paper, Kopits and Symansky (1998) enumerate a set of criteria to assess the quality of fiscal rules, later amended by Buiter (2003) to take into account the specificities of monetary unions. These criteria can be seen as stemming (i) from political economy considerations (rules need to be clear, transparent, simple, neutral with respect to political preferences on the size of the public sector, and enforceable); or (ii) from economic efficiency considerations (rules need to be consistent, sustainable, flexible, and respectful of institutional variety across countries).

Kopits and Symansky acknowledge that no rule could fulfill all the criteria at the same time, as some trade-offs between them are inevitable. We will see in Section 4 that in the EMU, transparency and enforceability were favoured over flexibility and simplicity respectively (Buti et al., 2003). Other choices, as the "Golden Rule"[13] may favour flexibility at the expense of simplicity.

These trade-offs are often less evident than one might think. Transparency, clarity and enforceability, for example, may come at the expense of some degree of discretion which might, under reasonable circumstances, help to stabilize the economy after a shock has occurred. Similarly, simplicity may be obtained at the expenses of adequacy and, in a monetary union, variety. If needed, a "complex rule" should not be scrapped on the ground that it is difficult to sell to the public. And conversely, an inadequate fiscal rule would not be made better by the fact that it is easily understandable.

The New Consensus shaped the European institutions that were put in place with the Maastricht Treaty in the early 1990s. As we will see below (Section 4), the Treaty centralized European economic governance on the rejection of active macroeconomic policies. By contrast, in the United States, the Full Employment and Balanced Budget Act of 1978 (the Humphrey-Hawkins Act) amended the Federal Reserve Act in establishing a dual objective of price stability and full employment for monetary policy. At the same time, attempts to introduce a fiscal rule for the US Government have never been successful. This is not surprising as the US Federal government has an important stabilization role to play in absorbing asymmetric shocks hitting the states that, with the exception of Vermont, have very strict fiscal rules.

I will argue in the next section that this institutional setting may have played a role in explaining the relatively poor performance of the EMU before and during the crisis.

[12] The interested reader can find a complete account, including a theoretical discussion in Wyplosz (2012). Ray et al. (2015) and Tanzi (2015) discuss the issue with a special focus on developing countries, with the former taking a rather critical stance.

[13] For a discussion of the Golden Rule, see Blanchard and Giavazzi (2004), and more recently Creel et al. (2009), Creel et al. (2013), Derviş and Saraceno (2014), and Truger (2015). For a critical view, see Balassone and Franco (2000).

3. The USA vs the EMU: Different policies for different outcomes

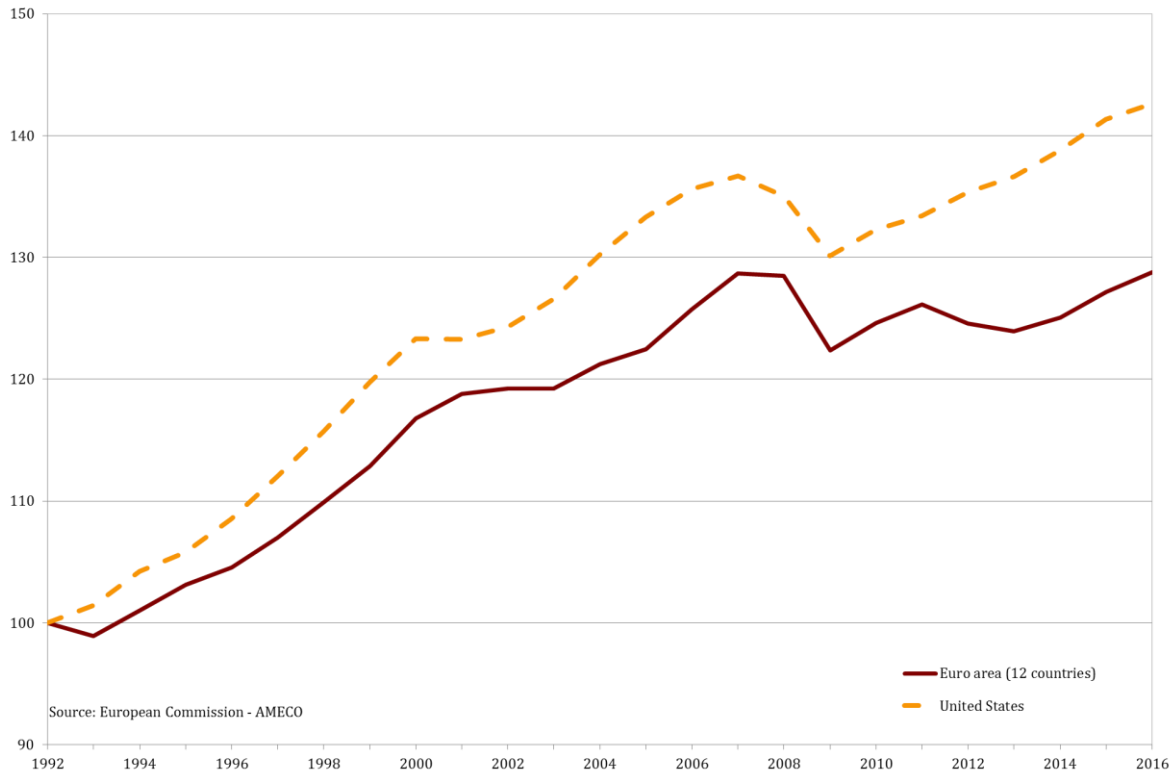
3.1 Chasing the United States

The two largest world economies, the United States and the Economic and Monetary Union of the European Union (EMU), constitute a convenient natural experiment in that they have similar economic "fundamentals" (productivity, wealth, financial structure), but also different institutional settings. In particular, as we'll see below, while in the EMU fiscal policy is constrained by a rule, in the US fiscal authorities retain full discretion.

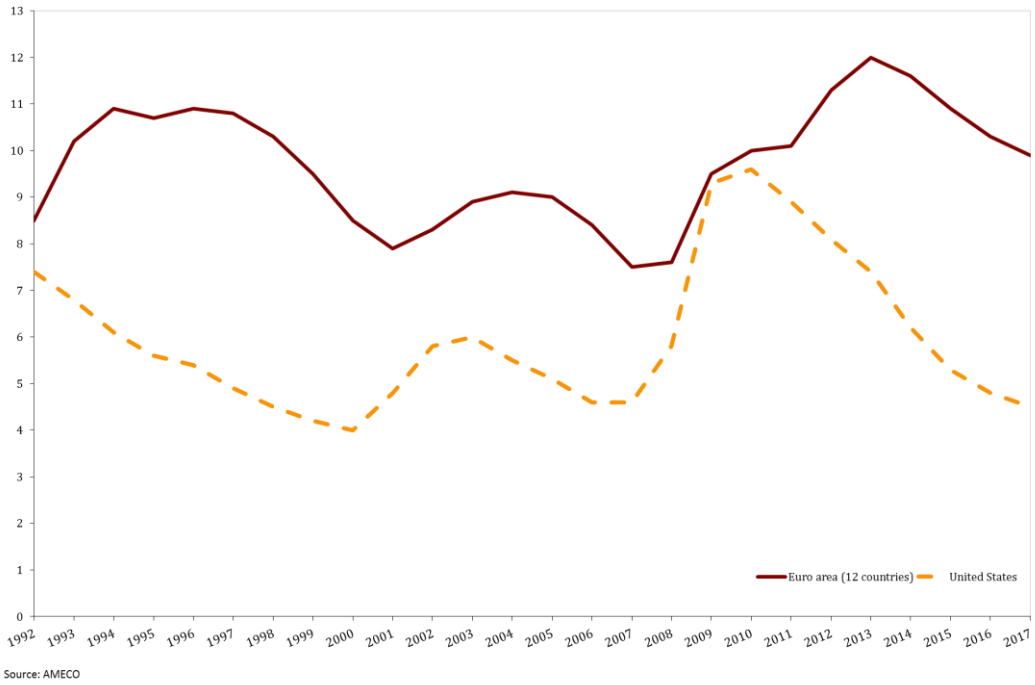
Since 1999, the EMU has had a more stable macroeconomic environment: inflation was slightly lower than in the United States, the exchange rate less volatile, and external imbalances small. But the relative success of the EMU in targeting nominal variables was paid in terms of a significantly worse economic performance, with a cumulative comparative loss of per capita GDP of more than 20 percentage points over the whole period (Figure 1a). If we look in particular at unemployment, the United States has outperformed the EMU since 1992 (Figure 1b). True, the rate increased remarkably more with the crisis; but since then it has decreased to pre-crisis levels.

Figure 1. EMU vs the USA (1992-2016)

(a) Per Capita GDP (1992=100)



(b) Unemployment Rates



Source: European Commission (2017).

The US economic model has problems that just a casual look at some macro variables cannot account for (instability and inequality, just to name two). Furthermore, it is well known that its unemployment rate decreased in part because of the decline in labour force participation (a phenomenon on that nevertheless can be observed in Europe as well). But it is undeniable that, from a macroeconomic viewpoint, it showed strong dynamism and resilience during the crisis that the EMU has cruelly lacked.

The Consensus highlights US market flexibility as an explanation for the difference in performance. The excessive rigidity of EMU markets, in particular labour markets, is a drag on firms' dynamism and willingness to hire workers. Tackling this rigidity would therefore reduce the distortions to incentives and ensure convergence towards a first best equilibrium.

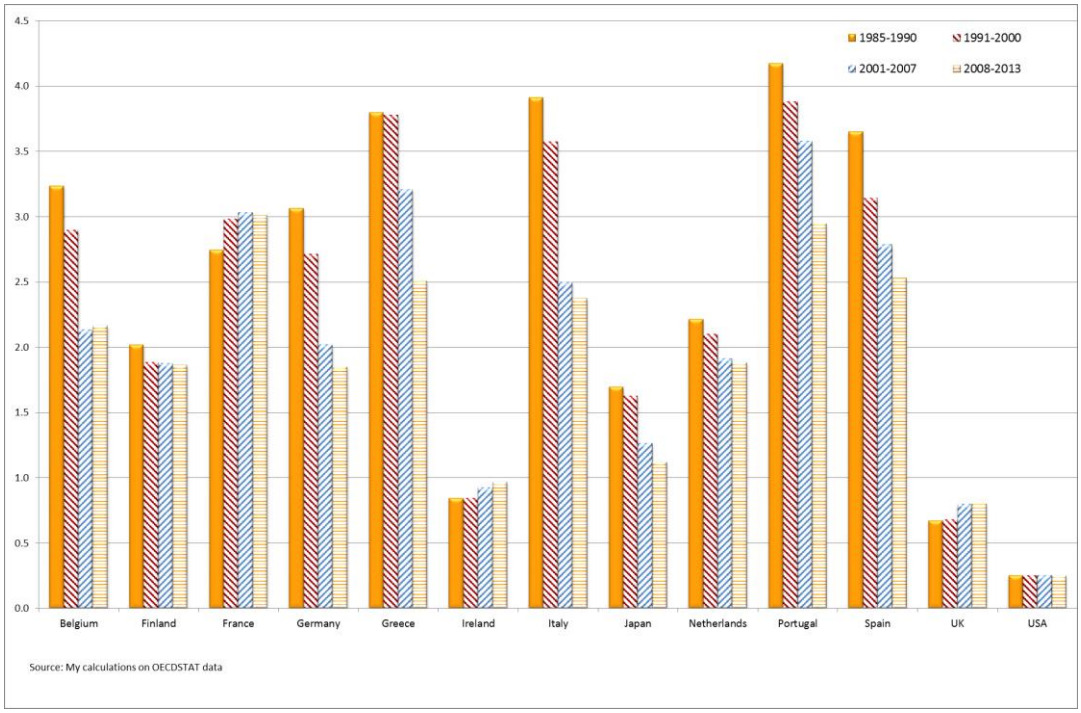
It is hard to deny that labour and product markets in the Eurozone could be streamlined and made more efficient. Yet, available evidence is somewhat at odds with the Consensus narrative that reforms are all that is needed to improve economic performance.

In particular, if we look at labour markets, the Consensus narrative does not take into account recent developments. Figure 2 shows the evolution of the Employment Protection Legislation (EPL) index, computed by the Organisation for Economic Co-operation and Development (OECD), over the recent decades. The EPL index, as imperfect as it is, may be taken as a broad measure of labour market flexibility (large numbers indicating more rigid labour markets)[14]. While it is true that most European countries have high index values, it is also true that they experienced drastic reductions

[14] The OECD reports two indexes of employment protection: one for regular contracts and one for temporary contracts. I averaged the two to obtain an overall index.

in the past years; many of them since the Maastricht Treaty was signed, some others when forced by the crisis.

Figure 2. Employment Protection Legislation (EPL) Index: Period Averages (1985-2013)



Source: Author's calculations based on OECD (2017).

Furthermore, besides a shrinking pool of protected workers, EMU countries have an increasing share of workers covered by multiple types of contract (such as part-time) that are highly flexible. Thus, while average labour protection may still be larger than in Anglo-Saxon countries, *marginal* protection is by no means different. Firms wanting to smooth business cycle fluctuations by modifying labour utilization can easily do so. Thus, labour market rigidities can hardly be seen as an obstacle for European businesses to compete.

More generally, evidence on institutions and labour market performance is weak and often contradictory so that the most cautious authors studying the subject have to conclude that, for example, "the broadbrush analysis that says that European unemployment is high because European labour markets are 'rigid' is too vague and probably misleading" (Nickell, 1997: p. 73). Paradoxically, the only convincing conclusion to emerge from the wide array of studies devoted to the subject is that no single labour market institutional setting proves to be superior to others and that success is determined by the interaction of institutions with country-specific factors (Freeman, 2000).

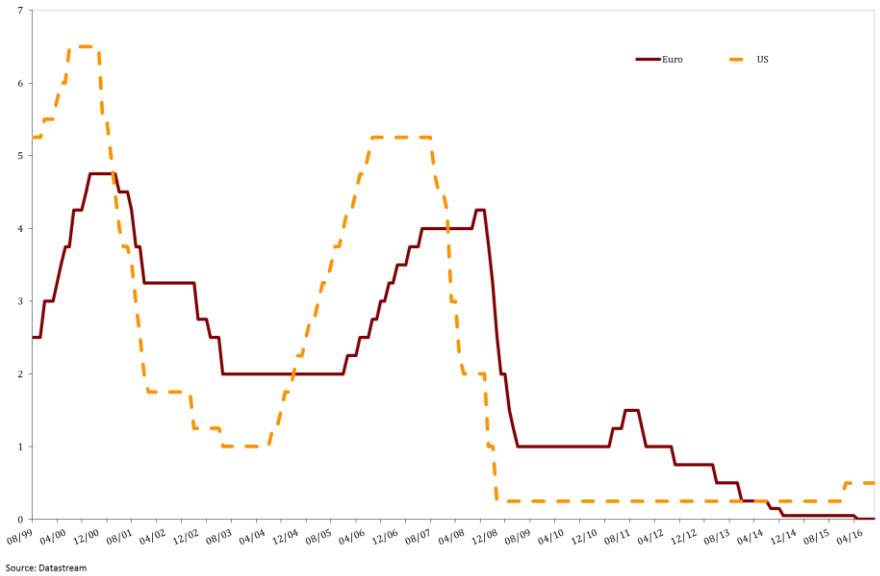
To sum up, while still popular in policy circles and in the media, the Consensus narrative seems to have little support from the data. The opposition of the "flexible" United States and "rigid" European countries, seems more like a snapshot of the past than a feature of the present. While too much emphasis is given to the Consensus narrative, another difference between the Eurozone and the United States is too often neglected: policy activism.

3.2 A tale of policy inertia

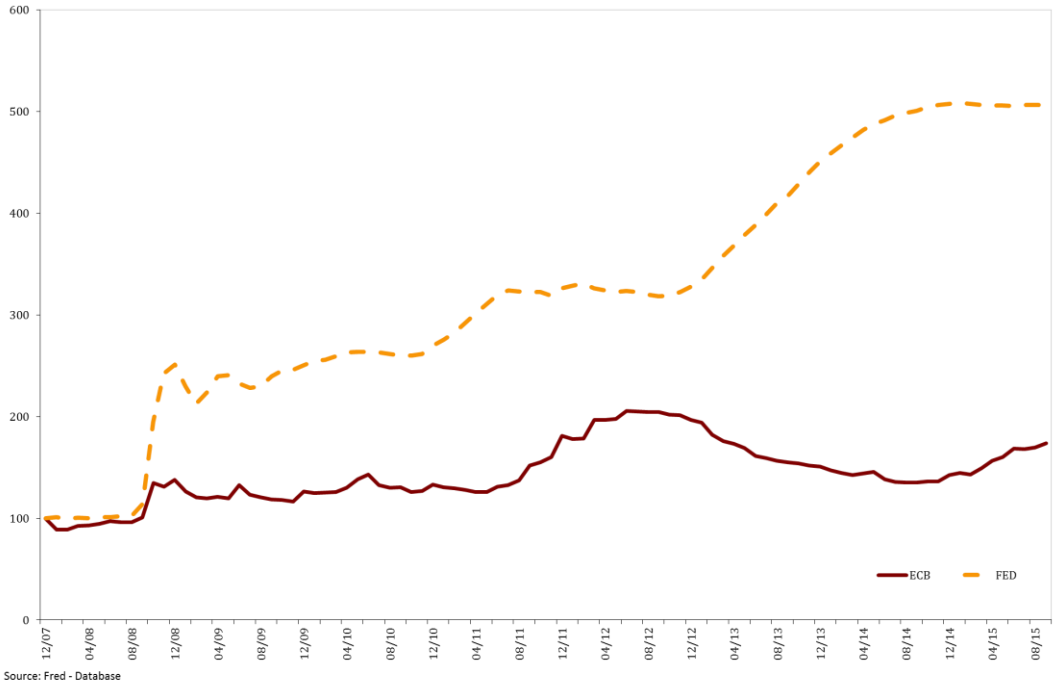
While American policy makers, regardless of their partisan affiliation, never gave up the active management of the business cycle, in Europe macroeconomic policy never made it into the policy-maker's toolbox. The Consensus, embedded in European institutions and practices since the early 1990s, led European governments to give up active management of the business cycle, and to engage in a non-cooperative strategy through fiscal and social competition. Even before the global financial crisis hit the world economy, the inertia of European policy makers in comparison with their counterparts across the ocean was striking. Let us start from monetary policy.

Figure 3. Monetary policy: EMU vs the USA

(a) Short term interest rate (1999-2016)



(b) Central bank total assets (2007-2015, Dec 07=100)

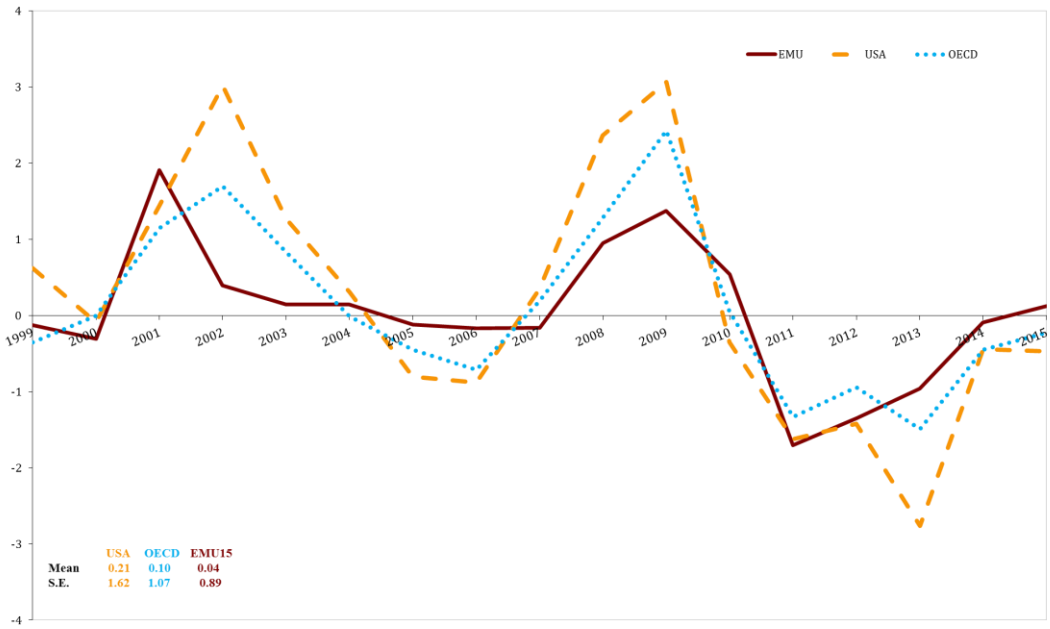


Source: Datastream (2017).

Figure 3a shows that since the creation of the euro the European Central Bank (ECB) has not acted as aggressively as the Federal Reserve (the Fed) to smooth the cycle. While in the United States rates went from high to low rather quickly, the ECB followed with a lag, and with more timid rate changes. This is most striking for the current crisis, as the ECB decided to slash rates later than the Fed. Nor is the difference limited to conventional monetary policy. Figure 3b shows the evolution of Fed and ECB balance sheets since the end of 2007. The much discussed ECB Quantitative Easing program clearly pales if compared to the behaviour of the Fed that once more acted earlier and more boldly.

There is little doubt that the ECB was substantially less proactive than the Fed, both before and during the crisis. This restraint could nevertheless be explained by the need for the ECB to compensate for excessively lax fiscal policies in the Eurozone. This argument does not hold, nevertheless, if we look at Figure 4, which shows the fiscal impulse[15] of the EMU in comparison with the US and the OECD average. Like for central bank rates, the figure is most striking for the differences in variation, with the standard error of the fiscal impulse in the EMU being only slightly more than half the value for the United States. The higher reactivity of American fiscal authorities is not surprising if we consider that the United States has a lower level of social protection and of automatic stabilization, which calls for a more active role of macroeconomic policies aimed at limiting the effects of harmful fluctuations of income (Creel and Saraceno, 2010a).

Figure 4. Fiscal Impulse (1999-2015; means and standard errors also reported)



Source: OECD (2017).

[15] The fiscal impulse is computed as the negative of year-on-year changes in cyclically adjusted government net lending. It measures the discretionary fiscal stance of the country, a positive number denoting an expansionary period.

But there is more than that. The EMU policy inertia is related to the institutions for macroeconomic governance that were created when the New Consensus dominated academic and policy circles alike. The constraints to policy activism, therefore, are a defining feature of the EMU as it came to existence in Maastricht in 1992.

4. European fiscal governance

4.1 From Maastricht to the Fiscal Compact, via the Stability and Growth Pact

The theory of currency unions (Mundell, 1961) assigns to monetary authorities the task of reacting to common shocks setting the interest rate in order to maximize some union-wide objective function (usually obtained by averaging the national objective functions). The optimal monetary policy response to idiosyncratic shocks is to "do nothing" (Lane, 2000), leaving the task to national fiscal policies, that remain decentralized.

The institutions of Europe, in their actual design, stem from two main sources. The first is the founding Treaty signed in Maastricht in 1991, and the second is the Stability and Growth Pact that, negotiated together with the Amsterdam Treaty in 1997, completes the setup for fiscal policy.

The Maastricht Treaty defined the convergence criteria that countries had to fulfil in order to be admitted to the single currency area. In particular, it required a deficit to GDP ratio of no more than 3 per cent, and a public debt below 60 per cent of GDP, or approaching that level at a "satisfactory pace". The vagueness of the latter requirement allowed to overlook it for high debt countries such as Belgium, Greece and Italy.

Approaching the starting date of 1999, the problem was posed of how to make the accession criteria permanent, i.e. valid once the single currency had become a reality. The Amsterdam Council of 1997 put in place the Stability and Growth Pact which coordinates fiscal policy in the Eurozone "from the bottom", and was designed with the explicit objective to ban discretionary fiscal policy, and to lay the burden of adjustment on the operation of automatic stabilizers (Buti and Giudice, 2002). According to its provisions, each Member Country had to achieve the objective of a medium-term balanced budget, while the deficit in any given year needed not to be above the 3 per cent Maastricht threshold. The requirement to attain a position of close to balance or surplus in the medium term was an important innovation of the Stability and Growth Pact (SGP) with respect to the Maastricht Treaty. In fact, it implied the strong consequence that public debt as a ratio to GDP should tend asymptotically to zero, a position hard to justify *per se*. The Amsterdam Treaty also defined an "excessive deficit procedure" which gives the Commission the power to propose sanctions against any country that exceeded the limit.

After a first reform in 2005, the European crisis paved the way for a new set of reforms of the European fiscal rules. On 2 March2012, 25 of the 27 EU countries (the Czech Republic and the United Kingdom did not sign) adopted the *Treaty on Stability, Coordination and Governance in the Economic and Monetary Union* that entered into force on 1 January 2013. This so-called Fiscal Compact tightened the provisions of the SGP: the limit of public deficit at 3 per cent of GDP has been supplemented with a limit on structural deficit at 0.5 per cent of GDP, and an average yearly reduction by $1/20^{th}$ of the difference between the debt to GDP ratio and the 60 per cent of GDP Maastricht limit. The limit on structural deficit goes beyond the SGP provisions, in that it aims at introducing balanced budget constraints at the constitutional level for each Eurozone Member State. These tighter rules have been complemented by a strengthened surveillance mechanism,

the "European Semester": the Commission interacts with Member Countries all along the budgetary process, to enhance surveillance, and enforcement of fiscal discipline.

4.2 The SGP and the Fiscal Compact: Good fiscal rules?

The discussion on fiscal rules and in particular on the Stability and Growth Pact, never faded, even before the crisis.

Attempts were made to try to assess the European fiscal rule against Kopits and Symansky's (1998) criteria enunciated above (see p. 20). Buti et al. (2003) concluded that the EMU fiscal rule did fare rather well in terms of the criteria, so that only slight modifications would be needed. According to them, the two most important drawbacks of the SGP were lack of enforceability and of consistency.

Creel and Saraceno (2010b) took a more critical stance, noticing how the SGP was inconsistent as it lacked the incentives for governments to take benefit of upswings to increase public surplus or to implement fiscal reforms ("all stick and no carrot" – Bean, 1998: p. 106).

Creel and Saraceno further argued that the SGP relies on an intrinsically difficult concept like "structural deficit" that, while economically meaningful, relies on estimates of potential output that are uncertain. The argument in Fall 2014 between the Italian Government and the Commission on the estimate of the output gap is a good case in point. This entails insufficient clarity and transparency of the SGP, which falls short of two important criteria put forward by Kopits and Symansky. Furthermore, the Commission is endowed of the power to identify "significant divergences" from medium term objectives, where the identification of what is and is not significant is left to the Commission's discretion. We thus learned in the Spring of 2015 that in the framework of the Macroeconomic Imbalances Procedure, Germany's current account surplus was not "excessive" even if larger than the threshold set by the European norms.

The original SGP had some flexibility, in that the power to impose sanctions stayed with the Council that decided based on political considerations. But this came at the price of reduced enforceability and credibility[16]. With the crisis, and the subsequent tightening of the rules introduced by the Fiscal Compact, this was corrected and now sanctions are automatic unless the Council blocks them with a qualified majority. This of course reduced flexibility, a practical demonstration of the already mentioned trade-offs implied by Kopits and Symansky's crieria.

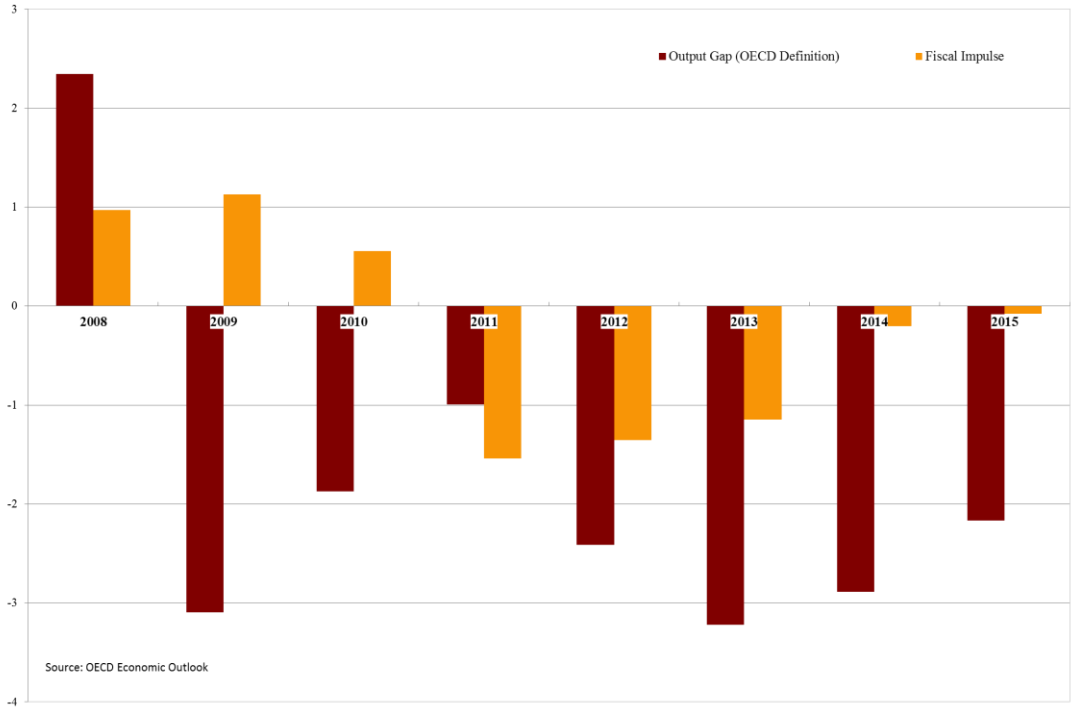
Interestingly enough, the recent difficulties of the Eurozone economy, and the backslash against austerity, have induced the Commission to take a more active role in according flexibility to countries, if associated to significant efforts in implementing reforms, managing emergencies such as the refugee crisis, and so on. This increased flexibility nevertheless comes at the price of increased arbitrariness, and a further reduction of clarity and transparency.

More importantly, the crisis has highlighted other important flaws of the fiscal framework. First, it does not seem to have guaranteed the convergence of crisis countries to sustainable finances. As we write (March 2017), in spite of austerity (probably because

[16] The clash between the Council and the Commission, when the former refused to trigger an Excessive Deficit Procedure for France and Germany in 2003, represents one of the most serious institutional crises of the EU.

of austerity, see Section 5) in all peripheral countries, the debt-to-GDP ratio has barely been stabilized. The philosophy of the SGP was to achieve coordination of fiscal policies "from the bottom" through adherence to the rule. The "one-size-fits-all" feature of the SGP created two problems related to consistency: the first is that fiscal policies ended up being synchronized rather than coordinated. All the countries implemented austerity, even those who had a margin to run expansionary policies. The result is that fiscal policy for the Eurozone as a whole since 2010 has been pro-cyclical at worse and neutral at best, in spite of persisting negative output gaps (Figure 5). Second, and as a consequence of this harmful and inertial fiscal stance, the ECB had to step in the picture somewhat reluctantly in order to minimize the damage, at least in terms of stability (Saraceno, 2016a). Besides the inefficiency of having to rely on monetary policy in a liquidity trap situation, this has also highlighted the inconsistency of the macroeconomic governance mechanism.

Figure 5. EMU Fiscal Impulse and Output Gap (2008-2015)



Source: OECD (2017).

Second, it is true that the letter of the rule respects the neutrality criterion, as nothing in the SGP (and Fiscal Compact) calls for specific measures on government size and on the reach of national welfare states. But the actual practice is in fact different. For example, creditors' demands in the bailout negotiations with Greece, and general public statements regarding macroeconomic policy from the ECB and the Commission, constantly call for a downsizing of the public sector and a reduction in pensions, healthcare services, and so on. The implementation of the rule, therefore, is a clear application of the New Consensus (Fitoussi and Saraceno, 2013). In light of these considerations, it is hard to share Buti et al.'s (2003) conclusion that the European fiscal framework just needs minor adjustments. The 2000s, and the crisis that started in 2008, clearly show that EMU fiscal rule are deficient in almost all the criteria listed by Kopits and Symansky.

But the EMU fiscal framework has deeper problems than simply being "non optimal". First, and without even questioning the reasons for the breach, the 3 per cent-of-GDP target for public deficit has been regularly exceeded by EU countries since 1999 when the SGP started being enforced. Wyplosz (2012: p. 23) argues that a rule which is breached so frequently by so many countries does not act as a binding rule. Fitoussi and Saraceno (2008) argue that, on the contrary, even if the European fiscal rules never yielded

actual sanctions in spite of the numerous infringements, their very existence was capable of constraining governments' action through peer pressure and the general reprobation attached to fiscal (and monetary) activism. Second, in some countries creative accounting has been implemented in order to circumvent excessive deficit. Third, the lengthy EMU procedures have been exploited strategically by governments: fiscal plans and implemented budgetary policies have been at odds, counting on the cumbersome sanctioning procedure. Fourth, by focusing on annual budgets the SGP overlooks all the intertemporal issues linked to fiscal policy. These range from investment expenditures, whose return is spread over long periods (so the same should hold for the cost), to the smoothing over different years of the adjustment costs linked to a downturn, or to current expenditures whose effects may be felt in the future (e.g. education). By imposing limits in terms of annual accounting, the SGP eliminates any intertemporal smoothing of fiscal policy. Blanchard and Giavazzi (2004) further argue that the lack of intertemporal considerations may be doubly harmful, by forcing governments to postpone structural reforms (namely of the pension system) that would yield benefits only in the medium-to-long run while imposing a short term burden on public finances (cuts in public system contributions in order to allow financing of private pension schemes). The new "flexibility" taking into account reform efforts has softened, but not eliminated, the problem.

5. Shaking the consensus: The crisis and secular stagnation

The Consensus emphasis on monetary policy led most countries, when the crisis began in 2007-2008, to favour monetary policy to try to contrast the recession. It is only when in 2009 the economy became trapped in the liquidity trap (see page 10), and monetary policy lost traction, that fiscal stimulus plans were implemented by advanced and emerging economies alike. The coordinated fiscal expansion was fruitful, and is credited with triggering the recovery (Eichengreen and O'Rourke, 2009). But as soon as the acute phase of the crisis was over, the fear of deficits and debt caused a quick reversal of the policy stance. The turn towards austerity was particularly brutal in Europe, where the crisis in peripheral countries (Greece, Ireland, Portugal and Spain) was interpreted as a fiscal profligacy story, and therefore "cured" with fiscal consolidation.

The austerity plans put in place in peripheral Europe where grounded on the New Consensus belief that fiscal multipliers, the impact of government deficit on economic activity were rather low, certainly lower than one, and probably around 0.5. Thus, austerity was estimated to be only mildly recessionary in the short run[17], and expansionary in the long run when the government withdrawal from the economy would unleash the potential of the economy.

Events did not unfold as planned: the fiscal stance reversal slowed down the recovery world- wide, and in the Eurozone austerity plunged the economy in a double dip recession from which it has not yet fully recovered.

The recession, and the slow and uncertain recovery that followed, have shaken the New Consensus, most notably in its limited faith in policy effectiveness. The reassessment

[17] Some even claimed that austerity would be expansionary in the short-run as well, drawing on the literature started by the seminal work of Giavazzi and Pagano (1990) on expansionary fiscal consolidations. The fact that this literature has been shown to be very country-specific, and substantially proven wrong, was neglected by partisans of fiscal consolidation.

of the Consensus is ongoing, and it touches many of its tenets. From the role of capital mobility (see, e.g., Ostry et al., 2016), to the importance of public debt (IMF, 2016), to the timing and design of structural reforms (Rodrik, 2013; Eggertsson et al., 2014).

For the purpose of this paper we will focus on the reassessment of the Consensus dismissal of fiscal policy. Two ongoing discussions are worth mentioning: the debate on the size of multipliers, and the one on the permanent costs of austerity.

5.1 How large are fiscal multipliers?

In 2012, the IMF made the headlines with a box in its fall edition of the *World Economic Outlook* that was later developed by its chief economist Olivier Blanchard (Blanchard and Leigh 2013). The IMF made an outright *mea culpa* on the size of the multipliers, arguing that in a deep downturn with monetary policy at the zero lower bound, their size was closer to 2 than to the value of 0.5 that they had previously estimated. As a consequence, the contractionary impact of fiscal consolidation (in particular in Europe) had been larger than anticipated, and the recession made austerity, not only more costly, but also self-defeating with respect to the objective to reduce the debt ratios.

The multiplier *per se* is a vague term. In the literature it may be taken to measure the impact of public expenditure, or of public deficit, on the level of activity, or on other variables such as employment, industrial production or consumption. Furthermore, it may be computed over different time horizons, from the multiplier on impact, to the long-term multiplier computed as the cumulated effects over time.

Empirical work on the multiplier size in "normal times" is far from being consensual[18]. The meta-analyses of Gechert and Will (2012) and Gechert (2015) manage to extract from the abundant literature a number of broad conclusions:

1. First, public expenditure multipliers are close to 1 (so significantly larger than the 0.5 value that was taken as a basis of fiscal consolidation programs in crisis Eurozone countries).
2. Second, consistent with the standard textbook argument, the spending multipliers are larger than tax and transfer multipliers.
3. Finally public investment multipliers are even larger than overall expenditure multipliers.

Nevertheless, these average values hide a very strong variability that depends among other things from the type of underlying theoretical model. Keynesian macroeconomic models yield substantially larger multiplier effects on average than Real Business Cycle (RBC) based estimates that allow no influence of demand factors on GDP growth. DSGE models, that blend an RBC structure with various short-term rigidities, allow for demand shocks to have an impact in the short term. It is not surprising then, that the empirical estimation of the multiplier, within this framework, rests between the two extremes of the Keynesian and the RBC model.

It is interesting to note, nevertheless, that the variability can be found even among estimates obtained with the same theoretical foundations. The reason for this variability is that, regardless of the theoretical model that is chosen, the value of the multiplier crucially depends on a number of factors, most notably the degree of openness of the economy, and

[18] For some recent work, reaching opposite conclusions see e.g. Perotti (2011) and Alesina et al. (2015).

the size of the output gap. Regarding the latter, the debate on the effectiveness of macroeconomic policy often neglects the fact that Keynesian theory only applies when there is slack in the economy, i.e. when there are idle resources that public expenditure can mobilize (see Section 2.1.2). During a recession, furthermore, a number of New Consensus features of the economy will play a role. For example, the number of liquidity constrained households and firms, who cannot smooth consumption, will increase (DeLong and Summers, 2012), thus making the value of the multiplier larger. On the other hand, if the economy is at full employment, in Keynesian as much as in Neoclassical theory, the value of the multiplier will be zero, and crowding out complete.

Attempts to estimate a time-varying value for the multiplier that depends on the cyclical position of the economy are not numerous. Using US data and a regime-switching SVAR model à la Blanchard and Perotti (2002), Auerbach and Gorodnichenko (2013) find large differences in the size of spending multipliers in recessions and expansions with fiscal policy (in particular military spending) being considerably more effective in recessions. Creel et al. (2011) find similar results using a structural Keynesian model on French data: when the output gap is significantly negative, the value of the multiplier is larger than one. Consistently with the theory on the other hand, when the economy is instead close to potential, the model gives significantly lower estimates of the multiplier.

Since the seminal work of Aschauer (1989), public investment has been considered to have a double role of short-term aggregate demand support, and long run productivity and growth contributor. Bom and Ligthart's (2014) meta-analysis shows that estimates of public investment multipliers exhibit the same degree of variability as the broader multiplier estimates seen above. This is not surprising, as it takes time, for public capital to become operational and contribute to total factor productivity (Leeper et al., 2010). Thus, depending on how the time to build is accounted for in the estimation exercise and in the underlying theoretical model, the multiplier may change significantly.

In general, and consistent with economic intuition, the multiplier increases in size with larger productivity of public capital, and with shorter time to build. In these cases, the positive short-term demand shock is quickly associated with a positive supply-side impact on productivity. This is because, while in normal conditions the positive demand shock triggers a central bank reaction, the subsequent impact on supply is deflationary, making central bank intervention milder or unnecessary, thus amplifying even the short-run multiplier.

Depressed interest rates at times of crisis also give another argument for stimulus through fiscal investment: borrowing costs are low, and the depleted public (and private) capital stock during the crisis make investment particularly productive, and the multiplier large. This is why, based on a large sample of developing and advanced countries, the (IMF, 2014) recently spoke of "free lunches": public investment would lift the economy out of the crisis and via its impact of growth, also reduce public debt.

5.2 The permanent costs of austerity

> Are there circumstances in which changes in aggregate demand can have an appreciable, persistent effect on aggregate supply? (Yellen 2016).

Fiscal consolidation and the implementation of reforms had stronger than expected recessionary effects, most notably in Europe. This did not soften the Consensus' emphasis on austerity and reform, as the recession was interpreted as a necessary short-term side effect of the policies put in place to increase the potential growth rate of the economy. This interpretation rested on the Consensus separation between short and long run, with demand side factors only affecting the former, and supply side policies having an impact on the latter (see p. 19). The Consensus conventional wisdom would argue that the reduction of aggregate demand and the ensuing recession triggered by austerity and reforms would be a

short-term pain which would in no way affect the long-term gain represented by the effect of reforms and government downsizing.

Nevertheless, the severity of the recession has cast doubt as of whether the economy was going through a simple cyclical downturn. Economists have therefore started asking whether the economy will ever be able to recover its past levels of output. On one side, the discussion on secular stagnation highlighted the reasons why the growth rates of the 1950s-1970s might not materialize again. On the other side, economists emphasized how prolonged periods of crisis may dent physical and human capital, causing a permanent damage to the economy.

In particular, DeLong and Summers (2012) revive an old intuition by Blanchard and Summers (1986), which highlights the role of hysteresis in explaining long-term unemployment: workers who stay unemployed long enough will start losing their human capital. Thus, when these workers eventually find a new job, they will be less productive. The result is a permanently lower capacity of the economy to produce. DeLong and Summers (2012) conclude that too strong fiscal austerity may yield permanently lower future output by throwing too many people out of work, and thus end up being self-defeating also in the long run.

Fàtas and Summers (2015) provide empirical support for this claim, as they find that short-run shocks to the economy tend to have an impact both on current and potential GDP. Among these shocks of course they focus on fiscal consolidations, that at times of crisis when multipliers are large, have a particularly strong negative effect on output both in the short and in the long run. Thus, Fàtas and Summers concur with the literature that argues against fiscal consolidation, adding an additional zest: the bad timing of austerity does not only cause unnecessary pain in the short run. It may be self-defeating in the long run as well.

To sum up, the crisis has revived the interest in fiscal policy, an interest that took the shape of a renewed debate on the size of fiscal multipliers, and on the impact of austerity on potential growth. It is too soon to say whether this body of work will lead to a reconsideration of the New Consensus policy prescriptions that had excluded fiscal policy from the policy makers' toolbox.

6. Conclusion: What Lessons for Developing Economies?

The New Consensus is built around the hypothesis of market efficiency, and is enshrined in European institutions since the Maastricht Treaty. Discretionary policies are limited to a bare minimum, while rules and government by technocrats are preferred to remove the obstacles towards the Pareto optimal equilibrium of the economy. As posited by the underlying theory, EU institutions and practices yielded inertial macroeconomic policies, even before the crisis that started in 2008.

Following the crisis the economics profession is reassessing macroeconomic policy, and in particular fiscal policy, well beyond its role in traditional Keynesian short-term stabilization. We may be headed towards a long period of "active government" that should absorb the private sector excess savings, and contribute to long-term growth with investment in private and public capital. The theory of this new role for fiscal policy remains to be written. What is certain is that rules like the European Stability and Growth

Pact (SGP) will not be able to survive in their current form, were a new paradigm on fiscal policy emerge[19].

Most of the literature quoted in this paper is built on evidence drawn from advanced economies. In a recent paper, Hory (2015) tries to evaluate whether when dealing with emerging economies the picture changes substantially. He concludes that multipliers tend to be weaker in emerging economies than in advanced economies, but that the determinants of their size are the same (e.g. debt, openness). Thus, Hory concludes, the differences between low-income and advanced economies are quantitative rather than qualitative. The lessons coming from the literature on advanced countries can therefore be applied, with some caution, to developing economies.

As for fiscal rules, the already cited Ray et al. (2015) wonders whether norms tailored on advanced economies are fit for lower-income countries that have recently borrowed, especially from the EMU, their fiscal rules. The authors conclude that transposing rules from advanced to developing and emerging economies presents two major risks: the first is that "many lower-income countries lack the organizational and institutional capacity, due to the scarcity of human resources, to establish the strong budgeting, reporting and oversight mechanisms necessary to establish and operate effective fiscal rules." (Ray et al., 2015: p. 11). The second is that excessive focus on fiscal discipline may yield pro-cyclical fiscal policy, and make it harder to reach development objectives such as poverty reduction, employment friendly growth, the reduction of income inequality, or the construction of a properly working welfare state.

The conclusions of this paper regarding fiscal policy, therefore, seem to be even more relevant when the focus is on low-income and emerging countries. While its effectiveness is some- what reduced by weak institutions, fiscal policy is all the more necessary. Emerging economies should use fiscal policy when necessary to do so, while working at ways to improve the efficiency of both current public expenditure and public investment. Similarly, the adoption of fiscal rules should be carefully assessed for countries where the objective of fiscal discipline risks not only to be at odds with macroeconomic stabilization, like in advanced countries, but also and more importantly with the attainment of development goals.

[19] For an analysis of the implication of secular stagnation on the conduct of fiscal policy, especially in Europe, see Saraceno (2016b).

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