Economy and economics: the twin crises

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Abstract

This paper explores the interaction between the Great recession triggered by the US subprime mortgages crisis and the twin crisis of macroeconomics. We argue that a major determinant of the subprime crisis and its dire consequences has been an approach to economics that is unable to deal with irregular phenomena. On the other hand, the unexpectedly deep financial crisis that has heavily affected the real economy makes clear that we need a major redirection of macroeconomic theory to make it able to explain, forecast and control irregular phenomena.

The recent interaction between the crisis of the economy and the crisis of macroeconomics is analyzed in the light of similar preceding episodes in the 20th century: the Great contraction of the 1930s and the Great stagflation of the 1970s.

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1. Introduction

The deep crisis of the world economy triggered by the US subprime crisis in 2007 (henceforth Great recession) was accompanied by a crisis in economics, especially macroeconomics, of not inferior gravity. This was not just a coincidence but the most recent expression of a far-reaching interaction between the macroeconomic performance of industrialized economies and the evolution of macroeconomics (henceforth the "Interaction"). Although we can find earlier examples, the Interaction became systematic since the birth of industrial capitalism in the late 18th century and became progressively stronger henceforth. We may observe a recurrent general pattern. A major crisis of the economy typically produces a radical redirection in mainstream macroeconomics. In its turn, the new macroeconomic paradigm contributes to shape a phase of economic growth, although much more slowly and with a longer lag. The new growth regime, after a while, progressively betrays its shortcomings until a new major crisis emerges. We emphasize that the Interaction should not be understood as a mechanistic feed-back. In particular we stress that its specific features change significantly through time.

For lack of space, our analysis has to be very schematic and simplistic. We will focus on the US economy whose evolution has often set the pace for the evolution of most other developed countries. In fact "the United States looks like the archetypical crisis country" (Reinhart and Rogoff, 2008, p.2). This is not to say that the local differences would be without interest for our analysis but we are compelled to ignore them in this paper.

The structure of this essay is as follows. In the second section we start from a bird's eye view of the Interaction since Adam Smith until the "Great stagflation" (1971-1980). In section 3 we briefly examine to what extent the Keynesian mainstream macroeconomic paradigm contributed to trigger the Great stagflation and to prolong its persistence until the late 1970s. Section 4 examines the emergence of the neo-liberal paradigm of new classical economics as the prevailing response to the Great stagflation. In section 5 we examine the influence of New classical economics on the fluctuating growth of the last 30 years until the outbreak of the subprime crisis. In section 6 we briefly recall the salient features of the Great recession that are of particular interest for our argument. In section 7 we summarize the main results of our analysis and we discuss briefly in which direction to proceed in order to give the correct response to the crisis.

2 The Interaction from Adam Smith to the Great stagflation

The Interaction started to be particularly intense since the Industrial revolution of the late 18th Century and the contemporaneous foundations of modern Political economy by Adam Smith (1776). In a sense, the *Wealth of Nations* itself may be seen as a reaction to the crisis of Mercantilism brought about by the first Industrial revolution, a reaction that was in tune with the views and interests of the emerging bourgeoisie. The new Smithian view of the free market as a self-regulating mechanism managed by a providential (although invisible) hand, had a pervasive impact not only on economic thought but also on the evolution of emerging capitalism. In particular, the liberal policy implications of this new view acquired a growing influence with governments and public opinion shaping the policy strategies of industrializing countries, particularly since the middle 19th century. The mild but persistent recession that characterized the last thirty years of 19th century, called Great depression by the economic historians, did not question the basic principle of classical Liberalism but produced a new, more sophisticated, version of the liberal ideas, that we may call Updated liberalism, a version that explicitly rejected laissez-faire and tried to clarify where exactly the boundaries between free market and collective action should be fixed. Marshall, Wicksell and Pigou gave important contributions in this spirit around the turn of the century. However, their ideas were insufficiently acknowledged by policy makers who persisted in a policy strategy essentially influenced by laissez faire orientations. This contributed to the outbreak of the Great contraction started in 1929.[1]

The Great Contraction of the 1930s was a much deeper crisis that produced a radical change of direction in both history of facts and thought. The faith in self-regulating markets was sorely tried favouring the emergence of approaches meant to explain the weakness of the invisible hand and to help it to restore full employment equilibrium. This set the terrain for the Keynesian revolution. In the *General Theory* the great Cambridge economist explained why free markets are unable to self-regulate themselves and why the classical

[1] We call in this way the crisis of the 1930s to avoid confusion with the long stagnation of the last 30 years on 19th century that is often called Great depression by historians. The terminology here adopted has been often used in the recent past (see, e.g., Laidler, 1999).

economic theory is unable to cope with this basic problem (Keynes, 1936). The new general theory suggested by Keynes led to a new conception of economic policy in which the state had to play a broader role to help the market to maintain or restore full employment equilibrium. The new vision of macroeconomic theory and public policy consolidated in the troubled 1940s that required a public management of the war economy and of the post-war reconstruction. When the conditions for growth were restored in the early1950s the Keynesian theory became the mainstream macroeconomic theory, although in an edulcorated version that came to be called "neoclassical synthesis", i.e. synthesis between Keynes's theory and the classical theory heavily criticized by him. In this view, the invisible hand has to be left unfettered as much as possible. It is recognized, however, that the existence of diffuse and sizeable microeconomic failures and of the huge macroeconomic failure of involuntary unemployment requires a strategy of policy interventions meant to internalize the negative externalities and to avoid involuntary unemployment. This policy strategy was synergic to the establishment of the so-called welfare state aiming to sustain full employment and redistribute income in favour of the less advantaged citizens. This view underlay a period of rapid growth accompanied by a sizeable reduction in poverty and inequality (1950s and 1960s) but became increasingly vulnerable from two related points of view. First it favoured a hypertrophy of public expenditure that rapidly increased its share in the GDP of industrialized countries from about 10-20% in the 1920s to 40-50% in the 1970s. This process was accompanied by a progressive increase of bureaucracy, cronyism and corruption. Second, it exhibited a growing inflationary bias due to the growing strength of trade unions in a full employment regime. In the 1960s and early 1970s this translated in periodic bouts of wage increases meant to improve, or defend, the share of wages in GDP leading to policy-induced fluctuations.

3 The Interaction during the Great stagflation and the neoliberal response

The growing level and dispersion of inflation rates determined by the stop-and-go policies adopted in different countries brought the Bretton Woods monetary regime to an end. In 1971 the unilateral declaration by the President Nixon of the inconvertibility of the dollar announced the end of the dollar-standard regime and opened the way to a process of systematic liberalization of other important macroeconomic magnitudes. This crucial decision marked the start of a period of transition characterized by persistent inflation and growing unemployment. The crisis was greatly aggravated by the two oil shocks in 1973 and 1979 that increased cost inflation in a significant way. The increase of public expenditure to counteract the growing unemployment resulted in accelerating inflation and unsustainable employment. Most governments sought a remedy in a new policy strategy, later on called neoliberal, based on privatization and liberalization.[2] This radical shift in economic policy was claimed to be consistent with the anti-Keynesian counter-revolution that had occurred in the 1970s. The upheaval in macroeconomics was prepared in the late 1960 by the monetarists led by Milton Friedman who blamed the increasing inflation on Keynesian policies based on a Phillips curve seen as a stable menu of policy choices (Friedman, 1968). This approach was criticized for generating bouts of accelerating inflation in the illusory hope of establishing a low but unsustainable level of unemployment. Friedman maintained that the sustainable rate, called natural rate of unemployment, is the equilibrium level that would be attained by unfettered markets in the absence of distortional policies. A crucial support came from the microfoundations research program led by Phelps (1970). While the Friedmanite monetarism was based on Marshallian partial equilibrium theory, Phelps's criticism blamed the weakness of Keynes's macroeconomic theory on its lack of rigorous microfoundations, and claimed that sound macroeconomic theory had to be reconstructed on the basis of general equilibrium microfoundations. In the early 1970s Lucas suggested an influential synthesis of the two streams adding a crucial ingredient: the assumption of rational expectations. Lucas's model of equilibrium business cycles rapidly became the prototype of a new macroeconomic theory soon called New Classical Economics (NCE; see Lucas, 1972, 1981). This theory aimed to recover and develop the basic insights of classical economics heavily criticized by Keynes and his followers, by adopting a new methodological approach that may be called "the pure equilibrium method" (Vercelli, 1991). In this approach the economy is assumed to be always in equilibrium and agents are conceived as fully rational while unemployment is always voluntary. The fluctuations of the economy are thus seen as completely

[2] The new policy strategy was inaugurated in the UK by Mrs. Thatcher since 1979, and adopted in the USA by President Reagan since 1980. Their leadership was soon imitated by most other political leaders in the developed countries.

independent of alleged market failures and are assumed to depend exclusively on exogenous factors such as distortional state interventions and oil shocks. Counter-cyclical policy is seen as impossible, or unreliable, and in any case harmful. The way out from the crisis was sought in a mix of privatization and deregulation aimed to strengthen the scope of unfettered markets and curb the weight of the state interference in the economy. These prescriptions provided the foundations for what has been later called "Neoliberalism". We will use this label since its use is now widespread, but we emphasize that this word is misleading, since classical and updated liberalism were much more aware of the limits of markets: a more appropriate wording would be "New laissez faire" (Borghesi and Vercelli, 2008).

4 The neoliberal era, or the "new laissez faire"

The early monetarist orientation of NCE in the 1970s gave a theoretical justification to the strict deflationary policies implemented in the early 1980s with the full support of the Central banks following the Federal Reserve under the leadership of Paul Volker (chairman from 1979 to 1987). In the meantime, the NCE school abandoned the early monetarism while retaining the pure equilibrium method of Lucas. The new prototype model of mainstream macroeconomics became the model of "real business cycle" suggested by Kydland and Prescott (1982) where the main shocks that explain economic fluctuations are not monetary impulses but technological shocks. This point of view was soon to be reflected in the monetary policy pursued by the very influential new chairman of the US Federal Reserve Board Greenspan (who served in this role from 1987 to 2006). The new monetary policy, often dubbed *Greenspan put*, was that of pumping liquidity in the real economic system whenever an excess supply emerged in financial markets, as after the 1987 stock market crash, the Gulf War, the Mexican crisis, the Asian crisis, the LTCM breakdown,Y2K, the burst of the internet bubble and the 9/11 attack. This policy strategy had positive effects in the short period but devastating effects in the longer period. It contributed to thwart the emerging financial crises by greatly reducing their recessive effects, but introduced disruptive systemic effects in the financial system that culminated in the subprime crisis. To understand how this was possible we have to examine how the neo-liberal reforms affected the structural characteristics of the real economy.

The conservative governments appointed in the early 1980s in many developed countries profited of the weakness of trade unions, in consequence of the severe depression induced by the monetarist policies implemented in that period, to introduce structural reforms in labour markets and industrial relations meant to increase their flexibility. The strategy pursued by the neoliberal governments (Thatcher, Reagan and many followers) in the early 1980s was twofold. On the one side they started a program of deregulation of labour markets meant to curb the power of trade unions and to strengthen the power of employers to decide whom to hire and fire, remunerations, overtimes and so on. On the other hand, they gave the example of a very tough attitude towards workers in highly spectacular disputes (such as the US air traffic controllers in 1981 and the UK coal mining dispute in 1984). The synergic policies of labour markets deregulation and demonstrative actions against trade unions' resistance were soon pursued by most governments deeply changing the behavioural rules of market economies. The unemployment rate diminished but many permanent jobs were substituted by precarious and badly paid jobs. The Phillips curve became almost horizontal so that the inflationary bias of the real economy was substituted by an attitude of "Great moderation" in the real markets (see, e.g., Iakova, 2007). We may now understand why the "Greenspan put" policy became possible. The permissive liquidity policy did not translate in higher inflation in the real economy, as in the period of stop-and-go Keynesian policies, but in "financial inflation" that in the short period increased the income of financiers benefiting to some extent the whole economy. However, the "trickle-down" doctrine worked only in part and the inequality of income distribution greatly increased. Also the number of the poor increased in most countries. The widespread conviction of having found the recipe to control business cycles while sustaining growth proved to be an illusion. From the point of view of growth, the higher demand coming from the finance sector did not fully compensate the curtailed demand of workers constrained by lower and more insecure wages. On the whole the average rate of growth in the neoliberal era (1980-2009) has been lower than in the Keynesian period (1951-1971). The optimism spread during the roaring 1990s on the wings of the "new economy" but petered out in the first decade of the new century, notwithstanding the vigorous but ephemeral boom in the period 2003-2006. Greenspan's lax monetary policy in a growingly financialized economy had the effect of doping the economy: shorter and less painful recessions and a higher trend of growth were bought at the heavy cost of intoxicating the economy. The "Greenspan put" encouraged speculation, a weakening of risk perception, and growing moral hazard. These dire effects were much enhanced by the policy of bailing-out the virtually broke bank and non-bank financial institutions (FI) considered too big to fail (with the only arbitrary and devastating exception of Lehman Brothers in September 2008). In the absence of appropriate regulation, only fear can check excessive speculation. The Greenspan's (and then Bernanke's) monetary and bail-out policy swept away fear and weakened the risk perception of the agents, particularly of big operators. In consequence of this dangerous combination, the financial cycles become progressively more frequent and profound. The way in which each crisis was overcome planted the seeds for a new, possibly worse, crisis to come.

It is ironic to observe that Neoliberalism, introduced to mend the inflationary bias in the real economy induced by Keynesism, favoured the progressive establishment of a different, but not less dangerous, inflationary bias, this time in the financial sector. The Fed policy introduced a floor to fluctuation in the price of financial assets, while the refusal to prick financial bubbles (because, as they maintained, "the market knows better") abstained from establishing a ceiling. The rate of discount policy is too limited by heavy constraints in a highly indebted economy to provide reliable floors and ceilings. A situation characterized by Great moderation in the real sector and an inflationary bias in the financial sector distorts the relative prices of financial assets in terms of the price of real goods inducing financial rather than real growth, and distorts the distribution of income in favour of financiers and top managers.

5 The Great recession: some salient features

The neo-liberal policy regime and its confidence in market self-regulation started to accumulate tensions that became evident in the 1980s and 1990s. Of the eighteen bank-centred post-war financial crises, as identified by Kaminsky and Reinhart (1999) and Caprio *et. al*. (2005), three are in the late 1970s, seven in the 1980s and eight in the 1990s. These financial crises were occasionally intense but circumscribed to a particular company (even if sometimes big and with huge systemic fall-outs, such as LTCM in 1998), a particular sector (US loan and investment banks in 1984) or a country (Italy, 1990; U.K., 1991; Japan, 1992, and so on). The growing financial instability of the neo-liberal era, culminated in the two global crises of 2000-02 and 2007-2010. A significant warning of the last devastating recession came with the dot.com crisis in 2000-2 as it hit in a serious way the main centres of the global financial system. However, its teachings were insufficiently understood to avoid the Great recession.

The success obtained by the "put policy" in rapidly aborting even a deep financial crisis such as the ICT bubble further increased the reliance on the neo-liberal paradigm. This widespread attitude of over-confidence in the self-regulating virtues of unfettered markets pushed the agents to take decisions that progressively increased the fragility of financial units to unprecedented levels. By the end of 2002 the speculators turned their main focus from the ICT immaterial assets to brick-and-mortar assets. The dangers of this situation became apparent only when the bubble of housing started to deflate in the middle of 2006. At the beginning, however, the rate of decrease of house prices was very slow and seemed temporary while the rate of interest, though slowly growing, was still sufficiently low to allow a not too onerous refinancing of subprime and adjustable-rate mortgages. Therefore, most observers expected a possible soft lending of house prices that would have produced not much more than controllable local effects. This hope was swept away by a sharp acceleration of the energy (and raw materials) prices in 2007-2008. In particular, the price of oil more than doubled from $63 in December 2006 to $147 in July 2008. In consequence of this spike in the oil price, and a similar one in the price of other natural resources as well as food, in 2007 and much of 2008 there was a surge in price inflation. Notwithstanding the emerging financial crisis, the central banks reacted in the canonical way by increasing the discount rate. The FED perceived earlier than BOE and ECB the dangers arising from such a policy in a period of increasing financial fragility, by reducing in a few rapid steps the discount rate from 5.75% (August 17, 2008) to 1.25 (October 29) and finally to 0.50% (December 16, 2008). However, this sharp reduction of the discount rate occurred too late to avoid the collapse of the housing sector and the ensuing rapid acceleration of default rates on "subprime" and adjustable rate mortgages (ARM). This accelerated the deflation of house prices and of the related mortgage-based securities (MBS). This process of contagion affected in sequence many other financial assets, then the companies whose net worth depended strictly on the most vulnerable assets, then their shares, and so on, triggering what many commentators called a Minsky moment (see Vercelli, 2009, a and b).

The housing bubble was the “detonator” of the gravest financial crisis since the Great contraction of the 1930s. What was really unexpected by most commentators was the catastrophic effect of the bubble’s bursting. The contagion proved to be much deeper and broader than that of preceding similar events such as the bursting of the dot.com bubble in 2001. The explanation has to be found in the increasing instability of the financial system in the neoliberal era that culminated in the second half of the first decade of the century. The intrinsic instability of a developed financial system is well known since long, as witnessed by the analyses of far-sighted economists such as Wicksell, Hawtrey, Keynes, and Minsky. In the neoliberal era the financial system underwent quantitative and qualitative modifications that progressively enhanced its vulnerability to unexpected destabilizing events and to contagion propagation.

From the quantitative point of view, the weight of finance on the economic system as a whole greatly increased in the neoliberal era. The Goldsmith’s FIR that measures the ratio between financial and real assets increased from a value of about 1 to a value exceeding 3 in the most developed countries. In the US the share of the financial industry over the GDP increased from about 4% to more than 8% (Philippon, 2007), the contribution of the finance, insurance and real estate (FIRE) sector to GDP rose from 15% to 20% (Palley, 2007), while the share of financial profits exceeded the 40% of overall profits just before the crisis. In addition, the weight of finance greatly increased also in the non-finance business sector. The same is true with households as the share of wealth detained in financial assets (including housing) steadily increased while pensions, after their privatization, were linked to the financial performance of pension funds.

This quantitative growth has been accompanied by very significant qualitative changes. The first and most important has been the development of shadow banking. Paul McCulley of PIMCO is reported to have introduced this neologism at the 2007 Jackson Hole conference where he defined “the shadow banking system”as “ the whole alphabet soup of levered up non-bank investment conduits, vehicles and structures“ (Mc Culley, 2007). These financial institutions are non-bank in the sense that they do not hold deposits like a commercial bank and are subject to different, much weaker, regulations. Within the "alphabet soup" of the shadow banking system we have to distinguish on one side autonomous (from commercial banks) shadow FI such as investment banks and hedge funds, on the other side shadow dependent FI, such as structured investment vehicles (SIV) and conduits, directly or indirectly controlled by commercial banks. The autonomy of investment banks from commercial banks had been set by law in 1933 by the Glass-Steagall Act in order to prevent conflict of interest and fraud believed to be a factor of the 1929 financial breakdown, until it was partially repealed by the Gramm-Leach-Bliley Act in 1999. Controlled shadow FI, such as SIVs and conduits were established by commercial banks in the last decade in order to fight back the competition of autonomous shadow FIs. To this end commercial banks shifted part of their activity off balance sheets to earn higher profits by eluding the constraints of regulators. The development of shadow banking has greatly increased the instability of the financial system as its substantial freedom from regulation allowed it to pursue aggressive strategies characterized by very high leverage and incautious financial innovations. This produced high profits during the years of financial boom and huge losses and widespread defaults in critical years. The five big US investment banks have been all swept away by the crisis. Hedge funds underwent severe losses but most of them managed to survive, although downsized, and to recover, together with enduring shadow FI, in the new wave of speculation started in the middle of 2009.

The development of shadow FIs was cause and effect of the parallel development of shadow financial markets that trade unregulated or weakly regulated securities, in particular OTC derivatives. The dimension of these markets swelled progressively in the neo-liberal era propelled by the process of securitization. This technique transforms non-traded assets and liabilities, or a combination of them, in tradable securities. This implies the transfer of the evaluation of expected cash flows from a few specialized analysts (in the originating FI) to the market, that is to an undefined and variable set of traders. The first experiments of securitization were performed in the 1970s but the process started to spread only in the 1980s becoming important in the 1990s and crucial in the 2000s. Its outstanding value reached in the second quarter of 2008 an estimated amount of more than $10 trillion in the US, and more than 2 trillion in Europe. The systematic use of securitization transformed the model from the "originate and hold" model of banking to the new "originate and distribute" model. Two kinds of asset-backed securities (ABS) played a crucial role in the subprime crisis: the mortgage-backed securities (MBS) bundling mortgages of increasing low quality that transmitted the housing crisis to financial markets, and the credit default swaps (CDS) that greatly aggravated it. The first were issued in order to avoid the risk of holding subprime mortgages and to increase liquidity. The CDS were issued to insure the risk of credit from party A to party B by paying a premium to the insurer in exchange for a promise to pay money to A in the event B defaulted. Contrary to widespread expectations, the market proved to be unable to price correctly these securities. This should have been understood much before the crisis by taking account of their complexity, opacity and the systemic risk involved. In particular, it was ignored the fundamental principle of commercial insurance asserting that it is not possible to insure a collective risk. The widespread faith in the market led market participants astray, also because they found a specific support in their beliefs in models of pricing based on the pure equilibrium methodology of NCEcs.

6 The crisis of New Classical Economics

The Great recession has triggered a hot debate whether the financial crisis and its subsequent real consequences have been brought about by market failures or policy failures. Critics of the neo-liberal paradigm typically tend to blame market failures neglected, or played down, by market fundamentalism, while most exponents of neo-liberalism tend to defend the invisible hand by putting the blame on policy failures. We maintain that both markets and policymakers made substantial mistakes and that both categories of failure undermined the soundness of the neoliberal paradigm from the viewpoint of policy, macroeconomic theory (the New classical view in all its versions including the most recent "New consensus" version), and of facts (neo-liberal or "turbo" capitalism).

Real markets confirmed their well-known limits, pointed out since long by economic theory, that henceforth no honest observer is authorized to underestimate. First, the neo-liberal era confirmed that markets are unable to deal in a satisfactory way with income distribution. It is well known from pure theory (in particular that based on the General equilibrium model) that, in a perfectly competitive market, income distribution evolves on the basis of the existing allocation of wealth and resources (given technology and preferences). Therefore, there is no reason why it should comply with a given distributive standard considered as desirable or at least acceptable. In the real markets, that are characterized by significant asymmetries in discretional economic power, in the absence of redistributive economic measures, the distribution of income tends to become more unequal as the most powerful decision makers eventually succeed in distorting the choices in their own favour. In addition, the increase of poverty and malnutrition in the last two decades, even in developed countries, showed that the trickle-down argument works only in part.

The policies pursued in the market of labour were able to establish a flat Phillips curve eliminating the inflationary bias of real Keynesism and establishing a regime of price stability (the so-called Great Moderation) but only at the cost of reducing the purchasing power of real wages and salaries, as well as the stability of jobs. This had negative implications not only for the wealth and well-being of a great part of society, but also for the aggregate consumption to the extent that it is financed by current income. Effective demand had to be sustained by the increasing debt of households promoted by private financial firms (bank and non-bank companies) and public institutions (as Fanny May and Freddy Mac in the mortgage sector). In this way, however, also the households became very fragile finance units. This explains why the increase of cost inflation in 2007, due to the spike of the oil price and the consequent increase in the rate of interest, triggered the crisis of the subprime mortgages sector that started the financial crisis.

These examples of huge market failures are in blatant contradiction with the basic assumption of orthodox macroeconomics that markets are always in equilibrium. The rejection of this basic assumption implies the falsification of all the other characteristic assumptions of such a theory: that agents do not make systematic mistakes and have rational expectations, that uncertainty is week and symmetric, and so on (Borghesi and Vercelli, 2008). The inability of these models to “mimic” the empirical evidence has been often observed in the past. The method of calibration adopted for habilitating New Classical models to empirical research is often used in such a way to make impossible the falsification of the model. Moreover, in principle, as recognized by the founding father of the school himself (Lucas 1981), these models are based on a crucial postulate of “regularity” of economic phenomena that prevents sound application to irregular phenomena such as the subprime crisis. The possibility of an event of this kind was altogether outside the conceptual horizon of the theory that was by definition unable to forecast, prevent and control it.

The new model of finance that emerged in the neoliberal era greatly increased the intrinsic instability of the financial system. The new "originate and distribute" model of banking led to a generalized delegation of responsibilities about financial decisions to an inexistent, or very weak, invisible hand. Shadow banking, being much less constrained by regulation and being protected by information opacity, greatly increased the attitude of relief of responsibilities in financial markets. Shadow markets approached the ideal model of unfettered markets that has always been dear to old and new exponents of laissez faire. This did not strengthen the self-regulating virtues of markets and further clarified that the deregulation of real markets does not imply a better approximation to a perfectly competitive market. The way in which the regulation of financial markets was weakened or eluded greatly reduced the completeness and reliability of information that is a crucial requirement of a competitive market.

Let's now consider the nature and effects of policy failures. The market failures that we have rapidly recalled have been induced or permitted by neoliberal policies. A crucial role has been played by Central Banks. They continued to react promptly to any danger of accelerating inflation as is clearly shown by their restrictive interventions in 2007 and first half of 2008, although the financial crisis had already started. This is by itself questionable as it shows an undervaluation of the gravity of the emerging crisis. However, the crucial point is another one: the lack of reaction to financial inflation and the refusal to prick the bubbles. According to Greenspan the market knows better than any single individual (including himself) when it is the case of pricking the bubbles and deflating financial assets. This clarifies that the failures of monetary policy are strictly related to the market fundamentalism of NCEcs and neo-liberalism. The same is true with the lax supervisory controls that allowed extravagant leverage ratios, the development of huge derivatives markets outside any control, and of an abnormal shadow banking sector. Also the policy mix of privatization and deregulation did not reach its goals but produced unexpected devastating collateral effects. In the end, the declared crucial objective entertained by neo-liberalism of reducing the share of public expenditure over GDP was not reached.

The only success that may be claimed in a few countries is the stabilization of this share. On the contrary, in many countries there has been a radical change in the structure of public expenditure: less public services and more expenditure for security and defence. In any case, there is still no evidence of enhanced competition in markets. On the contrary the vicious circle between the exponents of powerful private interests and policy makers in this period deteriorated also in the most developed countries. As for taxation, the progressive burden on personal incomes was weakened if not reversed, and this contributed to the growing inequality of income distribution.

As we see from these examples, the policy failures were the direct consequence of the same philosophy of market fundamentalism underlying orthodox macroeconomics and the neo-liberal turbo capitalism.

7. The twin crises: concluding remarks

As we have suggested, the Interaction followed a fairly regular pattern in the last century or so (see fig1). We had three major crises: the Great contraction in the 1930s, the Great stagflation in the 1970s, and the Great recession started in 2007. In each of these cases the existing economic policy regime was considered as a crucial factor contributing to the outbreak and persistence of the state of crisis: the laissez faire in the Great contraction, the Keynesism in the Great stagflation, and the neo-liberalism in the Great recession. In each of these cases there was an immediate and radical reaction in macroeconomic theory: from the classical to the Keynesian theory after the Great contraction, from the Keynesian to the New classical theory after the Great stagflation. The new macroeconomic theory was meant to overcome the policy failures originating the crisis and give apt foundations to a new policy strategy: Keynesism in the 1930s and Neo-liberalism in the 1970s. The new policy strategy starts to be applied after a fairly long and variable lag required to allow it to percolate at the level of public opinion and policy makers. The new policy paradigm in its applied version is typically simplified and distorted to make it appealing and to serve better the specific interests of policy makers and their great electors and supporters. We have thus to distinguish between an "ideal" policy paradigm as worked out by the intellectual leaders of the revolutions in macroeconomic theory, and its "real" application that depends on many other, often distorting, factors. As we learned to distinguish between socialism and real socialism, analogously we have to distinguish between liberalism and real liberalism or laissez faire, between Keynesism and real Keynesism, between neo-liberalism and real neo-liberalism or "new laissez faire". The real version of these policy paradigms tends to degenerate under the pressure of particular interests contributing to the outbreak of a great crisis that determines a radical redirection of theory, policy and behavioural practices.

The analogies that we have emphasized (as summarized in fig.1) should not blur the differences in the historical episodes here rapidly reconstructed. In particular, we may notice that the reaction of macroeconomics to the Great contraction of the 1930s went in the direction of a much enhanced realism. As Keynes maintained "…the classical theorists resemble Euclidean geometers in a non-Euclidean world…there is no remedy except to throw over the axiom of parallels and to work out a non-Euclidean geometry." (Keynes, 1936, p.16). On the contrary, the reaction of macroeconomics to the Great stagflation of the 1970s went in the opposite direction of systematic compliance with first principles believed to be universally true, regardless of their *prima facie* counterfactual nature. Also in this occasion there were serious attempts to redirect macroeconomic theory in a more realistic direction. Simon's theory of bounded rationality, Leyjonhufvud theory of temporary equilibria, and Minsky's theory of financial instability were some of the most serious attempts that attracted a great interest from many macroeconomists in the 1960s and early 1970s and seemed to point to a new revolution in the direction of enhanced realism. However, the New classical counter-revolution succeeded in the 1970s to sweep away the alternative attempts to reform macroeconomics. The success of this theory derived from a host of factors such as the simplicity and elegance of its models, their suitability for quantitative analysis, the feelings of reassurance that succeeded to give to a profession in deep crisis. The most recent version, the New neoclassical synthesis (Woodford 2003), timidly moved in the direction of more realism by reintroducing the possibility of market imperfections, but this was insufficient to reduce significantly the gap with the real economy as shown by the recent events. But none of these alleged advantages could have been reaped without a robust protective belt meant to isolate the theory from the falsifications stubbornly iterated by a rebel empirical evidence. This protective belt favoured the use, or abuse, of the new classical mainstream as ideology of market freedom that was much cherished by whomever believed, rightly or wrongly, that laissez faire was in his own interest.

Which will be on this occasion the reaction to the Great recession? We believe that we cannot further postpone a systematic effort in the direction of more realism. Differently from the Great stagflation, in the Great recession it is much more difficult to blame exclusively policy mistakes and exogenous shocks for macroeconomic failures. The pathological inefficiency of the invisible hand in fully liberalized and weakly regulated financial markets questions all the basic postulates of mainstream macroeconomics: persistent equilibrium, systematic efficiency, unbounded rationality, and so on. The subprime crisis provided a particularly evident confirmation of a significant empirical regularity: the majority of financial crises are preceded by financial liberalization (Kaminsky and Reinhart, 1999; Reinhart and Rogoff, 2008). We need a different kind of macroeconomics that starts from assumptions consistent with the properties of real markets. We have to liberate macroeconomics from the straitjackets of classical microfoundations and of the pure equilibrium method. Whatever are the merits of these two basic methodological features for the study of an ideal market of perfect competitions, macroeconomics has to address the problems of real markets. To study the latter we need a more realistic approach to microfoundations and awareness that in real market disequilibrium and instability play a crucial role. Only a macroeconomics of this kind may guide us in understanding and controlling the behaviour of real markets contributing to avoid or mitigate major crises.

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