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**FROM LONG-TERM GROWTH TO SECULAR STAGNATION. A
THEORETICAL COMPARISON BETWEEN RÉGULATION THEORY,
MARXIST APPROACHES AND PRESENT MAINSTREAM
INTERPRETATIONS**

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Abstract

Since 2013 various eminent mainstream economists have proposed reviving the doctrine of “secular stagnation”. According to these authors, the only explanation for this new trend could be a negative Wicksellian natural rate of interest, produced by an excess of saving over investment at any positive interest rate.

But the idea that the real world economy has entered into a new stagnation trend is really the other side of the coin in explaining the extraordinary long-term growth that characterised the aftermath of World War II. This peculiar growth period has been the main research objective of Régulation Theory, which found accumulation regimes and corresponding modes of regulation as its major determinants.

In the paper the theoretical explanations of the new secular stagnation theory are compared with those of Régulation theory and with the original Marxist approaches that initially inspired the French régulation theorists.

Keywords: Equilibrium Interest Rate, Business Cycles, Crisis, Rate of Profit, Profitability.

JEL Classification Codes: B510, E110, E120, E320, E430.

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1. The new secular stagnation theory

Since 2000 interest rates have been very low worldwide. Today the yield on long-term government bonds is often around a few tenths of a percentage point and sometimes slightly negative, as in the cases of Switzerland and Germany. Thus it seems that lenders are willing to pay some governments to hold their money (Bernanke, 2015). The interest rates paid by economic agents are relatively higher because of credit risk, but are at an historical minimum.

These low interest rates seem to be the consequence of a long-term trend. The nominal interest rates on ten-year US government bonds have been declining ever since 1981. That pattern partly follows the trend of inflation, but the real rate is also very low today, about less than 0.1%.

It could seem that very low interest rates have been the result of the intervention of the major Central Banks, which have been keeping them low, first to dope the economy after the *dotcom* crisis in late 1990, and then to counter economic depression after the financial crisis of 2007-2008. But Ben Bernanke, who helped to keep interest rates low from 2006 to 2014 as Chair of the Fed, has recently defended his action stating that Central Banks can only set the benchmark nominal short-term interest rate and not the real interest rate, which matters most for the economy, being relevant for capital investment decisions (Bernanke, 2015). According to him, the Central Bank's ability to affect longer-term real rates of return is only transitory and actually limited. In the long run, real interest rates are determined by a wider range of economic factors, and primarily by the prospects for economic growth (Bernanke, 2015).

To explain this situation, Bernanke utilises the concept of the equilibrium real interest rate, often named the Wicksellian interest rate. In the mainstream approaches, this interest rate should be consistent with full employment of labour and capital. It is obviously affected by many factors, which can change over time (Bernanke, 2015).

In accordance with the mainstream approaches, in a rapidly growing economy the equilibrium interest rate is expected to be high, because it should reflect the prospect for high return on capital investments, while in a recessionary economy it is expected to be low, because of limited investment opportunities and their probable low profitability. The equilibrium real interest rate may also be influenced by Government spending decisions and taxation policies, because of crowding out effects (Bernanke, 2015).

Thus, according to Bernanke, if Central Banks aim to obtain full employment conditions, then they have to influence market interest rates to push them toward levels consistent with their best estimation of equilibrium real interest rate, which is unfortunately not directly observable. If the Central Banks kept market interest rates too high, economic activities would slow down, since investments and consumer durable goods would become

unattractive. Symmetrically, if they maintained market interest rates too low, then they would only stimulate inflation (Bernanke, 2015).

This scholastic reasoning allows Bernanke to argue that it is the objective conditions of the economic systems that ultimately determine the real rate of return for savers and investors, not the Central Bankers. Thus he blames the very low returns to capital as the major reason for the declining equilibrium real interest rate, which, he deems, will possibly also be negative.

Soon after the financial crisis of 2007-2008, Bernanke, to defend his behaviour as Chairman of the Fed, pointed out some international imbalances, such as the global saving glut he had already publicly denounced before the crisis (Bernanke, 2005), as major causes of reducing long term interest rates in the US. But these causes would have typically been short-run factors. A change in the worldwide equilibrium real interest rate would need more structural changes in behavioural and distributive parameters of the world economy.

Now, Bernanke's new explication of the falling rate of interest simply seizes on the ideas presented by Summers in his revival of the theory of secular stagnation (Summers, 2014a).

Summers explicitly states that the experience of the Global Crisis and the Great Recession suggests that theories that assume the average level of output and employment as given over a long period are substantially useless. What has happened in the last few years would again prove that the workings of the market, alone, are not able to restore full employment and eliminate output gaps.

Thus, the new secular stagnation hypothesis he proposes is the result of the crisis produced in the field of macroeconomics by the Global Crisis and the Great Recession, and it casts doubt on the conjecture that the workings of the market can eliminate output gaps, with or without the help of public regulation. It explains the difficulty of attaining full employment by means of a declining full employment real interest rate (FERIR) coupled with low inflation.

According to Summers (2014b), there is a lot of empirical evidence supporting his hypothesis that the FERIR has declined substantially over the last few decades in the world economy. Again according to him, the experience of Japan, Europe and the US suggests that "theories that take the average level of output and employment over a long time period as given are close to useless". He thinks that, unfortunately, both the New Classical and New Keynesian traditions have long focused on the variance of output and employment, neglecting analysis of the long run determinants of their normal levels and trends.

The new secular stagnation hypothesis raises "the possibility that it may be impossible for an economy to achieve full employment, satisfactory growth, and financial stability simultaneously simply through the operation of conventional monetary policy", and attempts to explain the slow pace of recovery and the growing financial instability in the industrial world.

Taking note that industrial economies are having difficulty in achieving financially stable growth with full employment, Summers explains this situation in terms of a decline in the FERIR, coupled with low inflation.

Thus, suggesting that the FERIR has declined substantially over the last several decades throughout the industrial world, he adduces as evidence the fact that the US economy rate of growth is only 2% on average, although it started from a highly depressed state after the financial crisis of 2007-2008. Also in Europe, after the crisis of credit spreads and fears of the dissolution of the Eurozone, growth has been very slow, without any signs of acceleration.

In fact, according to the mainstream paradigm, this situation is surprising, because if a financial crisis is an exogenous accident, inducing demand to fall because of a lack of credit, growth should accelerate after its resolution, because demand should be newly enabled by the restored credit conditions.

However, according to Summers (2014b), the difficulty in achieving an adequate rate of growth has been a problem for a long time, but it has been covered up by an unsustainable finance. In the US, growth seemed quite adequate during the period 2003–2007, even though there were a vast erosion of credit standards, a big housing bubble, the emergence of budget deficits, and very lax monetary and regulatory policies. Without these financial and monetary phenomena, according to Summers, growth would probably have been inadequate because of lack of demand, produced by the burst of the *dotcom bubble* of the late 1990s and the successive downturn of 2001.

In Europe other kinds of structural constraints on growth probably played a major role. But, according to Summers, prior to 2010 much of the growth capacity of the emerging economies was in turn based on the worldwide availability of extraordinary cheap credit, while much of the growth of the economies of Northern Europe was substantially led by exports financed in an unsustainable way.

The major reason why growth would have been too slow in the absence of a financial doping, according to the new secular stagnation hypothesis advanced by Summers, lies in the increase in private saving propensity and diminished investment propensity.

According to the mainstream models, in a context of full price flexibility, interest rates would be expected to fall until saving and investment were equal at the full-employment level of output. Thus, changes in saving and investment propensities might be expected to change the FERIR. However, Summers points out that short-term safe interest rates cannot fall appreciably below zero because of currency substitution.

Thus Summers, rediscovering his neo-Keynesian roots, recognises that in modern economies interest rates are not fully flexible and it could be that no attainable interest rate would allow for the balancing of saving and investment at the full-employment level of output, reviving the secular stagnation hypothesis proposed by Alvin Hansen in the 1930s. The latter argued that, because of slowdowns in population growth and the high rates of technological innovation, entrepreneurs would not have a high propensity to invest in new capital goods, reducing effective demand. He concluded that low investment spending and low levels of consumption by households would probably obstruct full employment in the future (Hansen, 1939).

Hansen, following Keynes, Tobin and Brad DeLong, also pointed out that flexible wages and prices, falling during an output shortfall, may exacerbate the problem, bringing about an increase in real interest rates. Thus, there is the risk of destabilising deflation, which, in a

vicious cycle, generates falling prices that lead to higher real interest rates, in turn leading to greater output slowdowns, and so to more rapidly falling prices, and so on.

Moreover, very low interest rates consistent with full employment could not be consistent with financial stability. Indeed, they could increase pursuit of speculative yield, promote irresponsible lending and make Ponzi games more attractive, as it probably was during the 2003–2007 period.

According to Summers, also many structural changes suggest that FERIR levels may have declined in the major industrialised countries over the last two decades (Summers, 2014b).

Slower population growth, and thus slower labour force growth, combined with rapid technological progress, has generated reduction in the demand for new capital goods, particularly in Japan and Europe.

Declining prices of capital goods, mainly because of continuous innovations in information technology, mean that a given level of saving can purchase much more capital than before. This leads to a situation in which major leading-edge companies in information technology are holding huge cash hoards.

Growing inequality, led by a rising profit share, raises the share of income going to the part of the population with a lower consumption propensity.

The financial crisis induced greater risk-aversion, widening the wedge between safe interest rates and interest rates charged to borrowers. In mainstream general equilibrium models this effect drives down safe interest rates.

Greater precautionary accumulation of reserves by central banks and governments, coupled with conservative investment strategies by non-financial companies and precautionary holding of safe bonds by pension funds and insurance companies, raises the demand for safe and liquid assets, driving down safe interest rates.

Moreover, according to Summers, there is other empirical evidence of a declining FERIR. Indeed, indexed bond yields for many countries have gone down over the last 15 years. Furthermore, some economists at the Fed have heroically estimated the FERIR, using actual real interest rates and measuring the difference between the actual and the potential output of the US economy, showing its substantial long-term decline (Laubach, Williams, 2003).

Also the IMF has recently analysed trends in real interest rates in the industrial countries, concluding that the FERIR has probably declined in recent years and that declining rates of inflation make it more difficult to reduce real interest rates (IMF, 2015). Thus, its analysis suggests that, if the Central Banks and Governments of the industrial countries want to maintain full employment in the coming years, the real interest rates will probably be lower than they have been historically, with major implications for financial stability. Furthermore, because of capital mobility, real interest rates will tend to converge all over the world.

Thus, today monetary policy meets difficulties in maintaining full employment and output at its potential level, and these goals are attainable only at the cost of financial stability.

Furthermore, most of the factors driving a decrease in FERIR will probably come into play for the next decade.

However, the secular stagnation hypothesis does not explain the decline in potential output. Thus Summers integrates it with hysteresis theories, which emphasise the adverse effects of recessions on future output, due to a declining production capacity because of discouraged investment in physical capital. Consequently Summers rediscovers doubts about Say's law, conjecturing a new corollary of its: "Lack of Demand creates Lack of Supply". According to Summers, this reduction of supply could, in the long run, raise the FERIR, restoring a new, even though not very good, equilibrium.

Again according to Summers, there are only two possible Keynesian strategies to counter the dangerous impacts of a declining FERIR. The first is a higher inflation rate target, so that a zero nominal rate corresponds to a lower real rate, or, alternatively, quantitative easing, which could reduce credit premiums. But this monetary line of intervention could also increase financial instability. The second strategy is to raise demand by increasing investment and reducing saving, by means of public investment, basic social forms of protection and measures to reduce inequality and redistribute income towards people with higher consumption propensity.

Alvin Hansen proposed the hypothesis of secular stagnation in his 1938 American Economic Association presidential address (Hansen, 1939), immediately before the economic boom during and after World War II. At the time he had misjudged the situation because of the unforeseen war and post-war economic boom. But now Summers is of the opinion that Hansen's prediction was only premature. The contemporary decline in population growth and the reduced capital intensity of the major industries coupled with the falling relative prices of capital goods makes Hansen's prediction about an economy that chronically fails to reach full employment relevant to our own times.

The new secular stagnation theory, casting doubt on the conjecture of an optimal working of the markets and on the effectiveness of the monetary policy alone, and relaunching the proposal for Keynesian strategies, quickly drew the attention of some heterodox economists, especially among the Keynesians (Backhouse, Boianovsky, 2015; de León Arias, 2015). But it is not really a heterodox theory, because it utilises the major concepts and relations of neoclassical growth models, as changes in demographic dynamics and exogenous technological progress.

Nevertheless, the revival of this hypothesis has the merit of reawakening attention, even though within the mainstream approach, to the falling profitability of investment as the principal cause of the crisis and the successive depression.

However, outside the mainstream schemes which consider economic growth the natural result of intertemporal patterns of utility optimisation by rational agents, the idea that the real world economy has entered into a new stagnation trend could really be the other side of the coin in explaining the extraordinary long-term growth that characterised the three decades in the aftermath of World War II. Indeed, what is usually called economic growth is, for some heterodox theories, only the involuntary effect of another economic phenomenon: capital accumulation. Thus, the major question could be why capital accumulation was so intensive and extensive in the three post-war decades and why it

changed its trend. In fact, the historical reasons for this peculiar phase in world economic history and the end it met with in the 1970s has long been the main research objective of *Régulation Theory*.

2. Régulation Theory

According to *régulation theory*, the capitalist mode of production makes accumulation an imperative, but there is no simple and invariable relation between the latter and forms of accumulation. The theory also analyses the social and economic patterns that enable accumulation over time, called *accumulation regimes*. These regular patterns are often formalised by means of macroeconomic models of growth inspired by Kalecky and other Cambridge economists.

Regular patterns of accumulation do not exclude crises and typically take shape between two structural crises. Accumulation regimes are transformed over time and vary also in space. The *régulation* authors recognise a variety of accumulation regimes, characterised by different intensities of technical change, volumes and composition of demand and workers' life style.

According to the *regulationists* (Boyer, 1986), the chances of a long-term accumulation typically depend on some social and economic regularities, concerning:

- the evolution of the forms of production organisation;
- an adequate time horizon for a managerial valorisation of capital;
- an adequate sharing of social product between wage and profit;
- an adequate dimension and composition of the aggregate demand, able to absorb a growing production capacity.

As this list shows, the elements taken in account act at both micro and macro level. However, the observed social and economic patterns of accumulation are supported by different institutional forms and arrangements, which are also transformed over time. In *régulation theory*, therefore, institutional forms create a logical passage from micro- to macroeconomics, socially determining the behaviour of economic agents, which are not homogeneous rational market subjects interacting in a series of complete markets, as in mainstream approaches, but are social individuals, socially and historically determined, as in the Marxian approach. A hierarchy among the different institutional forms is generated by the *mode of régulation* that characterises a country in every period under consideration.

A *mode of régulation* consists “of a set of procedures and individual and collective behaviour patterns which must simultaneously reproduce social relations through the conjunction of institutional forms which are historically determined and supported by the current accumulation regime” (Boyer, Saillard, 2002). Thus every *mode of régulation* “ensures the compatibility of a set of decentralised decisions, without requiring agents to

internalise the principles governing the overall dynamic of the system” (Boyer, Saillard, 2002).

In Fordism, the *accumulation regime* prevailing in the major industrialised countries during the post-war period, characterised by mass production, mass consumption and generalised application of scientific methods in the organisation of production processes (Amable, 2002), the fundamental institutional arrangements were: a new role played by the state, credit money, an original *wage-labour nexus*, an oligopolistic form of competition and strict governmental control of international trade and capital movements (Boyer, Saillard, 2002). In this context, Keynesian economic policies appear to be a part of the *mode of régulation* that were functional to the *Fordist accumulation regime* in exiting from the long stagnation produced by the Great Depression in the thirties and in ensuring a long-term accumulation in the first three post-war decades.

However, according to *the regulationists*, the Keynesian policies were suitable to counter only unemployment determined by a lack of effective demand in a situation of excess of productivity compared to real wages (Boyer, 1986).

Thus, the *regulationists* see the crisis of the 1970s as the exhaustion of the *Fordist accumulation regime*, which reached its limits because of the accumulation of new internal contradictions, especially in terms of income distribution between wages and profits (Boyer, 1986). The conflict in income distribution was long mitigated by large corporations through monopolistic extra profits, obtained by means of restricting competition in internal markets, but especially with a continuous increase in productivity, obtained through increasing mechanization of production processes. But the latter way also produced a growing stock of fixed capital, which contributed to reduce the normal rate of profit in non-financial sectors.

Indeed, the crisis of this accumulation regime also coincided with the crisis of its specific Keynesian mode of *régulation*, which, in turn, lost its effectiveness and accumulated a growing mass of new internal contradictions (Lordon, 2002). In particular, full-employment policies supported the increase of real wages, contributing to compress the share of profit in national income and so reducing profitability prospects in new investment. In this way the 1970s and the early 1980s were characterised by the crisis of the *monopolistic* and *state-managed* mode of *régulation* that opened the way out of the crisis of 1929.

Subsequent to the crisis of the post-war accumulation regime in the 1970s, the new *post-Fordist mode of régulation*, which the capitalist system had been elaborating since the mid-1980s, has been characterised by internationalisation of competition, liberalisation of capital movements and consequent intensification of monetary constraints and sharp transformations in the *wage-labour nexus*: in short, by the *neo-liberal mode of régulation* still dominant.

Again according to *régulation theory*, money is another important institutional form, as general equivalent that connects all economic units. Many monetary regimes are possible as ways to offset shortfalls and oversupply in the economic systems. This particular institutional form can obviously involve major intergovernmental relations within extensive international areas of circulation and exchange, like the Bretton Woods agreements in the

Fordist accumulation regime or, now, the Euro and its centralised regulation in the Eurozone.

The regulationists also share with Minsky the idea that modern economies are dominated by the choice between productive and financial investments, controlled by the difference between the interest rate and the rate of profit. This means that, as the euphoria of an economic boom spreads, companies tend to choose increasingly risky investment plans, so that the slightest shock makes clear the latent imbalance between financial returns and the returns on productive investments, sparking off a crisis. The latter can then become cumulative if the credit crunch in turn reduces the overall demand rather than financial speculation.

The *wage-labour nexus* synthesises the set of relationships between the types of work organisation, workers' lifestyle and the ways in which the labour force is reproduced. Of all the institutional forms, *régulation theory* dedicates particular attention to it, because it determines the form of appropriation of surplus in the capitalist mode of production.

Another key factor in the form of accumulation and growth of a country is the *international regime* within which it plays out. The international regime shapes the relations between a single nation-state and the international "Concert of Nations". Indeed, if a single state can exert political sovereignty over a defined territory, relations between it and the rest of the world are rarely pure market relationships, while they typically arise from political choices and diplomatic balance of power, as exchange management and openness to foreign capital. The *international regime* obviously interacts with the country's other institutional forms and arrangements.

Also the forms of the state contribute to determine the economic dynamic. Indeed, the configuration of the state defines the monetary regime, forms of competition and the wage-labour nexus.

Régulation theory obviously has deep-rooted relations with Marx and various kinds of Marxist theories. Its formal distancing from Marxism is closely linked to the crisis of the latter in the early 1980s. However, according to Nadel (2002), this crisis was fundamentally political rather than scientific. The extension of this political crisis to the theoretical domain was, in a sense, paradoxical, because the Marxian theory of capitalist crisis is indisputably more interesting than those proposed by mainstream approaches. Thus *régulation theory* has freed itself from a declared relationship with Marxism, but has developed a research programme clearly linked with the Marxian vision.

In the Marxian paradigm, the capitalist mode of production is founded on the accumulation of capital, which continuously transforms surplus value into additional capital. It is this process that periodically expands and accelerates economic growth, but in an unsustainable way, because of the contradictions between the development of productive forces and productivity and the needs of the distribution of social product between labour and capital. Such growing contradictions create the conditions for new phases of crisis, which constantly characterise the enlarged reproduction of the capitalist system.

Thus the accumulation of capital is, according to both Marx and the regulationists, an expression of the wage-labour nexus, thanks to which the share of surplus value in social product is determined. Moreover, Marx sees the tendency of the rate of profit to decline as

an inevitable underlying consequence of the capitalist mode of production, continuously counteracted by forces that, in the *régulation* paradigm, could be summarised as *modes of régulation*.

3. Crises, interest rates and profitability

The capitalist accumulation process is typically characterised by long booms that give way to more or less long downturns. Thus, economic crisis is the passage that normally occurs between these two kinds of phases along the typical pattern in capitalist accumulation. And it is the logic of non-financial profit that drives this recurrent pattern (Shaikh, 2016). But every economic crisis manifests itself as a financial crisis (Shaikh, 2016). According to Kenneth Galbraith, for example, the Great Depression of the 1930s, even though preceded by evident financial speculation, was actually generated by the bad and fragile state of the real economy in 1929 (Galbraith, 1955).

Corporate cash holding, which could play a major role in producing financial crises, and some of their specific features, receive scant analytic attention today, whether in macroeconomic or microeconomic analysis frameworks. By contrast, they saw a glorious period of analysis in the 1940s and 1950s, immediately after the experience of the events occurring around the Great Depression (Scarano, 2016).

Indeed, corporate retained earnings reached high proportions during the twenties, fell to a low ebb during the thirties, but again became a significant component of the total savings in the economy in the forties. Furthermore, during the twenties the corporations were accused of contributing to the stock exchange boom by lending out part of their cash balances, and indeed of feeding the financial markets at the expense of the commodity markets. In the thirties the corporations were accused of contributing to the stagnation of the economic system by holding excess cash balances.

The American economic literature after the great depression began to deal with corporate saving as a conspicuous phenomenon which determined a very large share of national saving and was increasing in previous decades. It underlined also some evident cyclical determinants in the development of this phenomenon.

Traditionally economists did not deal separately with the corporate saving because they assumed that households, owning corporations, integrated corporate saving decisions in their own saving decision. Yet in the thirties and the forties corporations began to be viewed as particular institutional decision makers, with own specific objective functions. Household sector did not fully pierce the “corporate veil”, and corporations also began to be perceived as decision makers who did not utilise marginal principles in making their investments. In particular, lower investment decisions did not necessarily become higher consumption decisions, but they could also generate liquidity holding and, consequently, lack of effective demand.

The American economic literature from the twenties to the forties also underlined the relevance of corporate saving as a major part of the aggregate national saving. The growing corporate saving was generally viewed as a direct consequence of the separation of ownership and control in large corporations. Indeed, investment of retained funds sidestepped the judgment of the financial markets and enabled the management to follow speculative or prestige motives.

Most of the authors in this literature believed that the recent changes in corporate governance had transformed the corporations into a new kind of decision-makers, which radically changed the behaviour of aggregate saving.

Furthermore, some authors also thought that corporate savings tended to intensify the cyclical fluctuations. Indeed, insofar as corporate savings lead to accumulating cash balances, they generate hoarding, contributing to diminish the effective demand. Most of the authors believed that the reinvestment of profits in liquid assets during business expansion periods are made to maintain the level of dividends during depression periods. Thus the relevance of the effects of corporate savings on cyclical swings depends on their amount, the kind of assets in which they are invested and the dissavings made during depressions. All these factors depended, once again, on the features of corporate governance, but also on the prospects of future profitability.

Corporate profitability can be measured as profit margins, by means of the ratio between profit and the flow of capital used up, that is, the “cost price” of production, or as profit rate, by means of the ratio between profit and the stock of capital advanced. Shaikh shows that Okishio’s idea that firms manage to lower their “cost price” of production to maximise their rate of profit, increasing profit margins over time, neglects the role of the fixed capital. In reality, if the new techniques, able to bring down the unit cost price, pass through mechanization, they can obtain the result of raising the fixed capital per unit of output and of ultimately reducing the normal rate of profit, as in the Marxian *law of the tendency of the rate of profit to fall* (Shaikh, 1980; Mejorado, Roman, 2014).

Obviously, economic performance and rates of growth also depend on economic arrangements which are changed over time by the conscious and unconscious actions of economic agents and their objective interactions (Marglin, Schor, 2000). And this is also true of the rate of profit. These conscious and unconscious behaviours of economic agents and the system of their interactions are precisely what is called *mode of régulation* by the regulationists, but are also which Marx called *counteracting causes* in the case of his law. For a long time in the post-war period, conservatives and liberals argued about the margins of welfare state, but not about its principles. After the experience of the Great Depression, the social problem of unemployment on an excessively large scale was universally recognized as a danger for social peace and the orderly functioning of contemporary societies, and this creates a general consensus for full-employment policies. But within every *mode of régulation*, the policymakers' freedom is constrained by objective necessities deriving from the internal structure of economic systems.

The lesson from experience of a crisis could be used to prevent another, but business cycles are too long compared to the time it takes people to forget the previous disaster. So during every boom phase some people rediscover the virtuosity of deregulation and

reduction of financial controls, in the name of free enterprise, creating new conditions for a new crisis (Galbraith, 1955). And this is exactly the case of the Great Stagflation of the 1970s, the financial crisis of 2007-2008 and the successive Great Recession.

To understand how the long-term growth of the post-war period ended, we have first to understand how the very functioning of the system undermined it in, leading it to the drift of the 1970s and the stagnation of successive decades.

From the mid-1960s the profit rate in US non-financial corporate sector has been falling and, after a rebound, has caused declining trends of accumulation in the sector (Nordhaus, 1974; Feldstein, Summers, 1977; Marglin, Schor, 2000).

During the Stagflation Crisis of the 1970s, the economic crisis was covered up by accelerating inflation, which did not prevent unemployment, a large drop in the real value of the stock market and business and bank failures in the US and the UK, but rapidly eroded real wages worldwide. This erosion was then associated with a more general neoliberal attack on labour conditions in the 1980s, with a sharp change in the trend of the wage-share in national income which temporarily reversed the long downward trend of the normal rate of profit (Shaikh, 2016).

Subsequently to these events, starting from the mid-1980s a new boom phase began in the industrialised capitalist countries, also fuelled by declining interest rates, which further raised the net rate of profit. In this historical phase, low interest rates were obviously the effect of monetary policies deliberately oriented to give breath to net rate of profit. They not only stimulated inflation, as Bernanke recalls, but also reduced the share of social surplus going to debt capital, which largely collected private saving, deriving in part from the surplus wages generated by the previous increase of wage-share in national income thanks to full-employment policies. But in the major industrial countries they also provoked growing capital movements across the world and a huge rise in consumer debt, triggering bubbles in financial and real estate markets.

Among the many reasons that have been found to account for the financial crisis of 2007-2009 one of the most interesting is certainly that of the global saving glut, which would be the principal cause of the international imbalances that set off the crisis (Greenspan, 2010). But some empirical analyses have pointed out that the global saving glut is strictly connected to the corporate saving glut, a phenomenon little considered by present economic theory but actually decisive in the process of aggregate saving formation (Scarano, 2015).

Corporate saving is indeed a conspicuous phenomenon, determining, today as well as in the twenties and the thirties, a very considerable share of global private saving. Its role has been increasing over the last few decades and, if corporate decisions are not simply a veil over the households' decisions, it can raise very interesting theoretical questions about social intertemporal choices.

The excess of corporate saving recorded since 2001 is evidently a phenomenon with many transitory and exceptional causes, but undoubtedly also with some evident cyclical components. Indeed, more than 25% of the increase in aggregate OECD corporate net lending between 2001 and 2005 was statistically accounted for by the downturn of the cycle (Scarano, 2015).

Corporations can hold liquid balances for precautionary, speculative and transactional reasons. The precautionary motive obviously prevails when they fear unforeseen fluctuations or foresee a decrease in their profitability.

Companies usually utilize their gross saving for depreciation, new investment, acquisitions, paying off debts, and share repurchases. The change in the cash balance should normally be the residual after spending. After the financial crisis, companies were certainly keen to accumulate more substantial cash balances to face up to the credit crunch. For US companies there were tax liabilities for repatriating cash from foreign subsidiaries. But most of companies were waiting to invest and make acquisitions because of uncertainty in their profitability following the crisis. The beginning of the phenomenon, as from the early 2000s, suggests that uncertainty in the non-financial sectors really came to dominate the global economic scene as from the burst of the 1990s bubble.

But the corporate saving glut exceeded the increase in cash balances and also took the way of risky financial investment, helping to create the preconditions for the financial crisis of 2007-2009.

If financial crises can snowball on savings glut and corporate saving is a major cause of the latter, then it is possible to identify a new kind of mechanism which can connect business cycles and financial crises. Indeed, if the corporate savings glut is the consequence of corporate uncertainties deriving from a lasting downturn of the cycle, then a financial crisis can be a sudden manifestation of the tensions long accumulated during this cyclical phase.

If the dynamics of corporate saving are fundamental in determining and timing financial crises, then it becomes key to understand their structural drivers, such as profitability trends, and identify the right fiscal policy instruments to control them.

4. Conclusions

Therefore, economic growth patterns are driven by capital accumulation and the latter in turn is driven by the logic of non-financial profitability (Mejorado, Roman, 2014). In this prospect, the long-term growth of the post-war golden age was the result of the accumulation regime managed by the *Fordist mode of régulation*. The latter reached its limits because of the accumulation of internal contradictions, especially in terms of income distribution between wages and profits, and generated the stagflation crisis of the 1970s.

In the *golden age*, Keynesian policies were initially a viable way to counter a crisis of profitability due to a lack of effective demand, in a context in which real wages grew less than productivity. But their effects, coupled with the action of other features of the Fordist mode of *régulation*, triggered a new decline in profitability due to increase in real wages outstripping productivity. It was precisely this that led to the stagflation crisis in the 1970s. The post-Fordist mode of *régulation* gave new breath to the profitability of real investments at the expense of the wage-share in national income and the share of the surplus remunerating the debt capital. All these accumulated growing contradictions in the financial sector, which exploded in the financial crisis of 2007-2008. The new lack of effective

demand, which occurred after the crisis, would call for new policies to support demand, but in the new context of generalised trade and capital flow liberalization, which have long been an integral part of the post-Fordist mode of régulation, these can no longer be managed at the nation-state level.

New Keynesian policies could probably be managed at the level of larger supranational institutions, but this would also call for new forms of protectionism and capital control. And returning from a context of free trade and free movement of capital is no simple process. In the 1930s a similar situation was the prelude to World War II, which then greatly improved the effective demand and wrong-footed Alvin Hansen's forecasts of secular stagnation. But perhaps economic policy should pursue other ends.

References

- Amable, B. (2002), "Régulation Theory and Technical Change", in Boyer, R., Saillard, Y. (edited by) (2002), *Régulation Theory. The State of the Art*, Routledge, London and New York.
- Backhouse, R. E., Boianovsky, M. (2015), "Secular Stagnation: the History of a Macroeconomic Heresy", 2015 ESHET Conference, Rome.
- Bernanke, B. S. (2005), *The Global Saving Glut and the U.S. Current Account Deficit. Remarks by Governor Ben S. Bernanke at the Sandridge Lecture*, Virginia Association of Economics, Richmond.
- Bernanke, B. S. (2015), *Why are interest rates so low?*, <http://www.brookings.edu/blogs/ben-bernanke/posts/2015/03/30-why-interest-rates-so-low>
- Boyer, R. (1986), *La théorie de la régulation. Une analyse critique*, Éditions La Découvert, Paris.
- Boyer, R., Saillard, Y. (2002), "A Summary of Régulation Theory", in Boyer, R., Saillard, Y. (edited by) (2002), *Régulation Theory. The State of the Art*, Routledge, London and New York.
- De León Arias, A. (2015), "The controversy on full recovery or stagnation in late 1930's and the immediate II Postwar: Some lessons for the economic stagnation analysis under/after the Great Recession", 2015 ESHET Conference, Rome.
- Feldstein, M., Summers L. (1977), "Is the Rate of Profit Falling?", *Brookings Papers on Economic Activity*, 1, 211-228.
- Galbraith, J.K. (1955), *The Great Crash, 1929*, Hamish Hamilton, London.
- Greenspan A. (2010), "Testimony of Alan Greenspan Financial Crisis Inquiry Commission".
- Hansen, A H (1939), "Economic Progress and Declining Population Growth", *The American Economic Review*, 29 (1), 1-15.
- IMF (2015), *World Economic Outlook. Uneven Growth. Short- and Long-Term Factors*, International Monetary Fund, Washington.
- Laubach, T, Williams, J. C. (2003), "Measuring the Natural Rate of Interest", *Review of Economics and Statistics* 85(4), 1063–1070

- Lordon, F. (2002), “*Régulation Theory and Economic Policy*”, in Boyer, R., Saillard, Y. (edited by) (2002), *Régulation Theory. The State of the Art*, Routledge, London and New York.
- Marglin, S. A., Schor, J. B. (2000), *The Golden age of Capitalism. Reinterpreting the Post-war experience*, Oxford University Press, New York.
- Mejorado, A., Roman M. (2014), *Profitability and the Great Recession. The role of accumulation trends in the financial crisis*, Routledge, New York.
- Nadel, H. (2002), “*Régulation and Marx*”, in Boyer, R., Saillard, Y. (edited by) (2002), *Régulation Theory. The State of the Art*, Routledge, London and New York.
- Nordhaus, W. D. (1974), “*The Falling Share of Profits*”, *Brookings Papers on Economic Activity*, 1, 169-208.
- Shaikh, A. (1980), “*Marxian competition versus perfect competition: further comments on the so-called choice of technique*”, *Cambridge Journal of Economics*, 4, 1, 75-83.
- Shaikh, A. (2016), *Capitalism. Competition, Conflict, Crises*, Oxford University Press, New York.
- Scarano, G. (2015), “*Corporate Savings and the 2007-2009 Financial Crisis: A Warning for the European Banking Union*”, in Calciano F., Fiordelisi F., Scarano G. (edited by), *The Restructuring of Banks and Financial Systems in the Euro Area and the Financing of SMEs*, Palgrave Macmillan, London, New York.
- Scarano, G. (2016), “*Connections between Corporate Governance, Corporate Savings and Business Cycles in the Economic Literature around the Great Depression*”, Dipartimento di Economia Università degli studi Roma Tre, Working Paper, 207.
- Summers, L (2014a), “*U.S. Economic Prospects: Secular Stagnation, Hysteresis, and the Zero Lower Bound*”, *Business Economics*, 49(2), 65–73.
- Summers, L (2014b), “*Reflections on the ‘New Secular Stagnation Hypothesis’*”, in Teulings, C., Baldwin, R. (edited by), *Secular Stagnation: Facts, Causes and Cures*, CEPR Press, London.