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European economic policies, stock- flow relations and the great double crisis

Vittorio Valli*

Abstract

The 2007-2015 crisis has been the most devastating economic depression in the last seven decades. It has struck in different ways and with different amplitude the US and most European countries. In most countries it has been *a double crisis* (financial and real), but in Eurozone's financially vulnerable countries it has also badly worsened public finance indicators. There was therefore in those countries, a complex perverse feedback between public finance weakness, the harsh application of austerity policy and a further increase in the depth and duration of real and financial crisis.

The paper focus on the importance of stock-flow relations in worsening and prolonging economic depressions triggered by structural bubbles or other chronic imbalances. It also gives a critical assessment of some aspects of EU economic policies, outlining some elements for a possible alternative economic strategy.

JEL: E02, E63, G01, O52, E65

Keywords: financial and real crises, EU economic policies, Vulnerable countries, Stock-flow analysis

1. Introduction

In this paper we will try to show how stock-flow relations can badly influence a great economic depression as the one that struck the United States and Europe since 2007-8. Several countries, both in North America and in Europe, had a *double crisis*, financial and real. Some of them, as the United States, Germany and the United Kingdom, could begin the recovery after a couple of years. Other Eurozone countries, which had in 2007-8 some severe structural problems, as a chronic weakness in the balance of payments and a great net external debt; a structural housing bubble or a very high public debt/GDP ratio, had a much deeper and longer depression. These countries will be here named *financially vulnerable countries*. Changes in stock concepts as wealth or debt, and their feed-backs with flow concepts, as investment, consumption and GDP, had a great impact on the difficulties encountered by these countries to cope with the crisis. The economic policies adopted proved to be very weak and in several cases they badly backfired. Moreover, the idea that the same kind of medicine (austerity policies), could be applied to patients with very different diseases, has proved to be disastrous. In the last section we try to outline some elements for alternative economic policies.

2. Four original sins

There are *four original sins* in EU's institutions and policies that have heavily affected the depth and duration of the *double crisis*, the 2008-2015 financial and real crises.

1. The executive power in the EU is mainly given to the councils of prime ministers and of treasury ministers, with the support of the Commission. So,

* Professor emeritus, University of Turin (vittorio.valli@unito.it). I thank Carluccio Bianchi and two anonymous referees for their useful comments to a first version of this paper.

national interests are usually prevailing and all controversial economic decisions require months or years of difficult compromises. The measures are often tardive and ineffective while a financial crisis would need very rapid and vigorous actions. Moreover, since during the crises the financially stronger countries get more power, if nationalism prevails, a solidarity approach is usually banned.

2. There is no treasury or economics minister In the European Union (EU) and the EU's budget is only about 1% of EU's total GDP. So, the budget of the European Union is completely insufficient to make effective anti-cyclical and development policies. It ought to be at least around 10%[1]. Moreover, the euro was created without any kind of protective devices. In 2007-8 there were no EU institutions devoted to face major financial crises and the statute of the European Central Bank (ECB) makes it extremely difficult to pursue effective monetary expansionary policies[2]. For example, quantitative easing policies have been introduced in the Eurozone about six years later than in the United States, after a tough confrontation with the Bundesbank, and it was possible, with several constraints, only in the presence of a very dangerous deflation.
3. The EU political leaders and their main economic advisers are often inspired by the monetarist- neoclassic-anti- keynesian approach prevailing in the last four decades in most Western countries.
4. As a consequence, in the 1990s there was the adoption of "Maastricht parameters" including the Public deficit/GDP ratio and the Public debt/GDP ratios[3], and years later the "Stability Pact" and then the "fiscal compact". All this, in cases of severe and prolonged crises, can lead to harsh restrictive fiscal measures and disastrous and fully anti-keynesian "austerity policies", as it happened in the 2008-2015 years.

Even IMF's chief economist Oliver Blanchard had to admit that the there was an under-estimation of fiscal multipliers, i. e the impact of fiscal austerity measures on economies during a severe and prolonged depression[4]. Paul De Grauwe in various contributions has also criticized the imposition of "violent austerity fiscal policies to

[1] The debate on the optimal size in the EU budget has been very rich. While the Mc Dougall Report (EC, 1977) and several economists had been favourable to relatively high levels of the EU budget, other economists, such as De Grauwe in 1994 and El Agrra in 2015 were worried about possible moral - hazard effects of high EU budgets. However, the events of the present great crisis have clearly shown that a strong expansionary monetary policy is indeed not sufficient for a full recovery in most countries and that a small EU budget is not able to cope at the same time with a very severe depression and with the necessity of re-launching sustainable growth.

[2] Only in May 2010, there was the institution of a temporary special purpose vehicle EFSF (the European Financial Stability Facility), replaced in September 2012 by the European Stability Mechanism, which could provide a limited assistance to Greece and other EU countries in deep financial difficulties. As monetary policy is concerned, on September 6, 2012 Mr. Draghi announced ECB's "Outright Monetary Transactions", which promised to buy unlimited public bonds during severe crises, and this contributed to prevent panic in the market of public bonds, but only in 2014 ECB could start a quantitative easing policy, however subject to severe constraints.

[3] It must be noticed that too few economists had at that time criticized those parameters, technically very weak, or, if they had, such as Pasinetti (1998), or Eichengreen, Wyplosz (1998), their voice has been very feeble and has been suffocated by the main-stream consensus and the clamour of mass-media.

[4] See, for example, Blanchard, Leigh (2013).

Southern European countries", while they "…should be spread on a longer time"[5] and should be accompanied by a reduction in the surplus in current accounts of Germany and other North European countries and an expansion of their public deficits; by an active expansionary monetary policy of the European Central bank, and, finally, by a banking union and a budgetary union.

3. The relations between stocks and flows and the double crisis

In order to better understand why the 2008-2015 great financial crisis had such severe consequences on real economies and on public finance in the United States and in most European countries, it is essential to study the relationships between stock concepts, as wealth and debt, and flow concepts, as GDP, consumption and investment.

From the analytical point of view, both main-stream and critical economists have heavily overlooked the importance of the *relations between stocks and flows*, which consist in a complex series of dynamic feedbacks.

The analyses of most economists have been principally based on flow-variables[6]. However, the size of stock variables, such as wealth, accumulated in a number of years, are much larger than the one of flow variables, such as income.

As table 1 shows, in 2006 net national wealth was, for example, in Spain 8.6 times the net national income, in Japan 6.2 times, while in in the US, Greece and Germany the ratios were respectively 5.4, 5.2 and 3.8. As a consequence, an abrupt and substantial fall in the values of wealth, as it happened in the US, Spain and Greece since 2007 and in most other countries since 2008 or 2009, did swiftly determine catastrophic falls in income, investment, consumption and GDP.

Table 1. Net household wealth to net national income ratios in selected countries: 2006-2013 (%).

	2006	2007	2008	2009	2010	2011	2012	2013
Spain	862	911	897	887	851	798	725	663
Japan	618	616	618	641	611	594	576	588
United Kingdom	617	627	575	536	591	589	557	559
Italy	602	614	617	632	615	609	592	578
France	571	599	595	598	605			
United States	540	549	484	435	425	418	416	455
Greece	522	529	454	468	471	487	476	493
Germany	383	385	395	416	408	402	398	410

Source: WID (2017)

We give here some examples of the importance of the values of stocks in determining the passage from financial to real crises and then to public debt crises.

[5] See De Grauwe (2012), pp. 36-7.

[6] There are some important exceptions such as, for example, Irving Fisher in the 1930s and, for some aspects, Minsky (1986). There were, more recently, several other contribution, such as Ito T., Iwaisako T., (1995), Godley, Lavoie (2007), Hamada, Kashyap., Weinstein. (eds.) (2011), Borio (2012), Valli (2013). Piketty (2013). However, while Godley and Lavoie presented a theoretical framework for stock-flows analyses, Piketty mainly concentrated on a secular analysis and most Japanese contributions were principally interested to short and medium term bubbles, not to structural bubbles accumulated in decades.

These relations can contribute to a better comprehension of the great world crisis of the 2008-2015 period.

Since 2007-2008 there has been *ten vicious circles*[7], at first occurring in the U.S. and then rapidly spreading to most other industrialized countries.

The first three negative feedbacks are mainly associated to the sub-prime crisis and the consequent financial crisis begun in the United States and then spread to European countries, while the other ones have been also widely influenced by EU austerity policies and government's responses to the outbreak of structural bubbles and to worsening economic conditions.

1. a *negative wealth effect:* a sharp fall in the prices of housing leads to a severe financial crisis and then to a fall in the price of shares. There is thus a fall in private total wealth (both real wealth and financial wealth) and consequently a reduction in consumption, investment and aggregate demand. All this leads to a fall in GDP and income. Soon there will be a new reduction in wealth due the weaker demand for housing and financial assets, a further fall in consumption, etc.
2. *a collaterals effect:* the initial reduction in wealth leads to a fall in the value of collaterals (housing subject to mortgages, or shares) and consequently to a fall in the volume of loans conceded by banks. There are thus a fall in investment, possible failures of weaker enterprises, a sharp rise in nonperforming loans. and crises of several banks. All this leads to a reduction in GDP and income, further reduction in wealth, etc.
3. a *financial effect:* a fall in the prices of housing leads to a severe reduction in the values of toxic assets incorporating sub-prime loans, thereby to the crisis of several financial institutions and to the failure of some banks, if not rescued by the governments. In general, there follows a crisis in the confidence in most banks and in the inter-bank liquidity market, thus a liquidity crunch and a sharp fall in the stock exchange index. There is also a strict rationing of banks' loans to firms and thus a fall in real investment. All this leads to a decrease in GDP and income, further reductions in the value of real and financial wealth, etc. All this was greatly amplified by the "ex-post unnecessary" bankruptcy of Lehman brothers in 2008 and by the failure of a few European banks, like Northern Rock.
4. the *total wage effect.* In the United States and in several other countries there was, before the crisis, the deliberate policy of pumping up consumption and the building sector in a period of real wage restraint. This led to over-indebtedness of households and of some firms and to the fuelling of structural bubbles in housing and the stock exchange market. When, in 2007-8, there was the outbreak of the crisis, there was in most country a heavy fall in wealth, and then in real GDP, consumption and investment, and this determined a stagnation in real unit wages and, with a certain delay, a sharp reduction in employment. All this led to a fall in total real wages, a further decrease in consumption, a further fall in investment, exports and real GDP and thus in wealth, etc.

[7] See also Valli (2013) for a less complete list of vicious circles. Negative and positive cumulative causation circles were introduced, in different contexts, by authors such as Young (1928), Gunnar Myrdal (1957) and Kaldor (1966) and are widely used in the modern theory of systems.

5. the *austerity policies*: if the government tries to react to the real crisis through an increase in tax rates and /or a severe cut in public expenditures, there is a further fall in consumption, investment and GDP and thus a further reduction in the value of wealth, etc.
   The combination of financial and real crises has generated other important vicious circles, which since 2010 contributed to determine the sovereign debt crisis especially in financially weaker countries.
6. *Public finance* effect. Fall in wealth and then in GDP leads to a fall in tax revenues and an increase in some social expenditures (such as unemployment compensations, subsidies to poor households, etc.). So, there is a rise in public deficit, and even in the presence of austerity measures, a possible increase in the public debt/GDP ratio, mainly because of the large fall in its denominator.
7. The *spread* effect: the high public debt (a stock concept) leads to less confidence in public bonds of financially weaker countries and so to a high spread, i.e. the necessity to pay higher interest rates on public bonds than in Germany. Consequently, there are both lower real investment and higher public expenditures for the service of the debt and therefore, higher levels of public debt and of the public debt/ GDP ratio.
8. the *external debt* effect: continuous deficits in the balance of current accounts generally determine a progressive rise in net external debt and in the percentage of public debt owned by foreigners: so, there is less confidence in the country in the international financial markets and the necessity to pay higher interest rates to attract foreign investors for the country's public and corporate bonds.
9. The *socio-political effect*, which may occur after a very deep and prolonged economic depression, as dramatically happened in Greece and partly in Portugal, Ireland, Spain and Italy. Economic depression and public finance in growing distress can lead to repeated macroeconomic restrictive measures and a fall in investment, employment and in real wages. There is, then, a further fall in GDP and a rise in the public debt/GDP ratio notwithstanding the continuation in public expenditures cuts. The consequent social unrest and political instability may lead to a decline in economic international confidence and to the attempt to stabilize the economy through new restrictive measures. There are, so, further reductions in GDP and in the value of wealth, massive flights of capitals abroad, etc.
10. *The distributive effect.* At the beginning of the crisis in most Southern European countries there was *a large inequality in income* distribution and *even more in wealth distribution*. The financial, real and public debt crises have increased these inequalities, especially in South Europe. This happened mainly through a sharp rise in unemployment, and especially in youth unemployment, the stagnation in real wages, a cut in several social expenditures, the failure of many micro-firms, the increase in tax rates; only in part compensated, as regards income and wealth distribution, by the fall in profits, housing prices and other assets, which are largely concentrated in the hands of rich people. All this has had powerful effects on consumption, saving and investment choices and even more on intergeneration problems.

4. The case of financially vulnerable countries

All these vicious circles functioned in different ways in European countries, which had important long- standing diversities in the years preceding the great financial crisis.

There was a basic difference between the countries belonging to the euro-zone and the ones which have maintained their own currency and a larger autonomy in their monetary policy, such as the United Kingdom. The latter had more scope in their economic policy and could in some case decide less restrictive macro- economic measures and some variations in the rate of exchanges of their currencies.

A second basic difference regards external economic relations and in particular the current accounts balance and the net external debt or credit position. While Germany and a few other EU countries had a structural surplus in the current accounts, countries such as Portugal, Italy, Spain and especially Greece had a heavy structural external deficit and a net debt position, which strongly contributed to weaken their financial situation.

Table 2. Germany and selected euro-zone countries in the years preceding the double crisis

Countries	Current account of the balance of payments before 2008	Public debt/GDP ratio	Housing sector	Banking system
Germany	Structural surplus since 2001. Large net external credit (a stock concept).	Acceptable ratio, but higher than Maastricht parameter of 60% since 2003.	Containment of housing prices.	Growing exposition to financial bubbles.
Greece	Heavy and very prolonged structural deficits (from the 1990s up to 2012): Very large external net debt.	Very high level and with a large majority of public debt in the hands of foreign owners	Short bubble (2003-2007)	Fragile.
Ireland	Deficit from 2004 up to 2009.	Very low ratio.	Great structural bubble	Banks greatly exposed to housing bubble.
Italy	Prolonged structural deficit (from 2000 up to 2011): Net external debt.	Very high and a substantial part of public debt in foreign hands.	Modest bubble. A gradual, but persistent fall in housing prices has begun in 2011.	Growth of non performing loans and some banking crises (Monte dei Paschi, etc.)
Portugal	Heavy and very prolonged structural deficit from the mid-1990s up to 2012. Heavy net external debt.	Ratio slightly exceeding 60% up to 2007.	Relatively contained rise in housing prices.	Banks exposed exposed to financial bubbles.
Spain	Very prolonged structural deficits from the mid-1990 up to 2011.	Low ratio.	Great structural bubble.	Several banks greatly exposed to housing structural bubble.

If we limit the analysis to the most *financially vulnerable* euro-zone countries[8], defined as the countries more exposed to external shocks and considered financially weaker, compared with a stronger country as Germany, we can see, in table 2, some very important dissimilarities among the five countries.

For example, Ireland and Spain had in 2007 a much lower public debt/GDP ratio than Italy, Greece, Portugal and even Germany, but a much stronger housing bubble than other countries. Before 2008 for several years the prices of houses had increased very rapidly in Ireland and in a large part of Spain (in particular the coastal zones and the big cities). Irish and Spanish banks were very much exposed because of the abundant loans conceded to both the builders and the people buying houses. The interconnection between several banks and the construction sector was so strict that when the bubble exploded following the US sub-prime crisis, the housing prices went rapidly down, real wealth fell and there was a severe financial crisis, which reduced also the value of shares and other financial assets and put in great danger a large part of the Irish and Spanish banking systems. Massive state interventions and then large bail-out funds obtained by the EU institutions[9] made possible to save the banks in difficulty, but this naturally worsened the public finance situation of both countries and obliged them to make very restrictive fiscal policies, which contributed to lead to a severe crisis and a sharp rise in unemployment.

In 2008 Greece was the Eurozone country in the worst financial situation since it had four heavy structural weaknesses: a large long-standing structural deficit in the current accounts balance; a huge net external debt; a very large Public debt/ GDP ratio, second in Europe only to Italy's, but with a much higher proportion in the hands of foreign holders -especially French and German banks-; a fragile banking system. Moreover, Greece had a too large and partly inefficient bureaucracy, a weak industry and a great difficulty to oblige Greek richest people, mainly builders and ship-owners, to pay adequate taxes. This was mainly due the the many privileges granted to ship owners by the preceding governments, the fact that a large part of their wealth had been held abroad and they could always menace to move shipping activities to the ports of other countries.

Portugal and Italy had also serious difficulties in the balance of current accounts and their external debt, but while Italy had at the start of the crisis a much higher public debt/ GDP ratio than Portugal, the latter had in 2008-10 a higher public deficit /GDP ratio and a comparatively weaker banking system.

Tables 3 and 4 show the sharp decline in real GDP and the great increase in unemployment rates suffered by five vulnerable Eurozone economies in the 2008-2015 years compared with the US and Germany.

The United Sates, which had originated the crisis in 2007, had vigorously reacted with great financial packages in order to save the banks (with the exception of Lehman Brothers) and large industrial and insurance corporations, such as General Motors,

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[8] On vulnerable countries, see, for example, Briguglio et al. (2009). See also Marelli, Signorelli (2017). Dallago (2013, p. 296, has correctly maintained that " .. concentrating on financial issues is a one- sided approach that on its own cannot explain, let alone solve, Europe's troubles..". However, if it is true that remote real factors are the principal determinants of the crisis, the perception of financial weakness has unfortunately dominated the EU's approach towards vulnerable countries in the years of the crisis.

[9] Between November 2010 and December 2013 Ireland received bail-out loans up to 68.2 billion euros, while Spain borrowed 40.1 billion euros from July 2012 to December 2013.

Chrysler and AIG. Moreover, the Obama Administration has favoured investments in green economy (solar or wind energy, etc.), but also in environmental dangerous sources as shale gas and shale oil, greatly reducing the enormous burden of energy dependence. It had also favoured, with massive public funds, several R.& D. activities in military and civilian high-tech sectors, such as ICT, internet and big data, healthcare innovations, etc. [10] We can say that the US had added to a strongly expansionary monetary policy (quantitative easing), vigorous Keynesian policies and a robust industrial strategy. Naturally, public finance indicators considerably worsened from 2007 up to 2010 but then the economic recovery permitted to begin to reduce the public deficit/GDP ratio since 2010 and the public debt/GDP ratio since 2014.

Since 2008, Germany has saved quite a few banks in distress and had continued to vigorously sustain R.&D. activities in vital industrial and tertiary sectors. Public finance indicators did worsen up to 2010, but then they began to rapidly improve.

On the contrary, financially vulnerable Eurozone economies felt obliged to make repeated anti-keynesian austerity policies in the whole 2008-2013 or 2014 period, in order to respect EU's parameters and directives. Financial support tardily provided by European institutions and IMF to Ireland, Portugal, Greece, Spain, Romania, Hungary and Cyprus, attenuated a little the problems. However, the austerity measures badly prolonged and aggravated the fall in real GDP, real investment and employment, especially in Greece. Both total and youth unemployment rates rose to unprecedented and socially disrupting levels (see table 4). In particular, in 2013 and 2014 youth unemployment surpassed 50% in Greece and Spain and 40% in Italy.

Table 3. Real GDP in the United Sates and selected EU countries (2007-2015) (annual % rates of change)

Countries	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
USA	1.8	-0.3	-2.8	2.5	1.6	2.2	1.7	2.4	2.6	1.5
Germany	3.4	0.8	-5.6	3.9	3.7	0.7	0.6	1.6	1.5	1.7
Greece	3.2	-0.2	-4.3	-5.5	-9.2	-7.3	-3.2	0.4	-0.3	0.0
Ireland	3.7	-4.4	-4.6	2.0	-0.1	-1.1	1.1	8.5	26.3	4.3
Italy	1.6	-1.1	-5.5	1.7	0.7	-2.9	-1.7	0.2	0.6	0.8
Portugal	2.5	0.2	-3.0	1.9	-1.8	-4.0	-1.1	0.9	1.6	1.2
Spain	3.8	1.1	-3.6	0.0	-1.0	-2.9	-1.7	1.4	3.2	3.2

Source: OECD (2017). For 2016 preliminary estimates.

Table 4. Unemployment rates in the US and selected European countries

	Harmonized unemployment rates (%)				Youth unemployment rates (%) (15-24)			
Countries	2007	2010	2013	2015	2000	2007	2013	2015
USA	4.6	9.6	7.4	5.3	9.3	10.5	15.5	11.6
Germany	8.5	7.0	5.2	4.6	8.4	11.7	7.8	7.2
Greece	8.4	12.8	27.5	25.0	29.2	22.7	58.3	49.8
Ireland	4.7	13.9	13.1	9.5	7.9	10.3	29.8	22.4
Italy	6.1	8.4	12.1	11.9	29.7	20.4	40.0	40.3
Portugal	9.1	12.0	16.5	12.7	8.6	16.7	38.1	32.0
Spain	8.2	19.9	26.1	22.1	25.3	18.1	55.5	48.3

Sources: OECD (2017) and (2016). For all countries except the US the data are not fully comparable over time.

[10] See, for example, Mazzuccato (2013)

Table 5. Some public finance indicators in the US and selected European countries (2007-14)

Countries	Public deficit/GDP (%) (a)			Public debt /GDP (%)		
	2007	2010	2015	2007	2010	2015
USA	-3.6	-12.0	-4.2	61.9	89.5	101.7
Germany	0.2	-4.2	0.7	63.7	81.0	71.2
Greece	-6.7	-11.2	-7.5	103.1	146.2	177.4
Ireland	0.3	-32.2	-1.9	23.9	86.3	78.6
Italy	-1.5	-4.2	-2.6	99.8	115.4	132.3
Portugal	-3.0	-11.2	-4.4	68.4	96.2	129.0
Spain	2.0	-9.4	-5.1	35.5	60.1	99.8

Notes (a). estimates for Greece, Portugal and Spain in 2015. Sources: OECD (2017) for public deficit/GDP and FRED (2017) for US public debt/GDP; Eurostat (2017) for EU countries.

5. Alternative economic policies

Structural bubbles on the value of stocks, such as wealth and debt, generally depend on cumulative effects protracted for several years. So, the solution of great crises caused by the explosion of structural bubbles cannot be attempted with myopic short-term austerity measures, but ought to be made with a a mix of adequate long-term and short-term economic policies, taking also into account the different characteristics of each economy at the outbreak of the crisis.

On the short-run it is better to behave as the United States, which, in 2007-9, implemented neo-keynesian policies. There were at first massive expansionary monetary and fiscal policies, and then, after the recovery, in the ensuing expansionary phase, there were measures trying to re-quilibrate public deficit and debt.

However, when the structural problems are long- lasting and very profound, as it happened, in different ways, in the vulnerable euro-zone countries, it is necessary to adopt also a bold long-term strategy.

To devise a long-term or development policy it can be useful to start from a simple concept: the *pyramid of development*[11] (chart 1).

In a long-run perspective the main objective of economic development in a country ought to be the improvement in the quality of life of the population, the vertex of the pyramid.

In order to achieve this final objective, it would be necessary to reach some intermediate objectives, such as a high employment level, a decent average income level, low economic and social inequalities and, finally, an adequate respect of the environment. A high level of employment, both for men and women, is essential to preserve dignity and independence for most individuals and families; a decent level of income accompanied by low income and wealth inequalities can assure less poverty and deprivation and more social cohesion; a high respect for environment, including the quality of air, water and soil and the preservation of cultural goods, beauty and landscapes, is very important both for present and future generations.

However, it not so easy to reach all these intermediate and final objectives. In order to do so it is necessary to have a relatively high level of investment, both in physical investment (capital goods, etc.) and in knowledge (school, university, on the job training, learning by doing, R.& D. activities, etc.).

[11] See Valli (2013) and for an application of the concept to China and India Valli (2015), pp. 111-2.

In the long run it is also necessary to maintain two main constraints. First, the equilibrium in the current accounts of the balance of payments and the absence of an excessive net external debt, secondly, a limited public debt.

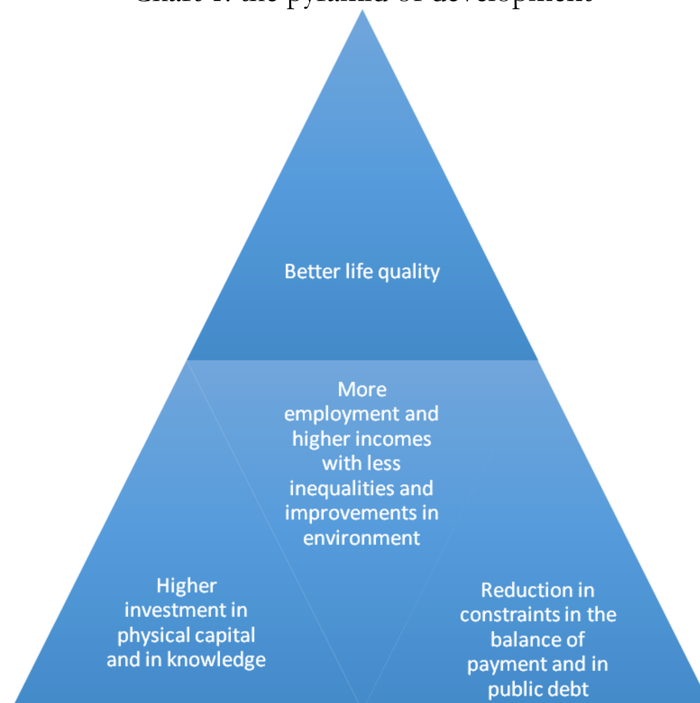
It is important to notice that the objectives can be qualitative or quantitative. There have been several attempts to measure the quality of life, both with subjective evaluations by a sample of the population or by composite indexes, but the methodological difficulties are very strong, so that a precise and commonly accepted quantification is at present unavailable. The intermediate objectives, as the employment situation, or the income and wealth levels and distribution, or the environmental situation might be more easily quantified, but it is difficult to give a correct weight to the single indicators, in order to build a good synthetic indicator. However, we can observe that, if in a country all the intermediate objectives reach a satisfactory level, it is most likely that also the quality of life would be acceptable.

If a country other than the US [12] becomes a large net debtor towards other countries or has an excessive public debt it becomes an hostage of its creditors and its autonomy in economic policy turns out to be very limited.

However, for countries such as Greece, Italy and Portugal, which have a public debt/GDP ratio superior to 130%, a gradual reduction of this ratio ought to be made in a very long period of time (at least three decades) and ought to be pursued, albeit vigorously, only in the years of economic expansion.

The EU countries with a lack of competitiveness and, until recently, a structural deficit in the balance of payments (as Greece, Italy, Spain, Portugal, etc.) have a particular need to increase the growth both of real physical investment and knowledge.

Chart 1. the pyramid of development



[12] The United States has the advantage to have the dollar, which is the key currency of the international monetary system: As long as there is trust on the dollar, the US can continue increasing their already huge net external debt.

As regards the increase in physical capital and knowledge, it would be necessary for these countries:

a) a drastic reduction of social contributions paid both by the firms and the employees, financed by a Tobin tax, a substantial carbon tax, part of a progressive wealth tax.
b) an increase in public investments and in incentives for R.&D., on the job-training, green economy initiatives and real extensive investment, aimed at the creation of new employment, and in particular youth employment. On the mid-term this will lead to higher productivity and higher tax revenues and to less need for unemployment compensations or other social interventions.
c) a reduction of taxes on firms' profits and of of personal tax rates on low and medium incomes if superior to the EU average level. This will most probably lead to higher consumption and higher expenditure in R.&D. and in education. The reduction in tax rates might be partly compensated in public revenues by the fight against tax evasion and the submerged economy, particularly large in Greece, Italy, Portugal and Spain, by the increase in wealth tax and by an adequate taxation of the European activities of giant multinationals which are currently heavily eroding their tax basis.

It is true that in the present political situation in the EU, it is indeed infeasible to reach full agreement on potentially precious tools such as an effective Tobin tax, a comprehensive carbon tax and a wealth tax. As a matter of fact, there has been a Germany led procedure for a rather timid Tobin Tax under enhanced cooperation, but it has only gained eleven EU States and will not bind the United Kingdom under the February 2016 Council agreement with the British premier David Cameron. Germany is also opposing a common carbon tax or a comprehensive progressive Piketty style wealth tax[13].

The present solution will so to recur to these budgetary measures in an adequate number of EU countries, and try reaching, in the middle-long run, a more complete common fiscal policy.

But there are solutions which can be immediately applied, as the ones highlighted in the Pavia's declaration[14]. There can be a "New deal for Europe" based on a rapid expansion of social and environmental investments, infrastructural and R.&D. projects both at national and local level, funded by bonds issued by the European Investment Bank and the European Investment Fund. All this can consolidate the recovery and growth of EU economies, reduce systemic uncertainty and improve expectations of private firms, but can also contribute to improve employment and the overall quality of life. Moreover, the increase in capital accumulation can lead to an expansion of net national wealth generating positive stock-flows feedbacks.

In an improved political context, it would be also very important to finance a gradual, but substantial increase in the EU budget to be mainly devoted to investment in infrastructures and knowledge (education*, R.&D.*, etc.) and to a vigorous temporary assistance of countries in deep crisis, such as Greece.

[13] These problems have been correctly pointed out by an anonymous referee on the first version of the paper.

[14] See The Pavia declaration (2015).

The last point will also require important reforms in EU institutions. A common monetary and exchange rate policy without an effective EU common fiscal and budgetary policy has proved to be very dangerous. In the long-term, it would be necessary to transfer from the national budget to the EU budget at least 10% of EU's GDP, with a sort of a EU finance minister appointed by the EU parliament, independent from the EU council of ministers, and fully in charge of this budget. During severe crises the council of prime ministers and of treasury ministers have proved to reach with great delays feeble and scarcely effective agreements having to reconcile strong nationalistic pressures.

There is also the absolute necessity of better regulations on banking and financial markets. The European stability mechanism and the Banking Union are not enough. Little has been done to prevent too risky speculative activities of banks and dangerous conflicts of interest.

There is also a deep need for some EU common grounds on the labour and industrial relations policies. It would be a difficult and impervious process, but a first step might be to introduce EU minimum wages and social contributions, a minimum EU set of unemployment compensations, active labour market policies and good immigration common rules. These minimums could be naturally improved by collective agreements and national laws, allowing more generous unemployment compensations, social contributions and assistance to refugees in richer countries, but the minimums could constitute the basis for the gradual building of a common EU social and labour market platform.

But in order to do all this, it is necessary to fight against strong nationalistic temptations, and gradually build a common social Europe and more integrated European Labour Unions and political parties.

Naturally this would require profound political and institutional changes in the EU, with the long-term objective to move towards a real United States of Europe.

6. Conclusions

The double crisis is not completely over in several EU countries, although in 2015 in the five vulnerable countries here considered, there was a slight recovery and a modest increase in real GDP and employment. Some important stocks have continued worsening. In some countries public debt and the ratio public debt/GDP ratio have increased and total wealth has decreased up to 2013 or 2014, mainly because of the reduction in housing prices. Moreover, in several banks the stock of non-performing loans has continued to increase. The perverse feedbacks between stocks and flows has continued to operate in several countries, though with decreasing strength. Disrupting external shocks, such as the wars in Iraq, Syria and Libya and the mass emigration of refugees; terrorism; China' economic slowdown and financial turbulences in stock exchange markets may aggravate the future political and economic difficulties.

Proposals as the ones highlighted in Pavia's declaration can contribute to economic recovery or expansion and to reverse the directions of stock-flows relations. From negative vicious circles it is possible to pass to positive beneficial feedbacks.

However, most EU's and Eurozone's problems are internal structural problems: there is the lack of a political and economic long-term strategy and of a common approach in which, in a moment of difficulty in any country, solidarity prevails on nationalisms.

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