Economic crisis and taxation in Europe

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ABSTRACT - The recent economic crisis and taxation in the advanced countries - especially in the European nations - are linked in several ways. The tax systems may have exacerbated the crisis, and this raises the question of the need for a better system of taxation in certain economic sectors, especially in the banking sector. It is worthwhile examining the various different effects of the crisis on different kinds of tax revenue, as a result of both the automatic stabilizers and the discretional measures which were adopted to sustain the economies. We are going to show that while the former have had a relatively substantial impact, the latter have been of negligible effect. The paper initially offers a critical overview of the just mentioned topics. The European countries are now faced with a difficult trade - off between further tax reductions to sustain economic recovery, and the raising of taxes in order to help stabilize public budgets and debts. Broadly speaking, the most suggested solution consists in the idea of raising taxes whilst making them more growth - friendly. With this in mind, the paper then reconsiders and compares the latest, authoritative proposals for tax reform which in recent years have been proposed not only by international economic organizations, but also by studies in the field. The longstanding principles of broadening the tax base, reducing rates and simplifying the tax system still appear to be at the order of the day. The idea of shifting the tax burden away from labour and capital, whilst increasing taxes on consumption, properties and environmental resources, also continues to receive large support. It is again suggested that efficiency - induced neutrality should characterize the design of the main taxes. While those political factors that have impeded reforms in recent years are still at work, we should remember that tax systems also have other targets than that of favouring neutrality - efficiency, and that in some countries (including Italy) the most urgent, radical reform required is the downsizing of an abnormal level of tax evasion.

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1. *Introduction and contents*

The economic crisis that has been underway since 2007-2008, and the taxation systems in place in the advanced countries - especially in Europe - are linked in several ways. First of all, one must ask whether the just mentioned tax systems contributed toward broadening and/or exacerbating the crisis, and if so, in what ways. Regardless of the outcome of such inquiry, the crisis clearly showed that taxation should be improved in several areas of the economy, first and foremost in the banking sector. Moreover, it is worthwhile examining the various effects that the crisis has had on different kinds of tax revenue, as a result of both the automatic stabilizers and the discretional measures which were adopted by several countries to sustain aggregate demand and employment[1]. We are going to show that while the former have had a relatively substantial impact, the latter have been of negligible effect, despite the (large) number of (marginal) tax changes that have been implemented. The advanced European (and non - European) countries are now faced with a genuine dilemma, namely whether to reduce taxation further, in order to sustain economic recovery, or, on the contrary, to raise public revenue in order to help stabilise the public budget and the level of public debt, what have deteriorated as a result of the crisis (for all, see: EU Commission, 2010b; IMF, 2009 and OECD, 2010b). According to international economic organisations and to those studies carried out in this field, once again the suggested solution should be found in reforms - as previously suggested over the last few years - which could help generate much - needed revenue as well as promote greater economic growth, which in turn could exert a positive effect on the revenue levels themselves. Longstanding proposals (such as the "buzz words" of broadening the bases and reducing the rates) are once again at hand, together with several more recent suggestions such as the shifting of the fiscal burden from labour and capital to consumption, real estate and environmentally - related resources. According to the most diffused opinion, more neutral features should characterize the main taxes. The proposed reforms thus tend towards pursuing efficiency, although this is not the sole target of a well - designed tax system.

The remainder of the paper is organised as follows. Section 2 discusses tax developments throughout Europe from 2007 until 2010. A subdivision will be made between the main categories of taxes and the different groupings of European Union member countries: EU27 (the whole Union), EA16 (the Euro Area), EU15 (the Old Member States - OMS), and, finally, the NMS (New - since 2004 - Member States)[2]. Section 3 investigates the aforementioned links between taxation and economic crisis, with particular reference to: the contribution of the fiscal system to the crisis and to the need to reform taxation of banks; the cyclical effects of declining GDP on total and single

[1] The measures adopted in order to prevent instability within the banking system are not considered in this paper.
[2] EU 2010 statistical data bases do not yet include Estonia in the Euro area, which does however include Slovakia.

tax yields, as well as the tax measures implemented in an attempt to sustain the various nations' economies. Section 4 discusses and compares the updating of the tax reform proposals, once again coming in particular from both the EU Commission and the OECD, and the related literature. Section 5 resumes our findings and offers a number of concluding remarks.

2. *Tax trends in the European countries, 2007-2010*

The economic crisis that began in 2007-2008 has led to a significant - albeit not disastrous - drop in tax revenue in the European countries. During the period 2007-2010 the overall tax burden decreased by more than one percentage point of GDP in the EU27, compared with an increase of about four percentage points in those countries' total public expenditure[3]. Notwithstanding its limited extent, the fall in European taxation levels merits further analysis, as it can help us gain a better understanding of a number of critical features of taxation in Europe. At a first glance (EU Commission, 2010a), one can see that following a cyclical recovery in 2007, European taxes, as percentages of GDP, slowed in 2008, fell substantially in 2009 and showed variable trends during the course of 2010. These trends were largely shared by almost all the aforementioned groups of European members, given the extensive overlapping of the countries that belong to these groups[4]. However, the NMS also revealed similar trends, albeit of a quantitatively broader nature, in relation to total fiscal burden in terms of GDP.

Table 1a/b shows the dynamics of the main categories of European taxes for the period 2007-2010 (Eurostat, April 2011)[5]. As a more specific quantitative assessment of the aforementioned general trends relating to the total tax burden, we may consider the entire EU27 area[6]. We can in fact see that in 2008 there was only a marginal fall in the total tax burden (from 39.6% to 39.3% of GDP).

TAB 1a AND TAB 1b ABOUT HERE

[3] Public benefits and incentives were largely believed to be generally more effective than tax allowances in sustaining disposable income and employment (EU Commission, 2010b).

[4] In 2007, the total tax revenue of the OMS was in fact 94 percent of that of the EU27, whereas the tax revenue of the EA16 was 74 percent of that of the EU27. The NMS accounted for a mere 6 percent of the total tax revenue of the EU27 (EU Commission, 2010a).

[5] For long-term data, see EU Commission, 2000 (1970 to 1997), 2010a (1995 to 2008) and OECD, 2010a (1965 to 2008). The tax trends for those years are analysed by, among others, Bernardi and Profeta (2004) and Bernardi (2009).

[6] In the EU27, *nominal* GDP (Tables 1 and 2) continued to rise slightly in 2008 (0.8 percent), followed by a significant fall in 2009 (-5.7 percent) and by a partial recovery in 2010 (+3.9 percent).

This was mainly due to a reduction in indirect taxes, the fastest to adapt to the current reversal of the cycle, probably because of more prudential consumer spending and the shift of the latter towards goods of inferior quality, that are taxed at a lower rate (EU Commission, 2010b). The marked 2009 drop in total fiscal revenue (from 39.3 to 38.6% of GDP) was mainly the result of an even greater reduction in direct taxes (from 13.6 to 12.6% of GDP)[7]. For 2010, data point to a limited reduction in total tax revenue (to 38.5% of GDP), as a consequence of a greater further contraction in direct taxes against a limited increase in indirect taxes. Social contributions for 2010 decreased in GDP terms, following the increases seen in 2008 and 2009. Ultimately, therefore, total revenue for the EU-27 in 2010 was more than one GDP point lower than the 2007 level (-4.1 % in absolute terms)[8]. The composition of revenue changed as a result of a fall of nearly 1.5 GDP points in direct taxes, which was only partially offset by an increase in social contributions and indirect taxes. So the crisis has clearly had different effects on the various taxes in force. Therefore, we are now going to look more closely at the absolute trends followed by the main categories of taxation, always with reference to EU27.

TAB 2 ABOUT HERE

Direct taxes (Table 2) fell by a limited amount in 2008 (-0.1/-0.2 points), but then fell significantly in 2009 (by around 10 points in each group of countries); however a turnaround took place in 2010, which sees an increase of 1 - 2 percent. The fall of indirect taxes was near 3 points in 2008 and near 7 points in 2009, followed by a similar recovery in 2010, in absolute terms. Social contributions had already displayed the aforementioned trend, due to a time - lag in the reduction of the tax base, and to institutional constraints (EU Commission, 2010b)[9]. In absolute terms they

[7] Table 2 shows that total fiscal revenue elasticity to the 2009 fall in GDP was 1.3 in absolute terms, while elasticity of direct taxes was 2.2 (absolute elasticity for indirect tax: 1.2; for social contributions: 0.5).

[8] As a result of the sharing of taxes, the various categories of revenue for both the EA16 and the OMS performed in a similar fashion to those depicted for the EU27. On the other hand, the dynamics of tax revenue in the NMS revealed certain specific feature, in addition to the previously - mentioned greater changes in terms of GDP. In particular, substantial fluctuations in the latter caused gaps between the dynamics of revenue in absolute terms and in terms of GDP. In *absolute terms* the various categories of revenue were still growing in 2008, before falling in 2009, with a very limited degree of recovery expected in 2010. In *terms of GDP*, a similar drop in total fiscal burden was witnessed in both 2008 and 2009, and a further drop took place for 2010.

[9] In many European countries, social contributions continue to be paid for a certain time even after a worker has been made redundant, and are partially calculated without reference to current wages. They are also pushed up by the need to finance public pensions PAYG schemes.

increased by about two average points in 2008, before falling by almost the same amount in 2009. A very limited increase of the absolute value took place for 2010[10].

These few data suggest an observation regarding 2007-2010 tax trends. It is interesting to see whether their movements were pro - or counter - cyclical. In terms of *cyclical correlation*, the values of the elasticity of revenues to GDP (Table 2) would suggest, albeit with differences between the various categories of taxes, the predominance of pro - cyclical developments (GDP elasticity greater than one). In terms of *budget effects* during the years of the crisis, on the other hand, anti - cyclical movements prevailed (see Table 2 once again: absolute changes less than zero)

Finally, some other conclusions may be drawn from Table 3, which shows a number of essential trends of certain variables which particularly affect the dynamics of the main taxes' bases[11]. The indirect tax trend seems to a degree correlated to that of household consumption[12]. The performance of social security contributions is bound by the above mentioned institutional factors, and so they were not substantially affected by the dramatic changes in employment seen in 2009. More needs to be said here with regard to the trend in direct taxation.

TAB 3 ABOUT HERE

The first rows in Table 3 give essential figures for employment and wages. There were limited changes in (un)employment levels in 2008, which become far larger in 2009, thus establishing a trend which continued into 2010, albeit along a smoother path. If we bear this in mind, we can better understand the PIT trend (about 2/3 of which is accounted for by wages in almost all European member states), that is, its stability in 2008, followed by its huge fall (also *in absolute terms*[13]) in 2009 (Table 4), when the economic crisis heavily affected the labour markets. CIT revenue, on the other hand, already witnessed a substantial drop in 2008, followed by a still larger one in 2009, both in *absolute terms* and in *GDP terms.*

TAB 4 ABOUT HERE

[10] Looking again at Table 1, we can see certain cases in which absolute tax trends do differ from the GDP percentage trends. This is true of the increase estimated for direct taxes with reference to 2010, and for social contributions which are substantially stable throughout the entire 2007-2010 period. Moreover, Table 2 also reveals that during 2009 and 2010, direct taxes were characterised by greater instability in terms of elasticity to GDP (due to the progressivity of PIT and to the volatility of CIT (Creedy and Gemmel, 2010)), indirect taxes less so (due to the behaviour of permanent income).

[11] Of course, suitable econometric models were required in order to confirm the correlations initially hypothesized here.

[12] Except for the previously - mentioned fall in 2008.

[13] Note that PIT values in 2009 were quite similar to those in 2008 *in GDP terms.* This is due to an elasticity to GDP that is lower than the above mentioned value for total direct taxes. See the arguments which follow.

The *proxies* in Table 3 of the tax basis for corporate taxation all indicate a decrease in 2009. However, there was already zero growth in the net surplus in 2008. This must be imputed to the low value of the banks' tax base, which had already recovered in 2009. Moreover, there is the question of the relative contribution of PIT and CIT revenue towards the collapse in 2009 in total direct taxes: while the two levies account for more than the 90 per cent of the latter (Table 5), revenues from PIT are about four times that of CIT. Table 5 shows that the reduction in CIT in 2008 was offset by limited increases in PIT and in other minor direct taxes.

TAB 5 ABOUT HERE

Conversely, in 2009, the decrease in CIT was so high as to account for about half the fall in total direct taxes. This explains the aforementioned fact that the elasticity to GDP of the latter was far superior to that abovementioned value for PIT.

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3. *The economic crisis and European taxation: selected issues*

In this section we are going to consider three specific issues concerning the interaction of the economic crisis and European taxation. Firstly, we are going to examine the idea that taxation contributed towards exacerbating the economic crisis, and the eventual use of the tax system to avoid and/or limit the impact of the economic crisis and any possible repetition thereof. Secondly, we are going to analyse the breakdown between cyclical components and discretional measures, which determined the aforementioned decrease in tax levels[14]. Thirdly, we offer a close analysis of that measures, in particular in order to ascertain their structure and their success in reducing labour costs.

3.1 *Taxation and the financial crisis*

The widely - held belief is that taxation did not give rise to the crisis, which derived from other sectors of the economy, characterised by excessive, almost moral hazardous, speculative behaviours. However, one must ask whether taxation did not in some way contribute towards exacerbating and spreading the crisis. Any answer to this question will be not be straightforward, since taxation may have exacerbated liquidity imbalances in different economic sectors (for a first

[14] On the difference of the tax multipliers on output between discretionary and automatic tax changes, see Perotti, 2011.

discussion, see Hemmelgarn and Nicodeme, 2010, to whom we shall make more than one reference below; for a more comprehensive in-depth analysis, see Keen, Klemm and Perry, 2010).

The first sector is that of corporate finance. It is widely acknowledged that in almost all European countries[15], the financing of investments through debt is cheaper from the fiscal point of view than through retained earnings and/or new equities (for the latest analysis of this question, see, for all: Huinzaga et al., 2008). One consequence is the substantial leverage which characterizes[16] European companies, which is higher when the effective CIT rates are higher too[17], allowing for larger interest deductions. As a result, corporations are particularly vulnerable to credit shortages (IMF, 2009). Larger crisis falls in output seem to be associated with a higher debt - equity ratio (Davis and Stone, 2004, quoted in Keen, Klemm and Perry, 2010). There are two well known possible ways out of the tax - induced distortion of corporate financing. The first is by reducing the deductibility of interest, and may be pursued in various ways: thin capitalization rules; a Comprehensive Business Tax - CBIT - that does not allow for the deductibility of interest; and a cash - flow tax which allows for the immediate spending of investments but not for the deduction of interest. The second approach is that offered by the Allowances for Companies' Equities - ACE - which implies lifting the tax on, or taxing in a lighter way, "normal profits", with taxation at the full rate limited to rental profits. These tax reform proposals are attractive on the ground of the tax neutrality of corporate financing. However, each of them has its own weaknesses[18].

A second sector where taxation is generally acknowledged as having contributed towards worsening the crisis is the housing market. The origins of the speculative bubble (which in the EU hit Ireland and Spain particularly hard, as well as France, the Netherland, Sweden and UK,) lie with the excessively low interest rates and expectations of a continuous increase in the price of houses and in the price to rent ratio, rather than with taxation[19]. However, taxation can influence property investment in a number of ways that impinge on the user cost of capital: the deduction of mortgage interest payments; light capital gains taxation; tax exemption of the imputed rent of the owner. Widespread favourable fiscal treatment[20] has contributed to excessive house buying and leverage

[15] Austria, Belgium, Germany, Italy and Latvia introduced various, time - varying measures to correct the fiscal advantage of debt.

[16] See Keen, Klemm and Perry (2010) for empirical evidence of the increase of leveraging due to non - neutral tax systems.

[17] The ratio of corporate debt to GDP has increased in many countries in recent years: from about 50 percent in 1998 to 66 percent in 2006 in the EA16 (ECB data).

[18] In particular, ACE may induce a drop in the revenue and may boost the shifting of profits (towards those countries where ACE has been adopted), while CBIT may increase distortions in marginal investments. So a mix of the two has been recently suggested (de Moij and Devereux, 2009).

[19] House prices in the period 2000 - 2007 displayed greater volatility in low - tax countries as well.

[20] Compared to non - distortive tax regimes requiring - within the framework of a comprehensive income tax - the taxation of imputed rents and of capital gains on housing as well as the deductibility of the mortgage interests payments (see Keen, Klemm and Perry, 2010, for an in-depth analysis of the issue).

on the part of property investors and owners. Therefore, certain measures designed to benefit the housing market include the reduction in the deductibility of mortgage interest, and the taxation of both imputed rents and capital gains. Taxation on home ownership could also be raised, as could that on complementary goods (Van den Noord, 2005). No doubt, however, these measures would be unpopular and thus politically difficult to implement.

A third sector where the tax system may have contributed towards worsening the crisis is obviously the banking system. To begin with, the bonuses paid to senior managers has led bank executives to rely excessively on short - term speculative measures (Ceriani, 2009; Bebchuk et al., 2010). The reason for this is that pay often takes the form of performance - related remuneration, such as stock options or bonuses, which are lightly taxed and increase in value with the riskiness of the behaviour adopted by the managers in question. Capital gains tax on performance - related and deferred forms of remuneration should thus be more substantial, and the salary part of such remuneration should be increased[21]. Moreover, tax - minimizing targets have favoured financial innovation. Securitizations and arbitrages have grown, and have led to the greater instability of the financial markets, which could be reduced through the (rather difficult) equalization at a single marginal rate of the fiscal burden on all forms of capital income, including hybrid and OTC gains (Eddins, 2009)[22].

More generally speaking, the financial crisis has raised the question of whether the various different banks' tax regimes ought to be both more efficient and equitable, and whether they could be designed to encourage less speculative forms of behaviour by increasing the cost thereof. Further targets of the reforming of banks' taxation are the increased taxation of rental profits, and the contributions of the banks themselves towards the fiscal cost of any future government support to the sector[23]. This approach entails at least two issues, and requires international coordination. The first issue consists in the need to coordinate any new or reformed taxes through a more restrictive regulation of the banking sector (IMF, 2010). The second stems from the fact that many alternatives have been proposed, especially by the EU Commission (EU Commission, 2010d) and by the IMF (2010)[24], to improve the taxation of the banking sector, each of which with its pros and its cons, including: the taxation of financial *transactions* (FTT); the financial *activities* tax (FAT); the

[21] France and the UK have recently introduced temporary bonus taxes, whilst Italy has introduced a permanent version thereof.

[22] See Keen, Klemm and Perry for the opportunities offered by tax arbitrage, induced by high leverage, made available by low - tax jurisdictions, and by risk - taking behaviour induced by the existing practice of offsetting losses. Finally, according to these Authors, the effects of taxation on asset prices is complex and difficult to forecast, so that it is not easy to identify the best ways by which to deal with unwelcome asset price developments.

[23] According to the IMF (2010) "*Initially, many proposals have been put forward to recover direct fiscal support (…). Countries are now (i. e. 2010) shifting towards measures designed to reduce and address the fiscal costs of future financial failures*".

[24] In March 2011 the European Parliament asked the Commission to submit a proposal for a FTT. The IMF's proposals (FAT and FSC) were mainly designed for the G20 meeting of June 2010.

financial *stability* contribution (FSC); the subjection of banks and financial institutions to a suitable form of VAT. It should be pointed out that the various proposals put forward give priority to one or other - and sometime conflicting - just mentioned targets of the improved taxation of the financial sector. All of them have a negative impact on banks' assets, although this has been estimated to be of a limited entity[25]. It is beyond the scope of this paper to offer any in - depth, comprehensive analysis of the issue, but we shall nevertheless like to provide a brief review of the various aforementioned proposals, as analysed by current studies of the issue.

To begin with, let us consider the FTT. This prioritises a reduction in the number of speculative transactions and their volatility. The basic idea is not a new one, as it dates back to Keynes (for the transactions on equities) and to Tobin (for the transactions on money exchanges: 1978). The current proposals are extended to any kind of financial transaction: shares, bonds, other financial instruments and foreign currency. It is argued that the tax would reduce speculative transactions by raising their cost. It may also help recover funds and to bail - out those bank debts in trouble. The resulting yields, albeit at a low rate (0.1 - 0.5 percent), would be significant, and have been estimated at 20 billion € for the EU and at 50 billion € worldwide (EU Commission, 2010c). The tax has been extensively analyzed from both the theoretical and the empirical points of view, although to date the results appear somewhat inconclusive. The main debating points are whether the tax might damage long - term investments, whether it will reduce financial market volatility or not (Hau, 2006), and whether it focuses on the key causes of financial instability or not. Either way, the adoption of the FTT should be worldwhile, or at least, EU wide, to avoid the elusive displacement of transactions. Finally, it is debatable whether the FTT would reduce systemic risks, by taxing banks' rents and not being passed onto consumers, and whether the financial industry could devise schemes to circumvent such a tax[26].

The FAT[27] has two specific aims: to hit the higher than normal contributions of the financial institutions to systemic risks; and to tax the banks' rents, which may derive from the peculiarities of the sector and by its specific connections with the rest of the economy (Beck and Demitguk - Kunt, 2009). Taxing the banks' rents may reduce the room for speculative behaviour. If applied on the sum of profits and all other forms of remuneration, the tax would be similar to VAT, from which the banks are notoriously exempt. In this case, the tax treatment of the banks would be more similar to that of the other sectors, thus discouraging any excessive enlargement of the financial sector. If

[25] For instance, the tax basis of the TAF has been estimated at around 4% of GDP as an average for European countries (IMF, 2010).
[26] Apparently, negative conclusions concerning the possible virtues of the FTT may now be found in Matheson, 2011.
[27] We have already mentioned that the fiscal benefits afforded to debt in almost all European countries may determine excessive levels of leverage, which in the banking sector may be particularly destabilizing and risk inducing. The suggested corrections are, once again, a shift towards ACE or CBIT, or a combination of the two.

applied only on remunerations and profits above a certain level, it would make the taxation system fairer and help correct any tendency towards excessive risk - taking.

The FSC[28] aims to charge the banks for at least part of the fiscal cost of any future government support to the sector. This should be charged on non - deposit debt liabilities and should be tax deductible. The FSC would be paid by all financial institutions at a rate which takes account of the individual banks' riskiness (IMF, 2010).

Finally, according to the 6th EU directive, the banks have the tax benefit of exemption from VAT, application of which in this sector would clearly raises certain rather difficult problems (for all, see Huinzaga, 2002). The only workable proposal would be a cash flow tax: all revenues would be considered as selling and all disbursements as purchasing (Poddar and English, 1997).

3.2 *The cyclical component of the fall in taxation*

It is commonly accepted that taxes are linked to fluctuations in the economy, and that they rise or fall in line with increases or decreases in GDP, to which they are ultimately linked. One consequence of this is that cyclical changes in the tax revenue may smooth the course of the economy. It is thus useful to filter tax trends from the cyclical components of the levies, in order to highlight their structural changes, particularly those resulting from discretionary measures[29]. An estimate has been carried out by the EU Commission, using the Hodrick - Prescott filter, in order to isolate the cyclical components of the dynamic of GDP, expressed in terms of (+/-) output gap[30], and then to assess the cyclical sensitivity of the various forms of taxation to the output gaps.

TAB 6 ABOUT HERE

Table 6 shows the values of the cyclical components of total revenue in the different groups of European countries for the period 2006-2010. In the case of the EU27, EA16 and OMS, there is a positive cyclical component of almost one point in 2006, which nearly doubles in 2007 given the substantial growth of GDP that year, and then falls, whilst remaining positive, in 2008 (partly due to higher values of GDP in previous years). By 2009 (and in 2010) the cyclical component becomes negative in each group of the just mentioned countries, amounting to about one point of GDP. By

[28] Similar levies have been suggested both by the IMF and by the European Council.

[29] The issue has been, and is, the subject of extensive study, both theoretical and empirical. The OECD estimates that a one point change in GDP leads to an overall 0.5 point change in total revenue, and therefore in the budget balance. This value varies from one country to the next, of course, depending on their different taxes, the structure thereof and the nature of the shock that caused the cyclical up/down turn. The magnitude of the effect should be attributed in particular to the progressivity of PIT and to the volatility of CIT. See below, footnote 32, for more details.

[30] An alternative method, sometimes used by the OECD, calculates the output gap by comparing the actual output with the potential one, the latter being obtained by estimating a production function.

comparing these values with those for the overall dynamics of proceeds (Table 1), we may duly conclude[31] that the fall in revenue in 2009-2010 was almost entirely due to the cyclical component. Figure 1 confirms these findings, in relation to the EU27, for the years 2001-2010.

FIG 1 ABOUT HERE

The overall conclusion that can be drawn from the above highlights the importance of cyclical trends in determining the levels of tax revenue and its impact on the budget balance. It has also been pointed out that the relevance of the cyclical component in determining the tax trends of the years in question is a welcome quality, because it emphasises the structural stability of tax revenue.

Given the magnitude of the decrease in yields, especially in 2009, it is now worthwhile ascertaining what the effect of automatic stabilization has actually been. We have omitted, here, any discussion of the specific properties and reliability of automatic stabilizers, limiting our analysis to the assessment of their effects during the crisis[32]. Recently, Dolls et al. (2010) conducted an assessment of the effects of automatic stabilization with reference to the crisis years, by making use of a micro - simulation model. For the European countries, they estimated that the share of the income shock absorbed by lower taxes (PIT and employees' contributions) was around 30 percent. The resulting stabilization of demand is very variable, from the very low values in the NMS, up to 44.8% in Denmark. This confirms the idea that high taxation rates and the steep progressivity of the tax system can help counteract the effect of an economic slowdown.

3.3 *Discretionary tax measures and the cost of labour*

To re - enforce the aforementioned effects of automatic stabilizers, a large number of discretional tax measures have been adopted since 2008 by almost all European countries. The main aim of these measures has been to support incomes, especially lower incomes, and to limit the fall in the demand for, and the supply of (bottom - tail), labour (EU Commission, 2010b). Before examining this question in further detail, we have to point out that while the number of such

[31] As always, the situation of the NMS is slightly different, being characterized by a positive cyclical component that was still high in 2008, lower than that of the other groups in 2009, and similar to them in 2010.

[32] Recent detailed estimates made before the onset of the crisis, calculated an overall measure of total budget balance sensibility to GDP fluctuations in the EU27 close to 0.4 (0.39 for revenue and -0.05 for expenditure) (Giruard and André, 2005). These figures do not vary much among the EU countries, but they are lower in the NMS as a result, in particular, of the widespread use of the flat rate tax (Keen et al., 2008). Darby and Melitz (2007) have attributed the stabilizing effect in the OECD countries as follows: 60% attributable to direct taxes on households, 30 % to other direct taxes, and 10% to social contributions. Indirect taxes were not found to have had any stabilizing effect. This is because consumer demand remains unchanged in the case of life - cycle behaviour and because of the perception of a transient short - term tax change, in case of the lack of liquidity constraints.

measures appears considerable, the majority have been highly selective, of a limited entity, and targeted to specific groups, particularly as a result of the need to avoid any further worsening of public budget balances and debts, which have already been severely compromised by the crisis.

TAB 7 ABOUT HERE

As a consequence, the discretionary measures made a much smaller contribution towards reducing taxation than the aforementioned impact of the automatic stabilizers. Eurostat (EU Commission, 2010a) has listed about 140 tax measures adopted by European countries during the period 2009-2010 (Table 7). These measures are classified according to the tax in question (PIT, CIT, SSC, VAT, ED) and according to the increases or reductions in rates or tax bases. Tax reductions (75) prevailed slightly over tax increases (67). As far as regards PIT and CIT, reductions accounted for more than two thirds of total measures (53/78), while for SSC[33], for VAT and for excise duties, virtually the opposite is true (41/63), given the need to stabilise budget balances in the face of cuts to direct taxes. PIT reductions have been obtained mainly by cutting the lower rates and by increasing thresholds and deductions. As for CIT - given the existing low rates and the limited effects of further cuts in times of decreasing or negative profits - the majority of the adopted measures consisted in reductions in the tax base (specifically accelerated depreciation, credits for investments and more generous systems for carrying losses back/forward).

Table 8 offers more quantitative data for the implemented measures, which may be of some interest, and which tend to confirm the highly dispersive nature, and limited entity, of such measures. Only seven countries introduced total measures greater than (-) 1 percent of GDP; only ten countries introduced measures accounting for more than (-) 0.5 percent of GDP.

TAB 8 ABOUT HERE

Of the aforementioned 75 individual tax-reduction measures, only five were larger than (-) 1 percent of GDP, a further five were larger than (-) 0.5 percent of GDP, and only a further 14 larger than (-) 0.1 percent of GDP. Of these broader measures, 15 concerned PIT, five concerned CIT, three regarded VAT, and only one regarded SSC. Taking account of these data, it would now be interesting to see whether the budget constraints (countries' deficits and debts to GDP) have actually restrained expansionary fiscal measures. The data we have do not allow us to perform any statistically reliable comparison between the level of total tax measures and that of deficits and

[33] As for the social contributions, the number of increases is equal to that of decreases (11).

debts. At a first glance, however, and considering a larger set of European countries than that reported in Table 8, there would seem to be some evidence that the deficits have been more binding than the debts[34].

As we have already said, a primary target of the measures taken to counter the crisis was the reduction in labour costs, designed to sustain labour demand (if the tax wedge hits the employers) and/or the labour supply (if it is passed on to wages, particularly lower ones). There is a common belief that the tax wedge is particularly high in European countries (although it tends to differ from one country to the next[35]), and this has been considered one of the factors underlying the poor economic performance of Europe in recent years (see Agell and Soerensen, 2006 for a comprehensive survey; Bernardi, 2009, for a summary of the question). The tax wedge is high both in terms of the Average Effective Tax Rate - AETR (average PIT rate + social contributions from both employees and employers at a given wage level and household composition) and for the Marginal Effective Tax Rate - METR (Marginal PIT rate + social contributions + the withdrawal of social benefits) (see OECD, 2009, for detailed definitions and a broad dataset). The AETR is considered to be the an important tax wedge measure for taking the labour decisions on the extensive margin, thus contributing towards what the EU calls the "unemployment" and "inactivity" traps, while the METR does influence intensive margins decisions (Carone et al., 2004). In 2009, as we have already said, a considerable number of measures were adopted by European countries to curb both the AETR and the METR. As a consequence, the tax wedge remained stable in almost all EU countries, falling slightly in just a few, and only increasing in Ireland and Bulgaria.

TAB 9 ABOUT HERE

The final outcome is duly summarised in Table 9, and it is a very discomforting one at that. In the EU15, the total AETR (at the average wage for a single worker without children) in 2009 fell on average by just by only 0.5 of a point from its 2008 value (never by more than one percent, and due almost entirely to PIT - related changes). This is not sufficient to boost labour demand and supply or to support employment decisions, given their low elasticity, as commonly reported in the literature (for all, see Agell and Soerensen, 2006). In turn, the METR decreased by nearly the same amount as the AETR for those workers on about two-thirds of the average wage, and by a little

[34] Among 15 countries, for which the data are available and reliable, 11 were higher than the average figure, being the deficit below its average figure. On the contrary, only five countries show the same property with respect to debt/GDP ratio.

[35] In 2009 from 10 percent of labour cost in Cyprus to almost 50 percent in Belgium. The average value for the EU15 countries (single worker with an average wage) was at the same time higher than 40 percent. Italy was the first in the ranking at about 45 percent (OECD, 2009).

more than the AETR for the average worker, thus introducing a disincentive towards increases in labour productivity.

4. *The main tax reform proposals: relevant issues and some comparisons*

In a recent paper (Bernardi, 2009), we discussed the main tax reforms currently proposed by the most influential international economic organizations, as well as by scholars in the field. The common target was, and continues to be, a combination of reforms designed to render tax systems more growth friendly, but which are also capable of raising tax revenue in accordance with the need to stabilize European countries' public finances, which have been negatively affected by the economic crisis, as we have already seen (EU Commission, 2010b; OECD, 2010b; IMF, 2010)[36]. Scholars have long debated the choice of budget items which would ensure greater success in overcoming the public debt crisis and in restoring the sustainability of public spending. Until now, the prevailing (albeit not universal) view has been that spending cuts are (together with increased public investment) more capable than tax reductions of firstly stabilising the debt/GDP ratio and then reducing that ratio (for the latest study, see Alesina and Ardagna, 2009). However, recent econometric analyses, performed on a large sample of successful cases of public finance stabilization during the last forty years, have shown that raising tax revenues helps reduce debt in those countries where consolidation requirements are particularly large (Baldacci et al., 2010).

The main tax reform proposals considered both in our abovementioned 2009 paper[37] and also here, are those suggested by the EU Commission, the OECD, the final report of the "Mirrlees Review" (IFS, 2010) and by certain individual scholars. The common final aims of these reform proposals are more or less those we have already mentioned, although the grounds on which the majority of them are founded tend to differ (for a theoretical insight, see, for example the "Mirrlees Review" - and/or for recent empirical evidence, see OECD, 2010b[38]), as do the specific measures that they call for. Therefore there is a certain overlapping of these proposals with the previously - mentioned ones, but there are also certain differences as well. In what follows, we are going to offer a brief discussion of these issues. More specifically, we will deal with the main features and effects of the total fiscal burden, with the composition of the tax mix, and with the design of the main taxes.

[36] As we all know, deterioration took place not only in terms of budget deficits, but also, what is worse, in terms of debt/GDP ratios (about 20 points vis-à-vis the EU average in 2009) and this contributed to give rise to the crisis of sovereign debts in a number of European countries (see the quotes at the beginning of the section). Needless to say, successful fiscal stabilization requires not only growth of the structural primary balance, but also, more importantly, the favourable dynamics of the growth - interest rates differential.

[37] See that paper for a more detailed description of the tax reforms considered herein.

[38] For a recent comprehensive presentation of taxation theory, see Kaplow, 2011. For a broad review of the latest empirical evidence concerning the effects of taxation on the main macroeconomic variables, see Vermeend et al., 2009.

4.1 *The total tax burden*

Notwithstanding a long history of analysis, proof of the supposed negative effect of the total tax burden on the level of GDP remains somewhat inconclusive (see Vermeend et al., 2009, for an updated review and relevant data). However, the "reformers" (especially the EU and the OECD), and not only the latter, have recently adopted the idea that the level of the fiscal burden may not in fact damage economic growth. A simple correlation between taxation and growth in the advanced countries is not easily verified. This is also because the alleged negative effects of the tax burden may be at least partially offset by the benefits of public expenditure. Furthermore, total tax burden and growth represent a two ways causality, and one that is difficult to disentangle (Arnold, 2008, and Myles, 2009)[39].

4.2 *The tax mix*

Almost all the "reformers" share the view that the existing tax mix in the advanced countries (and especially that in the European nations) has to be changed. This idea is advocated in particular by the OECD (2010b), but it is widely shared (EU Commission, 2010b; IMF, 2010; Arnold, 2008; Myles, 2009; Vermeend, 2009; Johansson et al., 2008). All of the suggested changes are designed to increase tax efficiency whereas the other requirements of a good tax system tend to be somewhat neglected, equity in particular[40]. Furthermore, the effects of tax reforms are estimated to be significant in the long run, and in any case to be relatively small, if the amount of reforms is not quite large. The suggested changes - based on different and some time not comparable grounds - aim to reduce income tax (on labour and on corporate capital) and to increase the tax burden on consumption, property and environmentally - related resources. In support of the tax - mix reform proposals, the OECD has resorted to a detailed analysis of the respective distortive effects of individual taxes, to a ranking matrix of these effects, and finally, to a set of new econometric estimates of a cross - country panel regressions (Johansson et al.; 2008 and OECD, 2010b). The first estimated equation makes the *per capita* GDP of the OECD countries dependent on the standard arguments of a neoclassical production function, on the tax structure and a set of control

[39] Both the Authors draw their conclusions from an endogenous growth model, which perhaps could be more sensitive to the value of certain selected variables (physical and human capital incentives, R & D expenditure, tax allowances for higher education and so forth) than to that of the total fiscal burden.

[40] This in fact is recognized in the OECD studies: *"While the paper focuses on how taxes affect growth, it recognises that practical tax reform requires a balance between the aims of efficiency, equity, simplicity and revenue rising*" (Heady et al., 2009).

variables[41]. Direct taxes are significant, with a negative coefficient (especially the corporate tax), while consumer and property taxes display significant positive coefficients. The move away from personal income tax has been mainly justified up to now on the basis of the distortion effect on labour supply and demand, in a competitive labour market[42].. Furthermore consumption taxes are considered to be less distortive than income taxes, not only due to the above mentioned effects on labour decisions[43], but also due to the fact that they are partly financed by accumulated wealth and are neutral to savings (also Arnold, 2008 and Myles, 2009)[44]. The main drawback of the corporate tax, at the industry and the firm level, consists in its increasing the user cost of capital, leading to a fall in profits and investment[45]. Property taxes would be the least distortive of all, being based on goods whose supply is inelastic (at least in the short run). Environmental taxes improve market efficiency by correcting negative externalities.

4.3 *The* d*esign of individual taxes*

The eighties' "buzz words" of simplifying tax structures, reducing tax rates and broadening tax bases, are once again fashionable among the "reformers", and the consequent changes to the design of taxation are warmly recommended (Vermeend et al., 2009, for all). As for the main taxes, the "reformers'" main suggestions may be briefly depicted as follows.

a) *PIT, SSC and personal benefits* - The broadening of the PIT base is still generally recommended, through the abolition of a large number of tax expenditures[46], which in many cases are no longer justifiable, but remain in place thanks largely to the pressure of interest groups (see OECD, 2010, in particular). As for the rates schedule[47], it is not difficult to share the words of the "Mirrlees Review" (IFS, 2010): "*The personal tax and benefit system should be progressive, coherent, and designed to*

[41] The specified equation is a dynamic Cobb Douglas with exogenous technical process. The significance of the various taxes is tested by including them once in the model, without checking the possible interaction between the different categories of levies. Note finally that the overall tax burden results negative and significant at the 1 percent level.
[42] A small negative effect of labour taxes on TFP has also been established.
[43] It is increasingly believed that account should be taken of consumption taxes in the tax wedge on labour: Agell and Soerensen, 2006, and OECD, 2009.
[44] Other econometric estimates, produced by the EU Commission (Roeger and 't Veld, 2010) and by the same OECD (Heady et al., 2009) indicate that a shift from income taxes to consumption and property taxes results in a long-term increase in GDP.
[45] Once again a negative impact on TFP has been identified, especially at the firm level.
[46] The rationale for tax expenditures would remain when they should to be replaced by subsidies the administration of which is less efficient, and when they correct market failures.
[47] As for the flat tax reform, mention should be made of some recent studies relating to this reform relative to the USA and to other OECD countries (Jenssen, 2008; Correia, 2010) which claim that the potential growth of a flat tax shift is significant. However these results do not seem capable of overcoming the previous doubts raised as to the efficiency and equity effects of flat tax reforms, which in fact have only been introduced by a limited number of countries, in particular those of Eastern Europe (Keen et al; 2006; Fuest et al., 2008; Bernardi, 2009, with references to Italian studies).

reflect what we know about the shape of the income distribution and how different groups respond to work incentives"; however, it is somewhat more difficult to give a specific implementation to an open - ended statement like this. Nevertheless, there is broad backing for the idea of reducing the disincentive to work[48], through lowering the existing level of marginal rates, especially for the lowest and highest income brackets. These suggestions are certainly not new[49]: the labour decisions of low earners (and second earners, i.e. married women with children, the elderly)[50] are more sensitive to taxation traps, while high rates for high earners may discourage (Arnold, 2008 for all) people from undertaking entrepreneurial activities and risk - bearing actions, thus affecting the TFP (when the carrying back/forward of losses is not complete, as is now frequently the case in most European countries (Gemmel and Credy, 2010)). The progressivity of taxation is generally believed to reduce the labour supply (especially on the intensive margin), however the negative effect on long growth, although significant, seems to be of a limited entity (Heady et al., 2009). Once again on the grounds of efficiency, individual taxation is favoured over family taxation, as the latter discourages potential second earners from working. In - work benefits are generally strongly supported, while unemployment benefits lead to the well - known trade - off between equity and efficiency[51].In any case, family and unemployment benefits should be radically simplified.

b) *CIT* - As we have already seen, CIT is largely considered the most distortive of taxes (see OECD, 2010b; Arnold, 2008; Myles, 2009, among others) for its effects not just on the TFP, but mainly on the user cost of capital[52] and on investments. However, it is difficult to envisage any further reductions in the rates, following those made over the course of the last 20 years or so. The process seems near conclusion, although in certain countries. There is widespread support for the need to correct the distortion in financing resulting from the previously - mentioned favour that almost all European tax systems give to debt. As we have already said, the most popular suggested correctives are the ACE and the CBIT[53]. The longstanding EU project for a common corporate tax base (CCCBT) has been recently sponsored by the "Monti Report" (Monti, 2010), on the basis of the

[48] Recent OECD findings (2010b) estimate the overall income/substitution effects on the total margin at this level as follows: a 10 - point cut in the wedge would lead to a 3.7 point increase in employment. However, the elasticity of the labour supply is very different for different groups of workers (Agell and Soerensen, 2006, for all).

[49] The recent overhaul of the Danish tax system has significantly raised the PIT threshold, while reducing the top rates (albeit from 53 to 46 percent only). The reform has also significantly reduced the deductibility of interests.

[50] In the same vein, efficiency and not only equity will require alleviating taxation of the most undesirable/jobs (Bernardi, 2004).

[51] See Bernardi (2009) for a brief discussion of the issue.

[52] The OECD (2010b) has recently estimated that a 5% reduction in taxation lowers the user cost of capital by 2.8%, thus leading to a 1.7% increase in investment (elasticity 0.7).

[53] Furthermore the ACE might limit the most profitable investments and requires a distinction between normal profits and rental profits, which is not easy to establish. Other solutions, such as a shift to the Meade Report expenditure tax, seem to have been rejected, while new proposals, such as a VAT - type tax in the destination country (also considered by the "Mirrlees Review") seem too difficult to implement (Zagler, 2010).

usual arguments, namely that: the CCCBT would reduce compliance costs and the practice of transfer prices, while allowing for the automatic compensation of losses suffered by branches operating in different countries, thus promoting cross - border transactions[54]. Finally, there is substantial support for greater allowances for R&D spending, in the form of subsidies and/or allowances (see once again: Arnold, 2008; Myles, 2009; Vermeend et al., 2009).

c) *Personal capital taxes* - Since Malthus' time, rents from financial wealth have always been a key factor in taxation design[55]. The current free movement of capital has made the point still harder to be managed. Recent reforms have seen a widespread shift towards the Nordic DIT or semi - DIT model (Genser and Reutter, 2007). Interest, dividends and capital gains have been almost all subtracted from the PIT tax base, and are taxed by means of anonymous withholdings at the source, which, in the case of dividends, partly doubles the taxation already paid by corporations. The "Mirrlees Review" has introduced a further novelty, by suggesting that ordinary interest not be taxed, and that share income over and above "normal capital rents" be included in the PIT tax base. More specifically, the "Review" states that "*Our main recommendations for reform would accomplish this by making interest on ordinary bank and building society accounts free from taxation, and by providing a 'Rate of Return Allowance' (RRA) for substantial holdings of risky assets such as equities, which can provide higher returns. The RRA would be calculated by applying a risk - free nominal interest rate to a cumulated stock of savings held in particular assets. They would then be taxed at the individual's marginal income tax rate*". In any case, the differences in the taxation of the various vehicles should be eliminated. Finally, certain kinds of tax on wealth transfers (inheritance, lifetime, current transfers) are widely suggested, due to the increasing level of income inequality witnessed in recent years.

d) *VAT* - The channels along which VAT reforms are to be implemented seem to be largely shared (OECD, 2010b; Vermeend et al, 2008; IFS, 2010; Copenhagen Economics, 2008). The base must be largely broadened to take in sectors until now not taxed, and existing exemptions must be reduced. This is particularly true of the financial sector and of new house. If the levying of VAT proves too difficult in these sectors, other levies may take its place. While the (single) standard rate should remain high[56], reduced rates should be almost entirely eliminated, except they are set on the

[54] For a detailed analysis of the CCCTB proposal, see Devereux and Loretz (2008), who offer certain warnings about the alleged benefits of such tax reforms. Similar conclusions have recently been reached also by Bettendordf et al. (2010).
[55] Optimal taxation theory suggests - as we all know - not taxing capital income unless first best lifetime taxation conditions are not satisfied. For the latest reflections on this issue, see Kaplow (2011).
[56] 25% in European countries, according to Weermend et al., 2009.

grounds of increased efficiency or as a result of externalities. To contrast the consequent regressive effects, a compensatory benefit for the poor should be introduced. The rationale for this is that such a benefit favours only the poor, while reduced VAT rates also benefit the rich.

e) *Property taxes* - It is widely believed that property taxes offer various benefits. They are: mildly distorting, broad - based, linked to the ability to pay, but also to the benefit principle in relation to the financing of local authorities. Notwithstanding this, European property taxes do not, on average, amount to more than a few GDP points, albeit subject to several differences between individual member countries. The OECD (2010b) and the EU Commission (2010b) both advocate a substantial increase in property taxes. The "Mirrless Review" (IFS, 2010) itself suggests tougher taxes on real estate. Furthermore, a tax on effective or imputed rents is considered better than a tax on property itself, which requires the complicated estimation of property values and does not allow for mortgage interest relief.

f) *Environmental taxation* - A substantial increase is widely advocated for environmentally - based taxation (EU Commission, 2010b; OECD, 2010b; Vermeend et al., 2009; the "Mirrless Review" (IFS, 2010)). Since the 1990s, environmental taxes have come increasingly to the fore, as a means by which to raise revenue, to compensate for the required cuts in labour taxation, to increase employment and to correct negative externalities. Lastly, environmental taxes have been offered as a means of fighting climate change. In fact, many European countries (especially Northern European countries) have introduced a series of taxes with environment-related bases. Notwithstanding this, since the beginning of the new century, environmental taxes have stopped increasing, due in particular to the rise in energy prices and the consequent reduction in energy consumption. In 2008, environmental tax revenues were no higher than 2.4% of GDP in the EU27 (compared with 2.8% in 1998). However, the level of environmental tax revenue varies widely across Europe, from 1.7% of GDP in Romania to 5.7% in Denmark. At the EU27 level, the majority of environmental tax revenue comes from the taxation of energy (1.7%, transport fuel taxes included), followed by transport (0.8%, excluding fuel), while pollution/resources charges do not account for much more than 0.1% (EU Commission, 2010b; OECD, 2010a). Various proposals have been recently made for the revival of environmental taxation. As is rightly pointed out by the "Mirrless Review" (IFS, 2010), there are two overriding targets of environmental taxes: the first is greenhouse gas emissions, the second is traffic congestion. At present, the actual tax on carbon emissions varies dramatically according to the source of those emissions, and the fuel duty is a poor substitute for road tolls. Consequently, existing environmental taxes must be reformed in the

aforementioned directions, and must raise up to 5 percent of GDP[57]. Wider plans for a more comprehensive reform of environmental taxation have also been suggested (Veermend et al., 2009).

The novelty is that recent EU and OECD proposals for tax reform (EU Commission, 2010b and OECD, 2010b, to whom we will refer in what follows) also consider those political factors which might be of crucial importance to the success of the proposed reforms. In fact, the reforms outlined above have so far been implemented to a very limited degree. This may be a sign of the difficulty of introducing such changes. For example, a reduction in the progressivity of taxes on labour may improve efficiency whilst reducing equity, and finding a just balance of the two may not be an easy task. The allocation of revenues between different levels of government may be changed in unpopular ways. Finally, it is important to consider the political economy of any reforms (Profeta, 2004, for all), in particular if the reforms imply a limited number of beneficiaries and a larger, broader category of losers. Effective reforms in terms of economic impact may not result in political benefits, as they may reduce the policy - makers' ability to attract voters through specific tax allowances and regimes and through the persistence of tax evasion options, which as such are traditional practice in certain countries (including Italy). Moreover, in order to be successful (OECD, 2010b), tax reforms must be supported by in - depth research and analyses, a clear vision, and strong leadership. The present economic crisis may have mixed support for tax reforms: while there may be fewer political and economic obstacles, and an increased sense of urgency, there may also be greater resistance from those groups hardest hit by the crisis. More generally the prevailing political climate in most European countries does not seem particularly conductive to deep tax reforms.

5. *Conclusions*

To sum up, it has been suggested that the tax systems may have contributed towards exacerbating the crisis. This happens when tax systems favour speculative behaviour and high levels of leverage, as seen in a number of cases: the debt financing of corporate investment; the housing market and the working of the banking sector. A number of suggestions have since emerged designed to limit such behaviour, including: the rectification of fiscal benefits for debt financing; a reduction in the tax favour for housing market; a limit to (and/or the surtaxing of) bank

[57] In April 2011, the European Council proposed a harmonized EU carbon tax, the revenue from which could be partly allocated to the EU budget. It should partly replace present energy excise duties based on the energetic content of different forms of energy.

managers' bonuses (in terms of equities). Proposals have also been made to increase the stability of the banks and to make them jointly liable for the costs to public budgets in the event of financial instability. A specific tax on banks was the most approved, whereby banks' rents were to be taxed (thus reducing the basis for short - term speculative actions and forcing banks to contribute to the public coffers in the event of any bail-out).

As a consequence of the crisis, there has been a certain fall in tax revenue, especially in 2009, in almost all European countries, although in general this has not exceeded (-) 1 percent of GDP. We have shown that this fall in tax revenue has particularly affected PIT and, even more so, CIT. This fall was almost exclusively due to the working of the automatic stabilizers, rather than to the claimed "fiscal stimuli", broadly adopted - albeit in limited amounts - to sustain incomes and consumer demand. These tax measures have as one main aim to reduce the tax wedge on labour, but as we have shown, they have had negligible effect.

According to the latest findings, and in the views of a number of authoritative scholars, the recovery of deeply deteriorated fiscal stability cannot be achieved merely by cutting expenditure (and by encouraging higher than current growth rates). Therefore, the European countries are now confronted with the dilemma of either raising taxes in order to help stabilise their public finances, or pursuing a less restrictive policy in order to sustain economic recovery. The most advocate solution is found in the proposal for tax reforms designed to achieve both the aforementioned conflicting targets.

The most of the proposed tax reforms follow the hardly - novel approach of "broadening the bases and reducing the rates", and of simplifying the tax system. More specifically, it is suggested by the "reformers" that the marginal rates of PIT be reduced, especially for lower and upper income brackets and, also, for the second earner, for the elderly[58] and for those workers employed in the most painful jobs. Broadly speaking, there is also a wide consensus that personal allowances should be merged with personal benefits, in order to simplify the system[59]. CIT provides to be the most distortive tax, although any further reduction in the rates thereof is difficult to envisage. Fiscal benefits afforded to debt financing must be abolished. A mix of ACE and CBIT seems to be the most suitable solution.

There is considerable support for one single standard VAT rate. This reform must be accompanied by a benefit for the poor in order to check the regressive effect of the single VAT rate. Moreover the VAT base should be widened by reducing exemptions and by covering sectors until

[58] For the second earner and the elderly a program of social services and targeted benefits is an alternative which may prove to be better and in any way requires to be considered.
[59] In some cases, however, allowances and benefits may better require a separate means testing. Furthermore, account should be taken that allowances could be exploited also bay the very low - zero income.

now untaxed, such as the financial and new building sectors. If this proves too difficult, a substitute tax must be levied. The greater room suggested for the VAT in the design of tax systems obviously makes sense if VAT evasion is reduced in countries (like Italy) in which it reaches dramatic values As for personal capital incomes the "Mirrlees Review" proposes a new idea as an alternative to the widespread DIT and semi DIT systems. The "Review" proposes not taxing interest, tax equities over their normal rents, but within PIT. In any case, all capital revenue (including hybrid and OTC forms) should be taxed at the same rate. Environmental taxes (especially carbon emissions and road congestion charges) should be substantially increased, as should real estate taxes (or rather, taxes on housing rents, including the imputed rent accruing to the home owner).

We begun this paper by pointing out that the tax systems were not the cause of the economic and financial crisis. We would conclude by asserting that Europe's tax systems are also not going to be the main way of resolving the crisis, notwithstanding the contribution they may make to this aim (in terms of growth recovering and public finances stabilizing) if, and only if, any reforms adopted are of a relevant entity, and if tax evasion is substantially reduced in those countries where it has reached abnormal proportions. The main escape route from the crisis lies with the recovery of growth in the European countries[60], with their improved ability to extract utility from a given GDP, and, last but not least, with the origins of the crisis itself, that is, with the reform of the mis - functioning of the international financial system[61].

[60] For example, the recent Italian (April 2011) "Economic Bulletin" published by the Bank of Italy shows the substantial impossibility of stabilising the Italian public deficit and debt in the medium term, if the rate of growth does not reach 2 percent of GDP during the next few years. This figure is about twice the 2010 and estimated 2011 values.

[61] "*But the position is serious when enterprise become the bubble in a Whirlpool of speculation. When the capital development of a country become a by - product of the activities of a casino, the job is likely to be ill - done*" (J. M. Keynes, *The General Theory*).

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Table 1a - Fiscal revenue in EU: current values (Billions of €) and percentages of GDP - 2007-2010 EU27 & OMS.

	EU27							
	2007		*2008*		*2009*		*2010*	
	Values	*% GDP*	*Values*	*% GDP*	*Values*	*% GDP*	*Values*	*% GDP*
Direct taxes	1696	13.7	1695	13.6	1484	12.6	1511	12.3
Indirect taxes	1670	13.5	1631	13.1	1518	12.9	1619	13.2
Total tax revenue	*3366*	*27.2*	*3326*	*26.6*	*3002*	*25.5*	*3130*	*25.6*
Social contributions	1544	12.5	1587	12.7	1541	13.1	1580	12.9
Total fiscal revenue	*4910*	*39.6*	*4913*	*39.3*	*4553*	*38.6*	*4710*	*38.5*
Current GDP	*12396*		*12494*		*11784*		*12248*	
	OMS							
	2007		*2008*		*2009*		*2010*	
	Values	*% GDP*	*Values*	*% GDP*	*Values*	*% GDP*	*Values*	*% GDP*
Direct taxes	1620	14.1	1612	14.0	1420	13.0	1444	12.8
Indirect taxes	1553	13.5	1500	13.0	1407	12.9	1496	13.2
Total tax revenue	*3173*	*27.5*	*3112*	*27.0*	*2827*	*25.9*	*2940*	*26.0*
Social contributions	1439	12.5	1470	12.8	1437	13.2	1471	13.0
Total fiscal revenue	*4612*	*40.0*	*4582*	*39.8*	*4264*	*39.1*	*4411*	*39.0*
Current GDP	*11525*		*11505*		*10913*		*11307*	

Table 1b - Fiscal revenue in EU: current values (Billions of €) and GDP percentages - 2007-2010 - EA16 &NMS

	EA16							
	2007		*2008*		*2009*		*2010*	
	Values	*% GDP*	*Values*	*% GDP*	*Values*	*% GDP*	*Values*	*% GDP*
Direct taxes	1145	12.7	1156	12.5	1054	11.8	1056	11.5
Indirect taxes	1215	13.5	1199	13.0	1146	12.8	1191	13.0
Total tax revenue	*2360*	*26.2*	*2355*	*25.5*	*2200*	*24.6*	*2247*	*24.5*
Social contributions	1260	13.9	1310	14.1	1300	14.5	1322	14.5
Total fiscal revenue	*3620*	*40.1*	*3665*	*39.6*	*3500*	*39.1*	*3569*	*39.0*
Current GDP	*9018*		*9247*		*8956*		*9158*	
	NMS							
	2007		*2008*		*2009*		*2010*	
	Values	*% GDP*	*Values*	*% GDP*	*Values*	*% GDP*	*Values*	*% GDP*
Direct taxes	76	8.7	83	8.4	64	7.3	67	7.1
Indirect taxes	117	13.4	131	13.2	111	12.9	123	13.1
Total tax revenue	*193*	*22.2*	*214*	*21.6*	*175*	*20.2*	*190*	*20.2*
Social contributions	105	12.1	117	11.8	104	11.9	109	11.6
Total fiscal revenue	*298*	*34.2*	*331*	*33.4*	*289*	*32.1*	*299*	*31.8*
Current GDP	*871*		*989*		*871*		*941*	

Sources and notes: our calculation based on the EU Ameco data base (April. 2011 update). http://ec.europa.eu/economy_finance/db_indicators/ ameco/index_en.htm. Data refer to General Government. Direct taxes include capital taxes. GDP - weighted averages.

Table 2 - Fiscal revenue in EU: yearly percentage rates of change and elasticity to GDP - 2008-2010

	EU-27						*EA-16*					
	2008		*2009*		*2010*		*2008*		*2009*		*2010*	
	% change	*GDP el.*	*% change*	*GDP el.*	*% change*	*GDP el.*	*% change*	*GDP el.*	*% change*	*GDP el.*	*% change*	*GDP el.*
Direct taxes	-0.1	-0.1	-12.4	2.2	1.8	0.5	1.0	0.4	-8.8	2.8	0.2	0.1
Indirect taxes	-2.3	-2.9	-6.9	1.2	6.6	1.7	-1.3	-0.5	-4.4	1.4	3.9	1.7
Total tax revenue	*-1.2*	*-1.5*	*-9.7*	*1.7*	*4.3*	*1.1*	*-0.2*	*-0.1*	*-6.6*	*2.1*	2.1	*0.9*
Social contributions	2.8	3.5	-2.9	0.5	2.5	0.6	4.0	*1.6*	-0.7	*0.2*	1.7	*0.7*
Total fiscal revenue	*0.1*	*0.1*	*-7.3*	*1.3*	*3.4*	*0.9*	*1.2*	*0.5*	*-4.5*	*1.4*	*2.0*	*0.9*
GDP % change	*0.8*	-	*-5.7*	-	*3.9*	-	*2.5*	-	*-3.1*	-	*2.3*	-

	OMS						*NMS*					
	2008		*2009*		*2010*		*2008*		*2009*		*2010*	
	% change	*GDP el.*	*% change*	*GDP el.*	*% change*	*GDP el.*	*% change*	*GDP el.*	*% change*	*GDP el.*	*% change*	*GDP el.*
Direct taxes	-0.5	2.5	-11.9	2.3	1.7	0.5	9.2	0.7	-22.9	1.9	4.7	0.6
Indirect taxes	-3.4	17.0	-6.2	1.2	6.3	1.8	12.0	0.9	-15.3	1.3	10.8	1.4
Total tax revenue	*-1.9*	9.5	*-9.2*	1.8	*4.0*	1.1	*10.9*	0.8	*-18.2*	1.5	*8.6*	*1.1*
Social contributions	2.2	-11.0	-2.2	0.4	2.4	0.7	11.4	0.8	-11.1	0.9	4.8	0.6
Total fiscal revenue	*-0.6*	3.0	*-6.9*	1.4	3.4	0.9	11.1	0.8	*-12.7*	1.1	3.5	0.4
GDP % change	*-0.2*	-	*-5.1*	-	*3.6*	-	*13.5*	-	*-11.9*	-	*8.0*	-

Sources and notes: as for Table 1.

Table 3 - Some macro - indicators for EU27 - 2007-2010.

	2007	*2008*	*2009*	*2010*
Rate of unemployment - %	7.2	7.0	8.9	9.6
Unemployed persons Mil.	17.0	16.8	21.5	23.2
Compensation of employees - Bl €	5964	6070	5897	6040
Households' consumption - Bl €	7099	7183	6882	7151
Gross operating surplus - Bl €	4911	4942	4543	n.a
Net Operating surplus - Bl €	1552	1553	1314	1377
Corporations' operating surplus - Bl €	2731	2732	2463	n.a.
Corporations' net surplus - Bl €	535	423	314	n.a
Banks' operating profits - EA16 - Bl €.	n.a	190.2	305.5	152.5 (a)

Sources and notes: Eurostat Statistics and EU Ameco data bank as in Table 1. ECB for Banks operating profits. (a) January to June.

Table 4 - PIT and CIT trends in European countries, 2007-2009. Billions of euro, Yearly % changes and GDP percentages.

	PIT								
	2007			*2008*			*2009*		
	Values	*% change*	*% GDP*	*Values*	*% change*	*% GDP*	*Values*	*% change*	*% GDP*
EU27	1178	7.8	9.5	1193	1.3	9.5	1113	-6.7	9.4
EA16	802	7.6	8.9	839	4.7	9.1	810	-3.4	9.0
OMS	1135	7.2	9.8	1144	0.8	9.9	1075	-6.0	9.9
NMS	43	26.5	4.9	49	14.0	5.0	38	-22.4	4.4
	CIT								
	2007			*2008*			*2009*		
	Values	*% change*	*% GDP*	*Values*	*% change*	*% GDP*	*Values*	*% change*	*% GDP*
EU27	375	6.4	3.0	339	-10.6	2.7	228	-32.7	1.9
EA16	258	9.5	2.9	230	-12.2	2.0	151	-34.3	1.7
OMS	346	5.0	3.0	308	-12.3	2.7	205	-33.4	1.9
NMS	29	31.8	3.3	21	-38.1	2.1	23	9.5	2.6

Source: Eurostat Apr. 2011 - National accounts tax aggregates. http://epp.eurostat.ec.europa.eu/portal/ page/portal /product_details/dataset?p_product_code=GOV_A_TAX_AG. Ireland 2009 value is missing.

Table 5 - Breakdown of 2008-2009 direct taxation changes in European countries. Billions of euro.

	2008								
	Direct taxes	*PIT*	*CIT*	*PIT + CIT*	*(a) % Direct taxes*	*Changes in direct taxes*	*Changes in PIT*	*Changes in CIT*	*Other DT changes*
EU27	1695	1193	339	1532	90.4	-1	15	-36	20
EA16	1199	840	230	1070	89.2	11	38	-29	2
OMS	1612	1144	309	1453	90.1	-8	9	-38	21
NMS	83	49	30	79	95.5	7	6	-8	9
	2009								
	Direct taxes	*PIT*	*CIT*	*PIT + CIT (a)*	*(a) % Direct taxes*	*Changes in direct taxes*	*Changes in PIT*	*Changes in CIT*	*Other DT changes*
EU27	1484	1113	228	1341	90.4	-211	-80	-111	-20
EA16	1146	810	251	1061	92.6	-102	-30	-79	7
OMS	1420	1075	205	1280	90.1	-192	-79	-104	-9
NMS	64	38	23	61	95.6	-19	-10	-7	-2

Source: As in Table 5.

Table 6 - Cyclical components of total revenue of general government. Percentages of current GDP.

	2006	*2007*	*2008*	*2009*	*2010*
EU27	0.8	1.5	1.1	-1.1	-0.9
EA16	0.8	1.4	1.0	-1.1	-0.9
OMS	0.7	1.4	1.1	-1.1	-0.8
NMS	1.2	2.1	2.0	-0.8	-1.1

Sources and notes: EU Ameco data base (Apr. 2011 update). http://ec.europa.eu/economy_finance/db_indicators /ameco/index_en.htm. Weighted average for EU27, EA16 and OMS, arithmetic average for NMS. Total taxes stay at about 90% of total revenue for all groupings of countries.

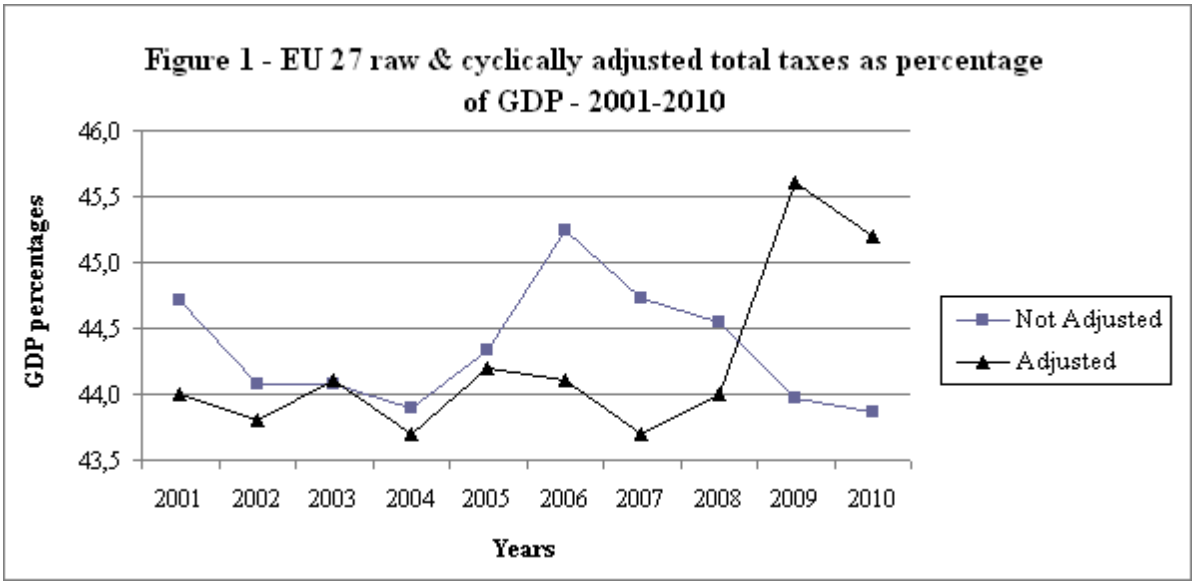
Figure 1 - EU 27 raw & cyclically adjusted total taxes as percentage of GDP - 2001-2010
GDP percentages
46,0
45,5
45,0
44,5
44,0
43,5
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
Years
Not Adjusted
Adjusted

Table 7 - Main recent (2009-2010) tax measures in EU27 countries: list by countries

	Statutory rate	*Basis or special regimes*
	Corporate Income tax	
Increase	LT, HU, PT	BE , BG, IE, EL, IT, LT, HU
Decrease	CZ, EL, HU, LU, SI, SE, LT	AT, B, DE, ES, IT, CY, LT, NL, PT, PL, RO, SE, SK, UK
	Personal Income tax	
Increase	EL, IE, FR, LV, PT, SI, UK	DK, EE, EL, ES, IE, HU, LV, LT, PT
Decrease	AT, DE, DK, FR, FI, HU, LV, LT, RO	AT, BE, BG, DE, DK, ES, FI, HU, MT, IE, IT,LV, LU, NL, PL, PT, RO, SK, SI, SE
	Social Security Contributions	
Increase	CY, EE, HU, PT, RO, SK, FI	BG, CZ, EE, LV, LT
Decrease	BG, CZ, HU, RO, SE	FI
	Value Added Tax	
Increase	CZ, EL, ES, EE, HU, LV, LT, FI	EE, LV, LT
Decrease	IE, FI, UK	BE, DE, CY, FR, LT, MT, HU, NL, RO, SI, FI
	Excise Duties	
Increase	BG, DK, EE, EL, ES, IE, HU, LV, LT, PT, PL, RO, SI, FI	DK, FI, EL, LV
Decrease	IT, LT, PL, SK	BG

Source: EU Commission, 2010a.

Table 8 - Weight of total and single tax measures in EU27 2009 - 2010 in decreasing ranking. Percentages of GDP.

Country	*Total measures*	*Deficit/GDP 2009*	*Debt/GDP 2009*	*Country*	*Total measures*	*Deficit/GDP 2009*	*Debt/GDP 2009*
DK	2.7	-2.7	41.5	AT	-1.2	-3.5	96
FR	1.5	-7.5	78.1	BE	-1.1	-6.1	14.1
HU	1.4	-3.7	78.4	PL	-0.9	-7.2	53
SW	1.2	-0.9	41.9	BG	-0.6	-4.7	67
DE	1.2	-3.0	73.4	ES	-0.6	-11.1	50.1

Country	*Single measures*	*GDP%*	*Country*	*Single measures*	*GDP %*
DK	PIT Schedule	-1.6	BE	VAT rates and reimbursements	-0.3
DK	Withdrawals from SSC funds	-1.5	EL	PIT low incomes	-0.3
HU	PIT basis (+) and rates (-)	-1.2	DE	PIT/CIT: depreciations rates	-0.2
DE	PIT rates schedule and allowances	-1.2	MT	PIT: increase of thresholds	-0.2
DE	PIT rates schedule and family allowances	-1.0	PL	VAT rules	-0.2
AT	PIT Schedule	-0.9	FR	PIT family allowances	-0.2
HU	PIT/CIT: abolition of the surcharge	-0.8	BG	Excise duty on cars	-0.2
BE	PIT special rates	-0.6	BE	CIT ACE rate	-0.1
FR	Basis taxe professionelle	-0.6	DK	PIT and VAT payments	-0.1
PL	PIT rates	-0.6	IT	PIT/CIT: credits for investments	-0.1
FR	PIT: special rates and reimbursements	-0.4	IT	Taxes on housing	-0.1
FR	CIT: R&D credits and losses	-0.4			

Sources and note: EU Commission 2010a for tax measures and EU Ameco data base for budget deficits and public debts. Total measures are reported where greater than 0.5 per cent of GDP, single measures when greater than 0.1 per cent of GDP. Countries' single measures may not add to total measures, because the omission of minor measures and/or of tax increasing measures

Table 9 - Average (AETR) and marginal (METR) effective total tax rates on labour income in EU15.
Percentages of labour cost - 2008 and 2009.

Average effective tax rates - AETR		*Marginal effective tax rates - METR*		
	2009		*2008*	*2009*
Total AETR at 100% APW	41.6	Total METR at 67% APW	50.5	50.1
Annual change 2008-2009	-0.5	*of which:*		
of which:		PIT, CW, CB	38.9	38.4
Personal Income Tax (17.5)	-0.4	CE	11.6	11.7
Employees' contributions (11.7)	0.0			
Employers' contributions (12.4)	-0.1	Total METR 100% APW	53.7	52.1
		of which:		
		PIT, CW, CB	43.5	41.6
		CE	10.2	10.5

Source and notes: OECD, 2009, http://dx.doi.org prefix. CW are workers' contributions, CE employers' contributions, (-) CB are cash benefits. Data refer to a singe taxpayer without children at 67/100% of the wage of the average productive worker (APW). Figures in the brackets show the breakdown of the 2009 total AETR into its main components. Comparable data are not available for EU27, EA16 and OMS. See text for more details.