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# UNIVERSITÀ DEGLI STUDI DI TORINO

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## **Fiscal Reforms during Fiscal Consolidation: The Case of Italy\***

Giampaolo Arachi  
University of Salento, Italy

Valeria Bucci  
University of Salento, Italy

Ernesto Longobardi  
University of Bari, Italy

Paolo M. Panteghini  
University of Brescia, Italy

Maria Laura Parisi  
University of Brescia, Italy

Simone Pellegrino  
University of Torino, Italy

Alberto Zanardi  
University of Bologna, Italy

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### *Abstract*

We discuss the strengths and weaknesses of the fiscal consolidation package adopted by Italy in 2011. Estimated at 3.3% of GDP, the tax measures were introduced to reduce public deficits without weakening the prospects of economic recovery or producing adverse redistributive outcomes. The tax reform mainly increases consumption and property taxes and gives relief for firms that recapitalize or hire young workers and women. To some extent, these measures are consistent with scholarly suggestions to foster short- and long-term economic growth by shifting the tax burden from capital and labour income towards consumption and property. Using microsimulation models, we evaluate the distributional and growth effects of the tax package. The indirect and property tax reforms are highly regressive, while the reform as a whole makes limited resources available for growth-enhancing policies, in terms of a reduction in the effective corporate tax burden. We propose a revenue neutral alternative reform that allows channelling more fiscal resources towards corporate tax relief, while at the same time producing less regressive distributional effects.

*JEL Codes:* H2, D22, D31

*Keywords:* Tax reform, Fiscal consolidation, Microsimulation, Italy

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## ***1. Introduction***

In recent years, a consensus has emerged amongst tax policy analysts that a country's tax structure affects its economic performance. Taxes have been ranked according to their effects on economic growth, with taxes on real estate considered to be the least harmful, followed by consumption taxes, personal income taxes and corporate income taxes.

Agreement on the opportunity to introduce growth-oriented reforms of the tax system, along the aforementioned lines, is reflected in the "tax and growth" recommendations made by Johansson et al. (2008) and Arnold et al. (2011): said recommendations consist in a shift of the fiscal burden from labor income towards consumption and/or residential property, and in the broadening of the tax base, and thus a reduction in tax rates and a strengthening of the correction of externality.

With regard to these recommendations, Italy can be viewed as a case study. In order to achieve a balanced budget by 2013, the Italian government has introduced three large fiscal packages, as of summer 2011, which are expected to have a total fiscal impact of about 5 GDP percentage points. These measures include significant adjustments to both revenue and expenditure sides of the country's public accounts. On the revenue side, fiscal reforms have led to increases in both indirect and property taxation. Growth enhancing measures have included a reduction in corporate taxation.

This paper attempts to evaluate these reforms in terms of their potential impact on growth and income distribution. We show that indirect and property tax reforms are highly regressive in terms of household income, whilst the reduction in the effective tax burden on firms is of a rather limited entity. In order to overcome these shortcomings, we propose an alternative tax package that offers the same tax yield as the reforms that

have actually been implemented by the current government. We show that it is possible to channel more fiscal resources into reducing the tax burden on firms, while at the same time producing less regressive redistributive effects by increasing indirect taxation and by reducing personal income tax rates for lower-income families.

The remaining part of the paper is organized as follows. Section 2 sets out the principal issues concerning the design of tax reforms during the fiscal consolidation process many European countries underwent in 2010, following the 2008-09 economic and financial crisis. In Section 3 we describe the tax measures adopted in 2011 by the Italian government as a part of the fiscal consolidation package designed to achieve a balanced budget by 2013. Section 4 presents an evaluation of the impact on growth and income distribution of these tax reforms, based on microsimulation models involving households and firms. In Section 5 we propose an alternative set of tax measures, and discuss the principal effects that such would have. Section 6 presents our conclusions.

## ***2. Recent Trends in Tax Reforms***

Taxation increases, rather than cuts in public expenditure, have constituted the main component of the recent fiscal packages implemented in most European countries since 2010. The massive, unprecedented measures designed to counter the economic downturn and the financial crisis that erupted in 2008-09, have had a considerable impact on EU Member States' public finances. In 2009, the EU-wide deficit peaked at 6.8% of GDP (up from 0.8% of GDP before the crisis), and remained at a similar level in 2010 (6.4% of GDP). Given the magnitude of the imbalances at stake, taxation inevitably constituted the main element of the subsequent fiscal adjustments. Indeed, the

EU Commission forecast is for general government tax revenue in the EU area to increase markedly up until 2013 (by one point of GDP in the weighted average).

The increase in the tax burden required by fiscal consolidation may have two significant side-effects that could undermine the general support for tax reforms: negative effects on economic growth prospects, and a regressive impact on income distribution.

As regards the former effect, recent studies of tax reforms suggest the adoption of two different strategies in order to curb the detrimental impact of taxation on economic growth. In the short run, countries that cannot use nominal exchange rate depreciation as a means of boosting external demand, such as those within the EU, can achieve the same goal through “internal” or “fiscal” devaluation: with fixed nominal wages, a cut in employers’ social contributions will lower labor costs in relation to foreign prices measured in domestic currency, to the same degree as nominal exchange-rate devaluation (Calmfors, 1993). If the government budget is balanced by raising the tax burden on workers and households via employee contributions, personal income tax or VAT, or by reducing public expenditure, then there will be no direct effects on aggregate demand, and the final outcome will be the devaluation of the real exchange rate (Alworth and Arachi, 2010; de Mooij and Keen, 2011; Franco, 2011).

Moving on to the long-term effects of the tax structure on economic growth, the findings presented in the economic literature are less clear-cut.<sup>1</sup> However, in recent years a consensus has emerged regarding the ranking of taxes according to their impact on growth (Arnold et al., 2011; Johansson et al., 2008; Prammer, 2011).<sup>2</sup> Taxes on real

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<sup>1</sup> For some recent reviews, see Micheletto and Sonedda (2011) and Prammer (2011).

<sup>2</sup> While some doubts have been raised about the robustness of empirical findings (Xing, 2012), the view that a change in the tax mix may foster long-run growth, in particular by shifting the burden of taxation away from labour taxes towards taxes on consumption and property, has gained strong support from the

estate have been considered to be the most growth-friendly, followed by consumption taxes, personal income tax and corporation tax. This ranking first reflects the international mobility of the different tax bases: corporation tax is the most vulnerable to the effects of increased openness and tax competition amongst countries, while labor income is certainly less mobile, and VAT (when levied at the point of purchase) and real estate taxation are relatively immobile. However, the ranking of taxes also reflects common wisdom regarding their economic effects: capital income taxes (especially those levied on a source base) are seen as highly detrimental to growth, since they might reduce capital accumulation, whereas taxes on labor income are always considered harmful since they discourage both extensive and intensive margins. Consumption taxes are considered to be more conducive to growth, to the extent that their bases are broader than those on labour income, and they are not of a progressive nature. Furthermore, consumption taxes may be designed to correct certain environmental externalities, or to reduce distortion in the labour supply (through the differential taxation of goods which are complements to labour). Finally, taxes on real estate produce only minor distortions on marginal economic decisions.

On the basis of these conclusions, the most straightforward policy requirement would be an increase in property taxes. However, it would be unlikely that such a measure would significantly alter the structure of the existing tax system. In 2009, property taxes accounted for only 5% of total revenue in the OECD countries (OECD, 2011). Moreover, any significant increase would encounter serious administrative and political obstacles, such as the assessment of true property value, taxpayers' liquidity constraints,

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European Commission and the European Council (European Commission, 2011; European Council, 2012).

and the widespread belief that a person's main residence, as a primary good, should either be taxed at a low rate or not taxed at all.

As a consequence, growth-enhancement arguments inevitably involve VAT as the most viable way not only of boosting short-term demand, but also of rendering the tax system more conducive to growth in the long-run. Indeed, since the outbreak of the financial crisis, increases in standard VAT rates (Prammer, 2011) have constituted a clear trend amongst EU Member States.

However, a shift towards consumption taxes is at odds with the redistributive requirements of a politically-viable reform: as we know, it is hard to implement a progressive system only by means of indirect taxation. As a consequence, the design of any tax reform aiming mainly to raise tax yield, such as the fiscal consolidation process implemented in many European countries since 2010, requires the thorough consideration of the classical equity-efficiency trade-off.

Italy is an interesting case from this point of view. As a matter of fact, in Italy not only have fiscal consolidation measures been more considerable than those of other European countries - given Italy's overwhelming level of public debt - but also the constraints have been more binding, in terms both of preserving the economic outlook from recessive impulses - given the poor performance of the Italian economy - and of avoiding regressive effects on income distribution - given the high tax-to-GDP ratio.

### ***3. Italy 2011: Fiscal Consolidation and Tax Reforms***

At the beginning of 2011, the Italian economy's prospects were no better than they had been the previous year. The Italian government estimated a growth of 1.1% in GDP in 2011 (1.0% less than the Euro area average), whereas for the period between 2012 and



2014, GDP was forecast to increase at an average of 1.5% per year. As for public finances, public debt was estimated to increase further to 120% of GDP in 2011. Given this scenario, it was clear why, in 2011, the Italian government's policy agenda was dominated by the need for stronger fiscal consolidation. However, this should have been achieved without compromising the prospects of economic recovery and weakening the already poor redistributive performance of the Italian tax system.

Under the Euro Plus Pact guidelines contained in the Stability program submitted to the European Commission in April 2011, the Italian government pledged to meet the medium-term objective of balancing the nation's budget by 2014. In order to achieve this goal, in July 2011 the government adopted a fiscal adjustment package which included measures amounting to 48 billion euro (for the period from 2012 to 2014). In mid-August, following severe financial market tension, the government agreed on an additional package raising the overall adjustment to 59.8 billion euro, in order to achieve a balanced budget by 2013, a year earlier than initially planned. The July-August stabilization package included measures aimed at both curtailing public spending and increasing government revenue. On the revenue side, the package provided for an increase in the ordinary VAT rate by one percentage point, a reform of taxation on financial income, harsher penalties for tax evasion, higher taxes on energy companies, and new revenues from excise duties.

No more than three months later, the worsening economic scenario and a further increase in interest payments on public debt, forced the new government, appointed the previous November, to approve an additional series of fiscal consolidation measures in December, in order to achieve the balanced budget target by 2013. On the revenue side, this new package provided for the strengthening of municipal property tax (Imposta

Municipale sugli Immobili - IMU), higher excise taxes on fuels, tax surcharges on luxury items, and higher taxes on financial assets. The overall strategy also included a number of growth-enhancing measures, ranging from infrastructural investments to liberalization and deregulation measures, as well as taxation measures such as tax relief for equity financing (Allowance for Corporate Equity – ACE) and tax deductions from the regional business tax (Imposta Regionale sulle Attività Produttive - IRAP) for those enterprises hiring young workers and women.

Overall, according to government estimates the fiscal packages introduced in 2011 shall provide a cumulative adjustment of 81.3 billion euro (5 GDP percentage points) by 2014, at the end of a three-year period of official estimates. Of this overall financial impact, 54 billion euro shall come from measures on revenue (3.3 GDP percentage points), whereas the correction on the expenditure side shall amount to 27.5 billion euro (see table 1).

This paper is focused on the analysis of six measures that are expected to produce the main financial impact of the aforesaid tax reforms (see the Appendix for details): on the one hand, changes in the base and rates of Personal Income Tax (PIT), strengthening the real estate tax (IMU) and raising excise duties (ED) and VAT, which are expected to produce a rise in tax yield of about 42 billion euro; on the other hand, a number of business tax cuts (the introduction of the ACE and the reduction in IRAP) and, to a lesser extent, a reduction of PIT tax base, which overall are forecast to reduce total tax yield by about 7.6 billion euro. The expected net effect of the bulk of those tax reforms specifically taken into consideration here, is an increase in taxes of about 34.4 billion euro. To a great extent, these measures are of a structural nature, i.e. their effects on the

public budget are expected to remain effective beyond the three-year period covered by official estimates.

The 2011 fiscal packages also provided for other tax measures, which go beyond the scope of this present study, which are forecast to yield a further 19.4 billion euro. These include an increase in the taxation of financial assets (4.4 billion euro), measures aimed at curbing tax evasion (3.7 billion euro), an increase in taxation on gaming and betting (4 billion euro), an increase in the social security contributions of the self-employed (1.9 billion euro), as well as a number of other minor measures.

TABLE 1 ABOUT HERE

#### ***4. The Economic Effects of the 2011 Italian Tax Package***

The sharp increase in the tax burden brought about by the three aforementioned consolidation packages raises the issues of the likely impact on economic growth and on income distribution.

##### *4.1. Tax Reform and Economic Growth*

Concern over the potential negative impact of consolidation measures on economic growth played a major role in shaping the fiscal packages implemented by the Italian government during the latter half of 2011. The packages included a number of growth-enhancing measures, ranging from infrastructural investments to liberalization and deregulation plans. However, the quest for policies conducive to growth also had an impact on the fiscal decisions made, where two main strategies can be identified. The first of these is the attempt made to rebalance the tax mix, involving a shift from labor

and business taxes towards consumption and property taxation. The second strategy is the effort to reduce tax distortions in business decisions, with the aim of fostering investment and employment by lowering marginal and average tax rates.

As for the first policy, there are two main arguments, as discussed in Section 2, in favor of a tax shift from labor and business taxes to consumption and property taxation. The first is provided by a recent school of thought among tax reform scholars, who argue that taxes on real estate and, to a lesser extent, on consumption, are less harmful to long-term growth than taxes on personal and corporate income are (Arnold, 2008; Johansson et al., 2008; Arnold et al., 2011).

The second argument focuses on the impact of the aforesaid tax shift on short-term growth. Countries within the Euro area cannot use nominal exchange rate depreciation as a means of boosting external demand, but they can achieve the same goal by means of an “internal” or “fiscal” form of devaluation that may be implemented through a reduction in the employers’ tax burden on labor, paid for by an increase in VAT. Quite surprisingly, empirical studies of the said “internal devaluation” process are somewhat limited, although the available evidence would suggest that the noticeable short-term effects of a shift from social contributions to VAT, may well improve the trade balance (Alworth and Arach, 2010; de Mooij and Keen, 2012; Franco 2011).

The tax measures contained in the consolidation packages seem to be driven by both objectives. The sharp increase in consumption taxes (VAT and ED) and IMU, and the reduction in taxation on business income (through a reduction in IRAP and the introduction of ACE) can be seen as an attempt to rebalance the structure of the Italian tax system in order to foster long-term growth. Moreover, such measures include an example of internal devaluation. As table 1 shows, reforms have reduced the tax burden

on business by about 6 billion euro (through the ACE scheme and IRAP). Almost half of this reduction stems from the reduction in IRAP. The IRAP base is net value added, including profits, interest costs and labor costs. The reform has tried to reduce the burden of tax on the labor cost component by increasing the lump sum amount which can be deducted for female and young workers, and by allowing IRAP on labor costs to be deducted from taxable business income.<sup>3</sup> The reduction in employers' tax burden vis-à-vis labor, implemented through a reduction in IRAP coupled with the simultaneous increase in VAT, is in keeping with fiscal devaluation.

We will only be able to judge whether fiscal devaluation, together with the overall tax shift, significantly affects short and long-term growth, in the years to come. What is clear at present is that the cost savings resulting from the changes to IRAP are of a rather limited entity. By means of a microsimulation model based on accounting data, Arachi et al. (2012) have estimated the impact of the fiscal package on the average effective tax burden on incorporated firms. The mean reduction in the average effective tax rate brought about by the partial deduction of IRAP from the corporate tax base amounts to 1.8%<sup>4</sup>. Further, the comparison between mean and median values shows that the impact of the package is highly concentrated. Indeed, most median values are zero. This is partly due to the fact that firms which are experiencing losses would not benefit from the package in the first year, given that they do not pay taxes in that year. However, even if loss-making firms (which account for 38% of our sample) were excluded from the sample, median values would remain significantly below the mean.

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<sup>3</sup> See the Appendix for details.

<sup>4</sup> It is worth noting that the tax rate reduction is not uniform across industries due to the heterogeneous distribution of the labor costs. Not surprisingly, the reduction of the average tax rate is higher in labor-intensive sector such as education (4.2%), health (5.9%) and transport and storage (4.3%).

A degree of dispersion is accounted for by firms' size, measured in terms of production value. Indeed, taking into consideration the entire sample, small firms benefit less than larger firms.

Besides shifting the tax burden, the Italian government has also tried to foster investment and employment by reducing the distortions in business decisions brought about by the taxation of business income. This has been mainly achieved through the introduction of ACE, which permits companies to deduct the opportunity cost of equity finance from their business income. The allowance is calculated by applying a notional rate of 3% to the increase in equity since 2010. As a result, in the case of an incorporated firm, the imputed return on new equity is exempt from corporation tax.<sup>5</sup> The Italian ACE scheme follows the original IFS proposal (IFS 1991) quite closely, the main difference being that the imputed return is computed on the base of new equity since 2010, rather than on the entire stock of equity.

The ACE scheme could achieve two aims: 1) encourage the stronger capitalization of Italian firms; 2) boost investment by lowering marginal and average effective tax burdens. As regards the first aim, by allowing the deduction of both interest expenses and the imputed income from equity capital, the new system could eliminate the tax advantage for debt finance and thus encourage a company to retain more profit or issue new equity. Panteghini et al. (2012) have estimated that this relief may significantly reduce the leverage of Italian firms.<sup>6</sup> This objective is in line with the major

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<sup>5</sup> In the case of a transparent entity, where business income is subject to personal income tax, the imputed return on new equity is taxed at lower rates.

<sup>6</sup> These results are in line with the findings of previous analyses centering on the effects of the Italian Dual Income Tax system in force during the 1998-2003 period, and aimed at stimulating firms' capitalization (see e.g. Bordignon et al., 1999, 2001). Bontempi et al. (2005) have shown that in a sample of about 12,000 companies, the debt/liability ratio was reduced on average by 0.21%. This result is particularly significant, because estimates were limited to the 1998-99 period. Similar results were found

international institutions' recommendations (e.g., European Commission 2010 and the International Monetary Fund 2010), which emphasize the importance of implementing fiscal instruments designed to discourage excessive corporate leverage, and thus to reduce systemic risk (Alworth and Arachi, 2012).

As regards the second aim, the ACE scheme brings about a significant reduction in effective marginal tax rates (EMTR). Table 2 reports the value of the EMTR for corporations on new investments for different levels of debt financing, estimated by Arachi et al. (2012) using standard techniques (à la King and Fullerton, 1984).<sup>7</sup> As expected, the absolute reduction in the marginal effective tax rate declines with the debt/equity ratio. When a new investment is entirely financed through debt ( $\sigma = 1$ ) the ACE relief does not apply, and the EMTR is unaffected by the reform. On the other hand, when a new investment is financed out of retained earnings or new share issues, the EMTR drops sharply from 45.79% to 21.73%. However, the rate reduction in percentage terms is quite significant even for high levels of debt financing.

#### TABLE 2 ABOUT HERE

The reduction in the marginal effective tax rate may stimulate new investment by lowering the user's cost of capital. However, this incentive may be rather weak or ineffective for those firms that are credit-constrained, or for multinationals considering whether to locate a new plant in Italy. In both cases, the firm's choices are likely to be

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by Bernasconi et al. (2005), who then urged policymakers to reconsider the elimination of the DIT system. By adopting the Graham-Shevlin approach, Alworth and Arachi (2001) confirmed that such a form of relief could in fact encourage capitalization.

<sup>7</sup> The estimate assumes that the post-tax equilibrium interest rate is equal to 5% and is based on a number of simplifying assumptions: personal taxation is omitted, the earning-stripping rule and a lump deduction of interest expenses from IRAP are disregarded.

affected by average, rather than marginal, effective taxation. As a matter of fact, the ACE relief may also reduce the average effective tax burden but the actual impact is limited by the fact that the imputed return is calculated on the base of the new equity since 2010. Arachi et al. (2012) estimate that the mean reduction in the average effective tax burden is equal to 1.5%.<sup>8</sup> As for the impact of the measures regarding IRAP, discussed in the previous section, the tax saving is concentrated as the median reduction is zero.

#### *4.2. Tax Reform and Income Distribution*

We have seen that the decision to rely mainly on VAT and real estate taxes in order to promote fiscal consolidation may be justified by the need to minimize the negative impact of fiscal reform on economic growth. It is not clear how this strategy affects income distribution, as VAT is widely perceived as a regressive tax, whereas real estate taxes are expected to be progressive.

In this section we provide an estimate of the distributional effects of the recent fiscal reforms, based on an updated version of the microsimulation model described in Pellegrino et al. (2011).

The model uses as its input data the Bank of Italy's 2010 Survey on Household Income and Wealth (SHIW), which contains information on households' post-tax income and wealth in 2008. The chosen sample is representative of the Italian population (Bank of Italy, 2010). The SHIW does not contain detailed information on households' consumption; consequently, in order to evaluate consumption taxation, we matched the

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<sup>8</sup> The reduction is not uniform across industries: capital intensive sectors, such as manufacturing, mining, collection purification and distribution of water, benefit relatively more.



SHIW with the Italian Institute of Statistics' (ISTAT) dataset on household consumption.<sup>9</sup>

We estimate the changes in the average tax rate before and after the introduction of the tax packages, by decile of equivalent households' gross income. In order to evaluate average tax rate changes, we consider household gross income as the sum of gross PIT income, family benefits, incomes exempt from taxation, gross income from financial assets, and gross income taxed under a separate regime. To highlight the distributional effects of the tax increases, we focus on taxable household monetary income, and so we do not include imputed rent from owner-occupied dwellings in our definition of household income. We then calculate household equivalent gross income by adopting the Cutler and Kats Scale.<sup>10</sup>

Overall, the fiscal packages are regressive in relation to households' gross income (table 3): the average increase for those households belonging to the first decile amounts to 5.2%, and for those belonging to the second decile it is 3%. Thereafter, the average increase declines in relation to income: households belonging to the top decile are faced with an average increase of 1.4%. The overall average increase is 2.3%.

TABLE 3 ABOUT HERE

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<sup>9</sup>We wish to thank Massimo Baldini for providing us with the matching program based on the `psmatch2` STATA command.

<sup>10</sup> The Cutler and Kats scale is defined as:  $CS = (N_A + .33N_C)^{.68}$  where  $N_A$  and  $N_C$  are respectively the number of adults and children (individuals within a household aged 17 or less) within each household; following Creedy and van de Ven (2005) we choose the equivalence scale parameters that minimize the re-ranking index.

As expected, the most regressive impact is that had by VAT<sup>11</sup>, followed by the ED<sup>12</sup> tax schedule reform. Changes to the PIT structure produce an almost proportional increase in the average tax rate (mainly due to the increase in the surtax rate), even if the top deciles experience a smaller increase, and the very top decile indeed sees a decrease of about 0.3%. This latter result is clearly due to the change in the taxation of cadastral rents of unoccupied and holiday dwellings (fully deductible from the PIT tax base) and total income from rented dwellings (taxed under a separate regime).<sup>13</sup>

Finally, changes in property taxation<sup>14</sup> are almost proportional (0.5-0.6%), except in the case of the bottom decile, for which the increase is almost double that figure (1.2%). These estimated effects of property taxation on income distribution require further analysis and discussion. In particular, the slightly regressive nature of Italian property tax can be accounted for by two sets of reasons.

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<sup>11</sup> According to the Ministry of Economy and Finance VAT revenue is expected to increase by about 20.6 billion euro. Of these overall effects our simulations, which are based on the Italian Institute of Statistics survey on households' consumption, capture only the part directly burdened to households, which amounts to about 11.4 billion euro (55% of the overall VAT increase). The share of increase VAT yield falling on households may appear surprisingly low and, as a consequence, requires further qualification. If we refer to the VAT revenue data reported by the Ministry of Economy and Finance (2008), of the total revenue of about 104 billion euro about 25 billion euro (24% of total revenue) were actually tax credits claimed by firms, so that the net tax yield on accrual basis was about 79 billion euro (about 76% of overall revenue). About 70% of this amount was referable to final consumption of households, whilst the remaining 30% accrued from intermediate consumption or investments by firms as a consequence of VAT-exempt transactions.

<sup>12</sup> According to the Ministry of Economy and Finance, ED revenue increases by about 7.8 billion euro. Our simulations show that the increased ED revenue received from households would amount to about 2.9 billion euro, that is, 37% of the overall ED increase.

<sup>13</sup> According to our micro simulation model regarding households, these changes increase revenue by 600 million euro. Excluding cadastral rents of unoccupied and holiday dwellings from the PIT tax base leads to a reduction in tax revenue of about 1.6 billion euro, whilst increasing Regional surtax increases revenue by about 2.2 million euro.

<sup>14</sup> Our simulations show that the expected revenue increase from households is about 4.8 billion euro: 2.6 billion in the form of taxes on people's principle residences, and about 2.2 billion on second homes and other dwellings. According to the Ministry of Economy and Finance, the reorganization of Real Estate taxation will raise revenue by 11.3 billion euro. There are around 65 million properties in Italy; our microsimulation model focuses only on those dwellings owned by households, which represent around one half of the total number (29.5 million dwellings).

First, since we are interested in evaluating effects on households' monetary income, we do not consider imputed rents in the assessment of household income. If imputed rents were included in the definition of gross household income, changes in property taxation would have a mildly progressive impact on income distribution, since the incidence of imputed rents decreases in relation to income.

The second set of reasons is related to the tax structure. In Italy, homeownership is widespread, even among poorer households: more than 70% of Italian households own their main residence, and more importantly, the percentage of homeowners remains almost constant in relation to income.<sup>15</sup> Moreover, cadastral values, which constitute the tax base of Italy's property tax, increase less than proportionally in relation to income. This latter issue is mainly due to the fact that cadastral values tend to be an extreme underestimation of the market values of dwellings, although this underestimation is less marked for those properties traditionally owned by poorer households. As a consequence, a reform of the property tax base aimed at reducing the gap between market and cadastral values, would reduce the regressive impact of property taxation (see Pellegrino et al., 2011, 2012 for further details).<sup>16</sup>

To summarize, since both theoretical and empirical studies suggest that property taxation is the least harmful for growth, the non-progressivity of Italian property tax may be an unwelcome prerequisite for the implementation of growth-enhancing policies, since the redistributive effect of the overall tax system would be reduced by

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<sup>15</sup> The percentage of owner households rises from about 60% in the bottom decile to about 76% in the top decile.

<sup>16</sup> A different impact is observed if we consider main residences and other dwellings. First of all, by considering on taxation main residences only, IMU is progressive in relation to its tax base, albeit mildly regressive with respect to household income. On the contrary, tax due on second homes and other dwellings is substantially proportional even if the number, and the value, of second homes increase with income.

such a manoeuvre. Such an outcome could be avoided by updating the cadastral values of dwellings in order to bring them in line with market values.

## ***5. An Alternative Proposal***

The analysis set out in Section 4 highlights the two main drawbacks of the 2011 Italian tax reform package. From the point of view of its impact on economic growth, the reform significantly reduces the marginal effective tax rate on business, but has a minor impact on the average effective tax rate in the short run. In particular, since both ACE and the deduction of IRAP operate through income tax, the reform package does not provide immediate relief for firms that have been hit by the economic crisis. As for income redistribution, the package's measures are highly regressive with regard to households' income.

In this section, we propose an alternative fiscal package that may overcome these shortcomings, and we then discuss its foreseen main effects. We show that by maintaining a balanced budget, the average taxes actually paid by firms can be reduced by further shifting taxation away from business income towards indirect taxation, without compromising redistribution. This can be achieved by reducing tax rates on personal incomes within the first deciles of the income distribution, since such incomes are the ones most affected by increases in indirect taxation.

### *5.1. Average Effective Tax Rates on Business Income*

We suggest that the entire stock of equity, and not the increase since 2010, be used as the base for ACE, and that IRAP is reduced directly by deducting 30% of labor costs from the IRAP base, instead of allowing the partial deduction of IRAP due from the

income tax base. Furthermore, we propose the elimination of the earning stripping rule, aimed at limiting the deductibility of interest payments: this works pro-cyclically by increasing the tax burden when firms experience a fall in revenue.

Of course, the impact of our proposal on the tax advantage of debt and on the effective marginal tax rate, is equivalent to the advantage offered by the 2012-14 fiscal package. However, it not only reduces the effective marginal tax rate, but also significantly reduces the average effective tax rate, thereby ensuring further benefits. Due to IRAP and the strict earning-stripping rule, many loss-making firms have to pay taxes, which further tighten the liquidity constraints existing since 2008. The government's implementation of ACE for marginal equity fails to reduce taxes and liquidity constraints. Conversely, the extension of ACE to all equity, the removal of the earning stripping rule and the reduction of IRAP base would solve, or at least alleviate firm's liquidity problems. These changes would reduce average effective taxation, thereby stimulating individual investment decisions (in terms of new plant and machinery).<sup>17</sup> This is particularly important, since Italy usually attracts only a small portion of foreign direct investment (FDI). A decrease in the tax burden would thus enable the government to encourage the setting up of foreign businesses in the country. To give an idea of how this would work, using de Mooij and Ederveen's (2008) semi-elasticities, we can say that on average, a 1% reduction in the average effective tax rate will increase FDI by 0.65%: this would lead to a rather important flywheel effect on Italy's production system.

The effects of our proposal on average effective tax rates have been simulated in Arachi et al. (2012). Mean and median tax reductions are substantially higher than in the actual

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<sup>17</sup> As we know, choices over lumpy investment are affected by average, as well as marginal, tax rates.

2012-14 package. In particular, median values show that the majority of firms experience a significant reduction (of around 3-4%) in the tax burden, due to the deduction of 30% of labor costs from the IRAP tax base.<sup>18</sup>

The tax reduction remains asymmetric (mean values are higher than the median), and median values are generally different from zero for ACE and IRAP. Median values are still zero following removal of the earning stripping rule. This does not come as a surprise, since the rule is designed to curtail abnormal interest expenses.

## *5.2. Redistribution*

In order to reduce the regressive impact of the reform, we propose to not increase the ED compared with the 2011 level, but to reform real estate taxation similarly to the government's reform package. Compared to the measures contained in the 2011 fiscal package, this alternative scenario increases revenues paid by households by about 3 billion euro, while improving the redistributive effect of the overall tax system.

Whilst we consider a very different tax structure for PIT, we introduce, in particular, VAT rates of 4%, 14% and 24%. Following recommendations by Arnold et al. (2011), we reduce both the number of tax brackets (from 5 to 4), and the two lower tax rates (from 23% to 22%, and from 27% to 26%, respectively); on the contrary, we raise the top two tax rates<sup>19</sup> (from 38% to 40%, and from 41% to 46%, respectively) (see table 4).

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<sup>18</sup> For further details, see Arachi et al. (2012).

<sup>19</sup> The literature suggests that cuts in personal income tax can also increase growth. In particular, cuts at the top (for entrepreneurs) and at the bottom (for low-wage workers) can have a positive impact in the productive inputs supply. As a consequence, if we look at the increase in the top marginal rate we suggest, this might produce recessive effects. However this might only marginally be the case in Italy: according to the Ministry of Economy and Finance official statistics, in Italy about 85% of taxable income returned by entrepreneurs are lower than 20 thousands euro, whilst only 11 percent of entrepreneurs declares incomes between 20 and 50 thousands euro, and only 4 per cent incomes above 50 thousands euro. Moreover, only 4.6% of overall taxpayers reports incomes above 50 thousands euro. As a

Moreover, we include both cadastral income and rent in the PIT tax base; regional surtaxes are not increased, unlike in the 2011 fiscal package; tax credits for earned income are considerably increased for those on lower incomes.<sup>20</sup> Conversely, tax credits and allowances for tax expenditures are cut by 5% for incomes below 25,000 euro, and reduced, becoming zero, for incomes over 50,000 euro. Finally, we introduce a negative income tax: whenever gross tax liability is lower than the tax credits for earned incomes and for dependent relatives, 75% of the difference is granted as a cash transfer.

#### TABLE 4 ABOUT HERE

Table 5 shows the overall effect of this alternative scenario. As expected, the VAT reform is more regressive than the 2011 fiscal package's measures. Note that almost the same variation in average rates is recorded whenever VAT and ED reforms are evaluated together. On the contrary, the alternative PIT system would have a more progressive impact. The negative income tax scheme allows for a 5.3% reduction in average tax in the first decile; a small reduction is registered, also, for those households within the second decile.

#### TABLE 5 ABOUT HERE

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consequence, the marginal rate increase we propose (two percentage points on incomes between 29 and 45 thousands euro, 5 percentage points between 45 and 75 thousands and 3 above 75 thousand) can affect only few taxpayers: among them, the vast majority are employees and pensioners. Therefore, at least through the channel of the increase in the top marginal rate, the actual impact of the reform we propose on growth is expected to be marginal.

<sup>20</sup> Such decrease in relation to income is zero for incomes over 45,000 euro (compared with 55,000 euro under the present tax schedule).

On the contrary, revised top tax rates allow for the average taxation of the top decile to be increased. The overall reform we propose allows for a reduction in effective marginal tax rates for the first part of the income distribution. Note that, with regard to the present tax system, the overall average increase in taxation is lower than that resulting from the measures contained in the 2011 fiscal package.

## **6. *Concluding Remarks***

This paper evaluates the economic effects of the tax measures introduced by the Italian government in 2011 as part of its fiscal consolidation strategy aimed at achieving a balanced budget by 2013. In order to limit any negative effects on economic growth, this tax reform, in keeping with recent suggestions made by economic scholars, included elements of fiscal devaluation, through a tax shift from labour income compensated by an increase in VAT and real estate taxation. By using a collection of microsimulation models, we show that this tax strategy has a strongly regressive impact on households' incomes, whereas the same reform has made limited resources available for growth-enhancing policies (through a reduction in corporate tax). We investigate whether these shortcomings could be overcome by adopting an alternative approach. We show that a reform with less regressive consequences for households could be achieved by shifting taxation from personal and corporate income tax towards indirect taxation. Our proposal allows the tax burden on firms to be reduced substantially, whilst at the same time permitting lower personal income tax rates for those households within the lower deciles of income distribution, since they are the ones most heavily penalized by the increase in indirect taxation.



## APPENDIX

### *The Main Tax Measures Provided by the 2011 Fiscal Package*

#### *Corporate Income Tax (IRES)*

The fiscal reform introduced the so-called “Aiuto alla Crescita Economica” (Aid to Economic Growth), which is designed to stimulate companies’ capitalization. This relief shares not only the acronym, but also the main characteristics, of the ACE suggested by the IFS (1991). Under both systems, a company would be entitled to deduct an allowance (ACE) for equity. This allowance is calculated by applying an imputation (or notional) rate to the equity invested in the company. Under this tax scheme, companies’ earnings are thus split into two components: 1) an imputed return on new investments financed by equity capital (called the “ordinary return”), which is calculated by applying a nominal interest rate to equity capital; 2) the residual taxable profit, namely profit less ordinary return. The ordinary return, which approximates the opportunity cost of new equity, is exempt from tax at the corporate level. Only the latter component is taxed at the corporate income tax rate.<sup>21</sup> The implementation of ACE is gradual in that it only benefits net worth increases recorded since 2010.

#### *Regional Business Tax (IRAP)*

Since the introduction of IRAP in 1998, several deductions and allowances had been introduced in the determination of IRAP tax base in order to reduce the burden of the

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<sup>21</sup> For further details of these rules, see: Bordignon et al. (1999, 2001) and Panteghini (2001).

tax on labor costs.<sup>22</sup> Following the same strategy, the 2011 tax package increased the lump sum amount which could be deducted for every female worker and for every worker below the age of 35. Moreover, the 2011 tax package allowed companies to deduct the share of IRAP pertaining to labor costs, net of other deductions, from corporate tax (IRES).

#### *Personal Income Tax (PIT)*

PIT<sup>23</sup> undergoes two principal modifications. Firstly, the cadastral incomes of unoccupied dwellings and holiday homes were exempted. Secondly, regional surtax tax rate was increased by 0.33%.

#### *Real Estate (Property) Tax (IMU)*

Property Tax was radically modified. Until the reform, dwellings other than a person's main residence, were subject to a tax rate of between 4 and 7 per thousand (6.1 per thousand on average), whilst the main residence was completely exempted (unless classified as a luxury home). The tax base was calculated by multiplying cadastral income by 100. The 2011 tax packages raised both the tax rate (by 0.76 per thousand) and the multiplier (160 instead of 100). Moreover, the cadastral income of a person's main residence was no longer exempt from tax: the tax rate became 4 per thousand, and a tax credit allowance was introduced.<sup>24</sup>

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<sup>22</sup> For example, contributions for compulsory industrial insurance, social security contributions for permanent employees, and those costs relating to apprentices, etc. are deductible from the IRAP tax.

<sup>23</sup> Technical details of the PIT system can be found in Pellegrino and Vernizzi (2010).

<sup>24</sup> The tax credit is 200 euro for each dwelling, and this increases by 50 euro for each child living at home (up to an overall limit of 600 euro).

### *Value Added Tax (VAT)*

Until September 2011, the standard and reduced rates of VAT in Italy have been 20, 10 and 4%. Since October 2011, the standard rate is raised to 21%. As of October 2012 (January 2014), the two higher rates are going to be raised still further respectively to 23 (23.5) and 12 (12.5) percent if alternative tax or expenditure measures with the same financial impact are not implemented.

### *Excise Duties (ED)*

Excise duties on transport fuels were increased considerably. Up to 2011, a duty of 0.583 euro per liter was applied to fuel, and 0.442 to diesel fuel. In 2012, these duties were increased to 0.7047 and 0.5932, respectively.

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**Table 1**  
**2011 Fiscal Packages - Main Tax Measures and Their Forecast Budgetary Impact**

	<b>2012</b>	<b>2013</b>	<b>2014</b>
VAT - 10% rate	1,162	4,648	5,810
VAT - 20% rate	6,354	12,707	14,826
ED	7,993	7,637	7,761
IMU	10,660	10,930	11,330
PIT – Surtaxes	2,215	2,215	2,215
PIT - Second homes	-1,600	-1,600	-1,600
ACE	-951	-1,446	-2,929
IRAP	-1,624	-3,611	-3,036
<b>Total taxes considered in the paper</b>	<b>24,209</b>	<b>31,480</b>	<b>34,377</b>
<b>Other revenues not considered</b>	<b>16,224</b>	<b>21,050</b>	<b>19,432</b>
<b>Total net increase in revenue</b>	<b>40,433</b>	<b>52,530</b>	<b>53,809</b>
<b>Total net cut in expenditure</b>	<b>8,478</b>	<b>23,217</b>	<b>27,518</b>
<b>Total</b>	<b>48,914</b>	<b>75,749</b>	<b>81,327</b>

*Note:* Figures are expressed in millions of euro.

*Source:* Italian government estimates regarding the 2011 fiscal packages.



**Table 2**  
**Impact of ACE on EMTR**

<b><math>\sigma</math> (portion of new investment financed through debt)</b>	<b>Pre-ACE regime (2009-2011)</b>	<b>ACE regime (from 2012)</b>
0.0	45.79	21.73
0.2	37.77	18.52
0.4	29.75	15.31
0.6	21.73	12.11
0.8	13.71	8.90
1.0	5.69	5.69

**Table 3:**  
**2011 Fiscal Package - Percentage Variation in the Tax Burden in Terms of Taxes on Households**

<b>Decile</b>	<b>ED</b>	<b>VAT 2014</b>	<b>IMU</b>	<b>PIT</b>	<b>Total</b>
1	0.8	3.0	1.2	0.3	5.2
2	0.5	1.8	0.6	0.2	3.0
3	0.4	1.7	0.5	0.3	2.9
4	0.5	1.7	0.6	0.3	2.9
5	0.4	1.5	0.5	0.3	2.8
6	0.4	1.4	0.5	0.2	2.5
7	0.4	1.4	0.5	0.2	2.6
8	0.4	1.4	0.6	0.2	2.5
9	0.3	1.3	0.6	0.0	2.3
10	0.2	0.9	0.6	-0.3	1.4
<b>Total</b>	<b>0.3</b>	<b>1.3</b>	<b>0.6</b>	<b>0.0</b>	<b>2.3</b>
<b>Revenue (billions of euro)</b>	<b>2.9</b>	<b>11.4</b>	<b>4.8</b>	<b>0.4</b>	<b>19.5</b>

*Source:* Our own processing of SHIW and ISTAT data.

**Table 4****Alternative Fiscal Package: Actual and Reformed Rate Schedules for PIT**

<b>Actual Schedule</b>		<b>Our Proposal</b>	
<b>Taxable income (euro)</b>	<b>Tax rate (%)</b>	<b>Taxable income (euro)</b>	<b>Tax rate (%)</b>
up to 15,000	23	up to 15,000	22
15,000 – 28,000	27	15,000 – 29,000	26
28,000 – 55,000	38	29,000 – 45,000	40
55,000 – 75,000	41	above 45,000	46
above 75,000	43		

*Source:* Ministry of Economy and Finance, and our own processing of available data.

**Table 5****Alternative Fiscal Package: Percentage Variation in the Tax Burden in Terms of Taxes on Households**

<b>Decile</b>	<b>ED</b>	<b>VAT</b>	<b>IMU</b>	<b>PIT</b>	<b>Total</b>
1	0.0	4.0	1.2	-5.3	-0.2
2	0.0	2.4	0.6	-0.4	2.5
3	0.0	2.2	0.5	0.2	2.9
4	0.0	2.2	0.6	-0.2	2.6
5	0.0	2.0	0.5	-0.5	2.0
6	0.0	1.8	0.5	-0.5	1.9
7	0.0	1.8	0.5	-0.6	1.7
8	0.0	1.8	0.6	-0.5	1.9
9	0.0	1.6	0.6	0.0	2.3
10	0.0	1.1	0.6	2.6	4.3
<b>Total</b>	<b>0.0</b>	<b>1.7</b>	<b>0.6</b>	<b>0.4</b>	<b>2.7</b>
<b>Revenue (mld euro)</b>	<b>0.0</b>	<b>14.5</b>	<b>4.8</b>	<b>3.2</b>	<b>22.5</b>

*Source:* Our own processing of SHIW and ISTAT data.

## **CORRESPONDING AUTHOR**

Simone Pellegrino

Department of Economics and Statistics - Università degli Studi di Torino

Corso Unione Sovietica 218 bis - 10134 Torino (Italy)

Phone: +39 011 670 6060

Fax: +39 011 670 6062

E-mail: [pellegrino@econ.unito.it](mailto:pellegrino@econ.unito.it)