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2010/10

UNIVERSITÀ DELL'INSUBRIA
FACOLTÀ DI ECONOMIA

http://eco.uninsubria.it

Printed in Italy in december 2010
Università degli Studi dell'Insubria
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# Tax Impact of International Financial Reporting Standards: Evidence from a Sample of Italian Companies

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**Abstract**

Does the adoption of IFRS (International Financial Reporting Standards) by E.U. countries result in a reduction or in an increase of the degree of alignment between tax and financial reporting? What are the potential tax effects if IFRS were used as the basis for corporate taxation? We address these issues in the context of the Italian accounting and taxation systems. Italy is one of the European countries with a closer linkage between financial and tax accounting and where there are relevant conceptual differences between the domestic accounting framework and the IFRS framework. As a consequence, the choice of extending IFRS to the annual accounts of certain types of companies has immediately implied a problem of mismatch between the new set of accounting standards and tax rules. After a three years parenthesis of tax neutrality, Finance Act 2008 established that the tax base of regional business tax (Irap) is exclusively driven by financial reporting, regardless of the set of accounting standards adopted, domestic Gaap or IFRS. The paper compares the recognition and measurement criteria proper to Italian Gaap and IFRS potentially responsible for a different Irap tax burden among taxpayers. We propose a framework to detect the expected effects that, in principle, might affect the measure of the specific items included in the Irap base; afterwards, using a sample of Italian listed companies, we empirically test the departure from the tax neutrality principle.

**JEL Classification**: H20; H25; M41.

**Keywords**: Taxation; Accounting; International Financial Reporting Standards (IFRS); Italy.

## 1. Introduction

There are obvious advantages of linking the tax base to accounting results. The reduction of compliance costs and the simplification of the tax system are the most convincing arguments in favour of a close alignment between taxable income and income per accounts. However, the desirability of book and tax accounts conformity needs to be evaluated in the light of the fact that the nature of profit and its definition underlying the set of accounting standards satisfy the tax requirements by representing the current ability to pay (for a discussion see, for instance, Holmes, 2001; James 2002; Desai, 2003; Alley and Simon, 2005; Shaviro, 2009). The debate on the appropriateness of accounting standards for tax purposes has gained a new appeal with the increasing relevance of IFRS (International Financial Reporting Standards) in the domestic accounting systems and with the proposal of the European Commission (2003) to use them as a starting point to compute a common consolidated tax base for companies' EU-wide activities.

The discussion on whether the IFRS are suitable as a basis for taxation has been focused on the degree of compatibility between their framework and the central principles commonly accepted for tax purposes. In particular, there is a general agreement that there are at least three aspects of IFRS that make controversial their concrete application in the modern tax systems: the balance sheet approach, the use of fair value accounting and the substance over form principle (see, Nobes, 2003; Oestreicher and Spengel, 2007; Shön, 2004; Jacobs *et al.*, 2005; Gammie *et al.*, 2005; Eberhartinger and Klostermann, 2007; Lang *et al.*, 2008). These fundamental concepts serve the scope of IFRS financial statements, that is to provide financial information primarily reflecting the ability of a company to generate cash flows so that investors can make forward looking economic decisions.

The investor oriented nature of IFRS clearly results from the focus given to the financial position of a company, represented in the balance-sheet, rather than to the historical performance shown by the income statement. In contrast, tax authorities require the tax base to be computed by with reference to the past results, generating a tension between tax and accounting purposes (Freedman, 2008).

Concerning the use of fair value, Gammie *et al.* (2005) remark that, in principle, the accrued income, resulting from the fair value accounting, is a concept close to the "true" economic profit upon which tax should be paid; however, in practice, the fair value accounting conflict with other tax principles, such as ability to pay, enforceability and tax revenues stability. In fact, including or deducting any unrealized gains or losses may imply, for the taxpayer, liquidity constraints to pay taxes and, for tax authorities, a fall in the ability to raise revenues. Furthermore, in a world with imperfect capital markets, where it is not possible to evaluate accrued gains and losses without a certain degree of subjectivity, taxing accrued income once again conflicts with the need of certainty and gives a boost to tax avoidance. Finally, fair value accounting increases the volatility of profits and, hence, does not match with the need to rise revenues with sufficient stability over the fiscal years (Freedman, 2004).

The substance over form principle is also problematic. As a general matter, the design of the modern tax systems is based on the legal form of transactions and, only with the aim to contrast avoidance attitude, specific exceptions are introduced (i.e. thin capitalisation rules). In fact, the substance over form approach prevents potential manipulations of the contracts in order to get the more convenient fiscal qualification, since it requires that transactions have to be accounted for in accordance with their economic nature, instead of their legal form. However, in practice, a certain degree of discretion remains in deciding whether a transaction meets the conditions to be qualified in line with IFRS rules.

The tension between the principles underlying IFRS and those of taxation has become a reality, first of all, in EU countries having a tradition of dependence of taxable profits on accounting profits and where IFRS have been required or permitted for the annual accounts. Using the well known classification proposed by Hoogendoorn (1996), two different types of general relationship between financial reporting and taxation can be distinguished: "independence" and "dependence" structure. The first structure implies that the computation of taxable base and the measurement of business income follow two independent and detailed sets of rules; the second means that either financial accounting follows tax rules or financial accounting drives the determination of taxable base. In practice, in most European countries, income per accounts is the base for the calculation of corporate taxation but specific and limited adjustments are required by tax law either for policy reasons or when accounting rules are not appropriate for tax purposes. This form of the relationship between accounting and taxation is referred to as "quasi-dependent approach".

Although the above relationships keep evolving, the quasi-dependent approach prevails within EU (Lamb *et al.* 1998; Nobes and Schwencke, 2006; Spengel, 2007), so that the shift to a new set of accounting standards is expected to have effects on the tax systems, especially in those countries in which the domestic Gaap, traditionally driving the tax computations, are not compliant with IFRS. Otherwise, where tax and financial accounting are independent, as in Anglo-Saxon countries, the adoption of IFRS for the annual accounts does not directly affect the computation of the tax base, but it could indirectly occur, if tax authorities decide to accept and import some concepts proper to IFRS within tax law. Finally, regardless the current linkage, the recent publication of the new standard for small and medium enterprises[1] ("IFRS light") that allows these companies to produce internationally comparable financial information as an alternative to the costly full IFRS, represents an important step in the harmonization of financial reporting and will necessary lead to a re-examination of the relationship between tax and financial accounting.

In this scenario, two important questions arise: does the adoption of IFRS by the EU countries result in a reduction or in an increase of the degree of alignment between tax and accounting profits? What are the potential tax effects if IFRS were used as the basis for corporate taxation?

The paper addresses these issues in the context of the Italian accounting and taxation systems. Italy represents a very interesting case study, as it is one of the European countries with a closer linkage between financial and tax accounting, where there are relevant conceptual differences between the domestic accounting framework and the IFRS framework. As a consequence, the choice of the Italian Legislator to extend IFRS to the annual accounts of certain types of companies and to enhance the principle of dependence of taxable profits on accounting profits for the computation of regional business tax (Irap), gives rise to an important question of tax neutrality among companies using Italian Gaap and those adopting IFRS.

The main aim of the paper is to compare the recognition and measurement criteria proper to Italian Gaap and to IFRS potentially responsible to a different Irap tax burden among taxpayers. We approach this issue by proposing a framework to detect the expected effects that, in principle, might affect the measure of the specific items included in Irap base; afterwards, using a sample of Italian listed companies, we empirically test the degree of the potential departure from the tax neutrality principle when both sets of accounting standards are applied.

[1] IASB has published, on July 9th 2009 an International Financial Reporting Standard designed for use by SMEs. In brief, topics considered not relevant for SMEs have been omitted by the standard and, where IFRS allow alternative accounting treatments, IFRS for SMEs only allow the easier one.

The paper is organized as follows. Section 2 discusses the choice of the Italian legislator to extend IFRS to annual accounts for listed companies in the light of the long-established relationship between tax and financial reporting; Section 3 presents the research design; the empirical analysis and the discussion of the results will be discussed in Section 4;  Section 5 concludes.

## 2. The Relationship between Accounting and Taxation in Italy

In Italy, the link between accounting and taxation has a long tradition and dates back to the general tax reform of the 1973-1974. The reform set a statutory and direct relationship between financial and tax accounting, involving a "quasi-dependent approach". In fact, the derivation principle codified in the Italian Tax Code, assumes that taxable income is computed on the basis of the accounting results, with specific adjustments required by tax law when accounting criteria are not suitable for tax purposes[2]. In this context of dependence,  the choice of the Italian Legislator to use the options in Article 5 of the "Ias Regulation", extending IFRS to the annual accounts of listed companies and other subjects has entailed immediately a demand of coordination between IFRS and tax rules. In order to safeguard equal tax treatment between companies, despite the system of accounting standards adopted and to preserve the archetype of financial statement under Italian Gaap as basis for taxation, the legislator established the tax neutrality of IFRS[3], both for corporate tax (Ires) and regional business tax (Irap).

The neutrality of IFRS imposed a "two steps approach": first, IFRS adopters had to convert their financial reporting according to Italian Gaap and, then, they had to make all the adjustments required by tax law in order to compute taxable income. On one hand, the fundamental differences between IFRS and Italian Gaap concepts and, hence, between IFRS principle and tax rules, significantly increased companies' compliance costs, as fiscal adjustments became numerous and complex; on the other hand, the absence of a detailed fiscal guideline gave rise to several uncertainties about the tax

[2] The Italian Tax Code (Testo Unico Imposte sui Redditi, TUIR) sets the derivation principle in Article 83. Over time, the derivation principle has taken varying forms, see among others, Rocchi, 1996 and Zambon, 2002.

[3] The principle of neutrality is not endorsed in the text of the Italian Tax Code but only mentioned in the Explanatory Relation to the legislative decree 38/2005.

treatment of not explicitly codified cases[4], overloading tax authorities with many interpretation questions. As it soon became evident, the full neutrality between IFRS and non IFRS companies was impossible to achieve: whereas IFRS values had to be adjusted according to tax rules, it was immediately clear that, over the years, fiscal values of assets and liabilities would become too divergent, distorting the ratio of the derivation principle; whereas tax rules were silent, tax authorities had to decide in which cases IFRS values could have fiscal relevance, opening some holes in the neutrality principle.

The above mentioned matters have highlighted the inadequacy of the Italian choice and the need of modelling in detail the linkage between IFRS and taxation, thus, after a three years parenthesis of tax neutrality, Finance Act 2008 has assigned full fiscal relevance to financial accounting values for regional business tax and has recognized some relevant aspects of IFRS for corporate income tax. The result has been an enhancement of the derivation principle.

First, concerning Irap, the Italian legislator removes the link to corporate income tax rules, in force since 1997, and migrates to a "pure dependent approach": tax base is now exclusively driven by financial reporting, regardless of the set of accounting standards adopted. Since fiscal adjustments are no more necessary, tax compliance significantly decreases for all taxpayers. However, companies complying with IFRS still suffer an additional charge because they should reclassify their financial statement in order to determine the Irap tax base taking into account the same items included in the income statement prepared under Italian Gaap. As already mentioned, due to the gap between IFRS and Italian Gaap, the dependent approach involves a different Irap tax base for companies depending on the set of accounting used.

Second, for corporate income tax, a specific rule recognizes fiscal relevance to IFRS qualification, timing imputation and classification criteria. The fiscal limits for depreciations, provisions and valuations are still in force and the fiscal criteria

4 In fact, only limited corrections were made to the Italian Tax Code in order to sterilize specific differences between IFRS criteria and Italian Gaap For example, start-up costs, which cannot be capitalized according to IFRS, are deductible in five tax periods; in the case of financial leases, the lease holder is entitled to deduct the rents Italian Gaap allow the capitalization of start-up costs and their depreciation within five accounting periods and do not permit finance lease to be accounted for by adopting financial accounting.

concerning specific items (for example, dividends and management fees) keep prevailing on the accounting ones[5].

Third, for all taxpayers and for both corporate and regional tax, Italian legislator abandons the extra accounting approach so that costs are deductible only if imputed in the income statement[6]. At the same time, accelerated depreciations, that was the main cause of extra accounting adjustments, were repealed.

From the taxpayers point of view, the alignment between tax and financial reporting for the computation of Irap tax base, where the tax rules are exactly the same as the financial reporting rules, set companies free from compliance costs; to the extent that business income is, also for IFRS adopters, the starting point for the calculation of Ires tax base, the number of tax adjustments sensibly decreases with a relief in terms of administrative efforts. On the other hand, the fiscal relevance gained by IFRS designs a tax system where different tax rules are in force for different taxpayers and different corporate taxes, as shown in Table 1.

**Table 1. The drivers of corporate taxation after Finance Act 2008**

| **Subjects/Taxes** | **Corporate tax (Ires)** | **Regional business tax (Irap)** |
|---|---|---|
| **IFRS subjects** | Qualification, timing imputation and classification criteria according to IFRS. Valuation criteria according to Italian Tax Code | IFRS values, but Italian Gaap classification |
| **Italian Gaap subjects** | Italian Tax Code | Italian Gaap values |

[5] The easier example of the acceptance of the IFRS classification, qualification and temporal imputation criteria for tax purposes is the treatment of lease arrangements. Notwithstanding the form of the contract, for leases that meet the conditions to be qualified as a finance lease under IFRS 17, depreciation expenses and interest costs are now deductible, instead of contingent rent payable, but the amount of these deductions is still subordinated to the current fiscal limits.

[6] For IFRS subjects, the amounts recognised directly in net equity, if fiscal relevant, are still considered to be imputed in the income statement.

## 3. Research Design

The previous analysis clearly shows that the coexistence, in the Italian scene, of two different sets of accounting standards, both relevant for taxation, gives rise to an important question of tax neutrality among companies using Italian Gaap and those adopting IFRS. This is true particularly in the case of the regional business tax, where tax rules completely adhere to the accounting principles.

In this section we develop a framework to compare how the divergences in the recognition and measurement criteria proper to each set of accounting standards might cause changes in the computation of Irap base and hence might lead to different concept of ability to pay.

As a matter of fact, the full alignment between Irap base and accounting results implies the acceptance of the principles underlying the two different sets of accounting standards for tax purposes. In this respect, financial reporting prepared under Italian Gaap is "creditor protection oriented", with great emphasis on the use of the prudence principle in presenting a true and fair view of a company's financial position and result of operations. Within this accounting approach, unrealized gains cannot be included in the measurement of business income and the valuation criteria are closely related to historical costs, in accordance with the notion of realized profits commonly accepted for tax design. The move towards the fair value accounting in IFRS assumes the accrued income appropriate for defining companies' ability to pay, irrespective of some basic principles of taxation, as the enforceability of the tax system and the certainty and stability in rise revenues. Furthermore, the substance over form principle adds discretion in qualifying transactions according to their economic nature[7].

Comparing the recognition and measurement criteria proper to Italian Gaap and IFRS potentially responsible to a different tax burden among taxpayers we isolate the effects that, in principle, might affect the measure of the specific items included in Irap base.

The regional business tax, introduced in 1998, is a flat-rate tax with a base defined as the accounting difference between the value of production and the cost of production, by excluding the deduction of labour cost, depreciation of fixed assets other

[7] Among the wide literature on the comparison between Italian Gaap and IFRS principles, see Cristea and Saccon (2008).

than amortization, write-down of receivables, provisions for risks and other provisions[8]. Thus, the Irap base basically approximates the company's net value added[9].

As evident, Irap base does not include the accounting items more affected by the fair value accounting, as financial instruments. In this way, one of the main sources of divergence between the two set of accounting standards adopted is, *a priori*, excluded. Indeed, fair value might impact on Irap base through the measurement of tangible and intangible assets, since IFRS allow companies to adopt the revaluation model (based on the fair value) as alternative to the historical cost. In practice, however, Italian companies are still anchored to the historical costs and rarely opt for the revaluation model. This fact confirms that the implementation of IFRS, that are a set of accounting standards developed separately from the domestic environments, is, in any case, influenced by national accounting traditions (EU, 2008). More important is the impact of the substance over form principle. In the Italian Civil Code, this principle is stated among the basic assumptions, even if it is not applied to all circumstances and it is relatively constrained. In particular, the main deviation concerns the accounting for leases, that is a relevant topic for the computation of the Irap base .

Table 2 reports the expected effects that, in principle, might affect the measure of the specific items included in the Irap base moving from Italian Gaap requirements to IFRS ones. These effects might, as a consequence, lead to a different tax burden for companies adopting a different set of accounting standards. The technical details on how the signs have been assigned are reported in Appendix.

Referring to the single fiscal year, Table 2 signs the more/faster recognition (+) or the less/slower recognition (-) of Irap tax base when IFRS are applied; if substantial changes are not expected Table 2 scores (NC); finally, when the expected effect might result in an increase or in a decrease of the tax base, Table 2 reports (+/-).

[8] Starting from fiscal year 2008, the values relevant for the computation of the taxable basis are those shown in the financial reporting, notwithstanding the set of accounting standards adopted, but it is stated that, for all taxpayers, the items consist in Irap tax base refer to those detailed in the income statement prepared under Italian accounting law. IFRS adopters are charged to reclassify their costs and revenues according to the P&L format provided for by the Italian Civil Code.

[9] The fact that Irap includes interest payments in the determination of its base makes this tax similar to a comprehensive business income tax, as first proposed for the US by the Treasury Department (1992). An important difference between a pure model of comprehensive business income taxation and Irap, however, is that labour costs are deductible in the case of the former, but not of the latter (for a thorough discussion on Irap, see Manzo and Monteduro 2010).

**Table 2. From Italian Gaap to IFRS: expected impact on regional business tax base**

| Topics of tax base | Comparison between Italian Gaap and IFRS treatment | Expected effect of adopting IFRS on Irap tax base (*) |
|---|---|---|
| *Positive components of tax base (value of production)* | | |
| Revenues | - sale of goods<br>- rendering of services | -<br>+ |
| Inventories | cost formulas | + |
| Construction contracts | percentage-of-completion method | + |
| Capitalization of interest costs | recognition of borrowing costs | + |
| *Negative components of tax base (costs of production)* | | |
| Expenditure on research and on advertising, and start up costs | recognition as an expense | - |
| Financial leasing | substance over form principle | - |
| Tangible assets | | |
| • Measurement | revaluation model | - |
| • Depreciation | component approach | -/+ |
| Intangible assets | | |
| • Measurement | | - |
| • Amortization | intangible assets with indefinite useful life are not amortized | + |
| Goodwill | not amortized but subject to impairment test | + |
| *Not deductible costs* | | |
| Trade receivables | | NC |
| Expenses for provision | | - |
| Labour costs | | |
| • Stock option pays | | + |
| • Defined benefit plans (TFR) | | -/+ |

(*) + = more or faster recognition of tax base components
- = less or slower recognition of tax base components
NC = no substantial change

It should be noted that an issue of time imputation of revenues and costs over the fiscal years, with a consequent effect of timing differences in tax burden, emerges from Table 2. For example, under IFRS research costs are recognized as an expense in the year they occur, while under Italian Gaap they are recognized as an asset and depreciated over the estimated useful life. IFRS companies immediately benefit of a reduction in Irap base (-) but, in the subsequent fiscal years they will suffer an increase in tax base (+) due to the lack of the depreciation charges. Our analysis takes into account the fact that, from the taxpayer point of view, to postpone or anticipate tax payments cause a change in discounted tax burden.

The results in Table 2 suggest several interesting remarks.

First, all topics (except trade receivables) are influenced by the differences in the recognition and measurement criteria proper to the two sets of accounting standards (see details in Appendix). Indeed, the computation of the Irap base is expected to diverge between IFRS subjects and companies under Italian Gaap, with a consequent potential violation of the principle of the equal treatment among taxpayers.

Second, the results of our qualitative analysis do not give a clear evidence that the adoption of IFRS will entail an increase or a decrease in Irap base. This is due to the fact that the frequency of positive and negative impacts is substantially the same (6 negative signs against 7 positive ones). Evidently, the overall tax effect depends on the weight of each items on the computation of Irap base and on the significance of the differences between the recognition and measurement criteria underlying the two sets of accounting standards adopted. As an example, under IFRS the stock option pays are qualified as a component of labour cost on the date they are granted to employees, while Italian Gaap do not consider this item until a liability rises; the differences in accounting treatment causes a relevant increase of Irap base for IFRS subjects, but, given the small diffusion of this instrument in the Italian context, a marginal impact is expected.

Third, some effects revealed by Table 2 may, in practice, not occur if IFRS subjects choose, between alternative valuation methods, the option closer to Italian Gaap requirements. For example, concerning the measurement of tangible and intangible fixed assets, IFRS allow the revaluation model as an alternative to the cost model, being the latter the only one permitted by Italian Gaap. Hence, the difference would be nil if IFRS subjects used the cost model. In a similar way, it is reasonable to assume that the valuation of construction contracts does not cause a relevant divergence on Irap tax base, since Italian accounting practice usually adopts, between the completed contract method and the percentage of completion method, the latter one, the same as that prescribed by IFRS.

Finally, it is reasonable to assume that some accounting topics, such as research and advertising costs, goodwill and intangible assets with indefinite useful life, will largely contribute to the divergence in the measurement of Irap base. This is due either to the divergences in the accounting treatment under Italian Gaap and IFRS or to the relative weight of these items in the financial statements.

Our investigation highlights important consequences of the IFRS being used as a basis for calculating Irap. However the effective change in Irap tax burden can be only estimated analyzing Italian companies' financial statements in order to capture the structure of costs and revenues qualifying the income statements and the role played by the accounting practice in implementing IFRS.

## 4. Tax Impact of IFRS, Evidence from a Sample of Italian Companies

Using a sample of Italian listed companies, the aim of the following section is to empirically compare the IRAP base for companies preparing their financial reporting under Italian Gaap and for those adopting IFRS. The empirical design and the structure of the sample will be described; afterwards the results of the empirical analysis will be discussed.

### 4.1 Empirical Design

With the introduction of IFRS in 2005, Italian preparers have been shared in three broad categories: listed companies and other special types (e.g. banks and financial institutions) that are required to adopt IFRS for the annual accounts; non listed companies presenting consolidated accounts in accordance with IFRS and all subsidiaries in the IFRS groups that are permitted to adopt IFRS for their annual accounts and companies not covered in the first two categories that are required to use Italian Gaap.

All companies adopting the international accounting standards were obliged to explain how the transition from Italian Gaap to IFRS affected their financial position, financial performance and cash flow through the reconciliation statement required by IFRS 1.

The reconciliation statement of a sample of Italian listed companies has been analyzed in order to compute, for each company, either the theoretical Irap base using Italian Gaap or the theoretical Irap base adopting IFRS. The tax base has been determined adding non deductible items (labour costs, asset devaluation, provisions for bad credit and other provisions) to the gross operating income (used as a proxy of the accounting difference between the value of production and the cost of production). In this way, referring to the financial statements values, we are able to estimate the change in tax base depending on the differences in the recognition and measurement criteria underlying the two sets of accounting standards. We then compare the empirical results with the expected effects shown in Table 2.

### 4.2 Structure of the Sample

Our sample includes 176 industrial and services companies listed on Italian Stock Exchange (Borsa Italiana) as at 31 December 2006. Originally, the sample consisted in 192 companies; among these, we excluded companies whose activity is markedly different from the others (i.e. soccer teams), companies that incurred in mergers and acquisitions in the year of the transition and companies not exhibiting sufficiently detailed data for the purpose of the analysis. Data were collected from AIDA data set[10] (Bureau van Dick), from the Italian Stock Exchange (Borsa Italiana) website and from the 'Investor relations' section of the companies' websites.

Table 3 reports the frequency of companies by sectors, the average turnover as a measure of the company size and the average gross operating income as a roughly proxy of Irap base.

**Table 3. Structure of the sample**

| Sector | N° of companies | Average turnover[1] | Average gross operat. income[1] |
|---|---|---|---|
| All | 176 | 685.708 | 61.455 |
| Manufacturing | 95 | 849.178 | 44.115 |
| Trade and services | 57 | 483.453 | 85.649 |
| Utilities | 15 | 641.843 | 91.108 |
| Constructions | 8 | 313.685 | 41.827 |
| Primary | 1 | 5.191 | 74 |

(1) Calculated in accordance with Italian Gaap figures, data in €/1000.

[10] The AIDA data set, provided by Bureau van Dijk, contains the annual accounts of Italian companies as deposited at the Chambers of Commerce.

### 4.3 Analysis of the Results

The average amounts of the simulated Irap bases, calculated using both Italian Gaap and IFRS figures, for the companies in the sample are shown in Table 4. Two breakdowns are represented. From a dimensional perspective, we calculate the tax bases for companies with above and below the median turnover, in order to explore whether the effects of the transition may change depending on the differences in size; afterwards we show a breakdown by sector, considering separately companies in the manufacturing, trade and services, utilities, constructions and primary sectors.

**Table 4. Differences in simulated Irap base under Italian Gaap and IFRS**

| | IRAP base[1] Italian Gaap | IRAP base[1] IFRS | (Base $_{IFRS}$ – Base $_{ITA\text{-}Gaap}$) / Base $_{ITA\text{-}Gaap}$ |
|---|---|---|---|
| All companies | 121,534 | 134,294 | 10,50% |
| ***Dimensional breakdown*** | | | |
| Below median turnover | 6,892 | 10,812 | 56.87% |
| Above median turnover | 237,495 | 259,195 | 9,14% |
| ***Sector breakdown*** | | | |
| Manufacturing | 92,596 | 111,755 | 20.69% |
| Trade and services | 165,781 | 169,049 | 1.97% |
| Utilities | 151,041 | 156,638 | 3,71% |
| Constructions | 113,134 | 131,662 | 16.38% |
| Primary | 2,721 | 2,638 | -3.05% |

(1) €/1000.

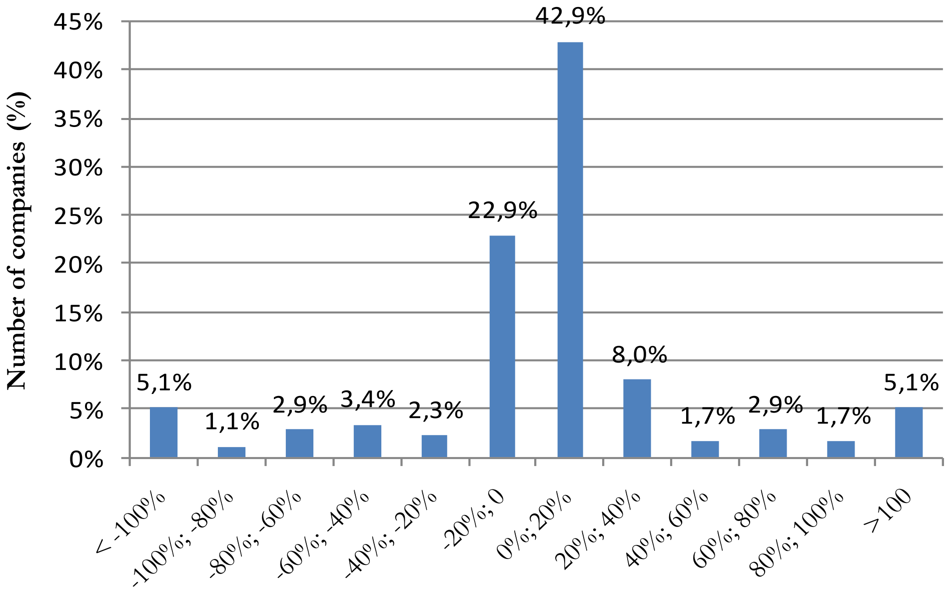
As expected from our qualitative analysis, the transition to IFRS influences in a relevant way the amount of Irap base of the entire sample. Moreover, the empirical analysis shows clearly that a marked positive effect prevails, signaling an average increase of about 11 per cent. This is an important and original result that might condition the companies' choice to adopt IFRS for annual account and hence it might introduce a distortion in the Italian tax system. Indeed, the empirical evidence shows, with the exception of primary sector where we have only one company, a rise in Irap base when companies move from Italian Gaap to International Financial Accounting Standards. Being Irap a flat-rate tax, the result means a proportional increase in Irap burden.

In detail, the tax impact is relatively higher in smaller companies: below median turnover companies exhibit a 56,9% increase in comparison to the 9,1% for the companies with turnover above the median level.

By observing the sector breakdown, we notice that companies in the manufacturing and construction sector are, by far, the most affected by the transition: the average Irap base rises for the former of about 20,7% and for the latter of about 16,5%. The difference in Irap base is substantially negligible for companies in the trade and services sector (+1,9%). Finally, it should be observed that the primary sector is the only one registering a negative impact (-3,1%); as already remarked, this result can be considered scarcely significant since only one company in the sample belongs to this sector.

More detailed information on the tax impact from the move towards IFRS can be derived by analyzing the distribution of the sample by range of variation of Irap base, as shown in Figure 1.

**Figure 1. Distribution of companies by range of variation in the tax base**




First of all, about a 62% of the companies in the sample suffer an increase in the Irap base when the tax is calculated in accordance with IFRS figures, even if for the great majority of them the positive variation in the tax base is limited to an amount between 0 and 20% ; differences between 20% and 40% are signaled for 8% of the companies;

around an 11% of the companies in the sample exhibit a rise in the Irap base of more than 40%, half of which register an overall increase greater than 100%.

The remaining 38% of the companies show a reduction in the Irap base while passing from Italian Gaap to IFRS values. For 23 per cent of them this drop is not so marked (between 0 and -20%), but for 14,9% of them it is quite strong (more than 20%). A 5,1% of the entire sample register a decrease in the Irap base of more than 100%.

The empirical analysis allow us to explore how the accounting items contribute to generate the estimated gap between the Irap base under Italian Gaap and that calculated on IFRS values. Following the definition of Irap base, we first compare the gross operating income and its main components, then we analyze the non deductible items (labour costs, provisions for risk and other provisions, write down of trade receivables and depreciation of fixed assets other than amortization). The evidences of the passage to IFRS on Irap base are reported in Table 5.

**Table 5. Variations in the tax base: component analysis**

| | **Gross operating income** | **Non deductible costs** | of which | *Write down of fixed assets* | *Write down of trade receivables* | *Expences for provisions* | *Labour cost* | of which | *Stock option pays* | *Defined benefit plans (TFR)* | **Delta tax base** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| All companies | **+5.8%** | **+4.7%** | | +0.5% | +0.8% | 1% | +2.4% | | +0.4% | -0.4% | **+10.5%** |
| **Dimensional breakdown** | | | | | | | | | | | |
| Below median turnover | **+54.6%** | **+2.3%** | | -2% | +0.1% | -0.6% | +4.8% | | +5.9% | -0.9% | **+56.9** |
| Above median turnover | **+9.1%** | **+4.7%** | | +0.5% | +0.8% | +1.1% | +2.3% | | +0.2% | -0.4% | **+16.1%** |
| **Sector breakdown** | | | | | | | | | | | |
| Manufacturing | **+15.5%** | **+5.2%** | | +0.1% | -0.2% | 3% | +2.3% | | +0.6% | -0.3% | **+20.7%** |
| Trade and services | **-3.9%** | **+5.8%** | | +0.8% | +1.9% | -0.2% | +3.3% | | +0.2% | -0.4% | **+1.9%** |
| Utilities | **+6.3%** | **-2.6%** | | 1.1% | 0% | -2% | -1.7% | | +0.1% | -0.6% | **+3.7%** |
| Contructions | **12%** | **+4.4%** | | 0% | 0% | +1.9% | +2.5% | | +1.1% | -0.4% | **+16.4%** |
| Primary | **-3.1%** | **0%** | | 0% | 0% | 0% | 0% | | 0% | 0% | **-3.1%** |

The results show that, on average, considering the whole sample, the gross operating income under IFRS is 5,8% higher than the one calculated in accordance with Italian Gaap.

The increase is more relevant in small companies (+54,6%) as compared with large ones (+9,1%). Among the considered sectors, manufacturing and construction remain the most affected by the change in gross operating income (+15,5% and 12% respectively); a positive effect is registered also by companies in the utilities sector; the opposite sign is observed as concerns companies in the trade and services sector (-3,9%) and in the primary sector (-3,1%).

The analysis of the financial statements of the 176 companies reveals that there are two accounting arena mainly responsible of the above divergences in gross operating income: the amortization of intangible assets and goodwill and the depreciation of tangible assets (the non deductible items will be separately discussed). On average, moving from Italian Gaap to IFRS, the amount of the amortization of intangible assets and goodwill decrease in a relevant way (about 35%), causing a consequent increase of Irap base. This effect is relatively higher for companies in the utilities and construction sectors. According to the data of the reconciliation statements, this difference is almost entirely due to the fact that, differently from Italian Gaap, IFRS do not permit the amortization of intangible with indefinite useful life and goodwill, but require an impairment test. There is no evidence, in our data, that the impairment offsets the lack of amortization charge, so that the IFRS accounting treatment brings to a faster recognition of the tax burden. For tangible assets, the fair value accounting plays a significant role: most companies of the sample used the option to revalue their tangible assets to fair value (according to IFRS 1), as a consequence depreciation charges are higher than those determined under Italian Gaap. The reduction in the tax base, that we estimate at the date of the transition, is likely to be a temporary effect, to the extent that Italian companies continue to apply the cost model, as reported in the note of accounts. For all companies in the sample, the increase in depreciation charges is about 2,4%, with two sectors (manufacturing and utilities) that reach a 10%. Even if these percentages seem to be rather low, it should be taken into account that the weight of this item on Irap base is remarkable (22%).

For what concerns the non deductible accounting items, the labour cost is the one that signals the most relevant difference (+2,4%). The empirical results add important information to our qualitative analysis by confirming the positive impact of stock option pays (+0,4%) and by assigning a negative impact (-0,4%) to the effect of defined benefit plans (TFR). In fact, whereas the inclusion of stock option in the labour cost obviously increases the tax base for IFRS subjects, the actuarial method applied under IFRS for evaluating the defined benefit plans (TFR) did not allow us to appreciate a priori its impact on the transition to IFRS (see Table 2 and Appendix).

The figures in Table 5 underline that the shift to IFRS causes an increase of about 4,8% the in the tax base due to the different accounting treatment of labour costs for small companies, as compared to the + 2,3% scored by larger ones. Clustering companies by sector, the effect is remarked and positive for companies in the trade and services (+3,3%), constructions (+2,5%) and manufacturing (+2,3) sectors. Vice versa, labour costs calculated in accordance with IFRS values are lower than the ones calculated using Italian Gaap for utilities sector (-1,2%).

Provisions for risks and other provisions are relevant in the sector of utilities, where they decrease the Irap base of a 2%, and in the manufacturing and constructions sectors (+3% and +1,9%). They cause more differences in tax base for larger (+1,1%) than for smaller companies (where the effect on the tax base is slightly negative, -0,6%).

On average, a negligible impact on Irap base is found for the write down of fixed assets (+0,5%). The sign is negative for small companies (-2%) and positive for companies above the median turnover (+0,5%) , even if as compared to a slight and positive effects for larger ones (+0,5%); from a sector perspective, it has effects only as concerns utilities (+1,1%) and trade and services (+0,8%) sectors.

In line with the result reported in Table 2, no substantial differences arise from the evaluation of the write down of trade receivables, with the only exception in the trade and services sector (+1,9%).

## 6. Concluding Remarks

Our study estimated the gap between Irap base calculated according to Italian Gaap values and that calculated according to IFRS values, providing a first evidence of the degree of the departure from the neutrality principle in act in the Italian tax system. This fact may be of particular interest for those companies that are permitted, but not required, to adopt IFRS, because the effect on the Irap base might negatively affect companies will to undertake a transition process. The results reflect a simplified scenario, where a full conformity between financial and tax accounting has been assumed, even though the tax rules at present in force in Italy introduce some correctives to partially remove the tax implications of the divergence in the recognition and measurement criteria above remarked. Notwithstanding, our findings highlight the consequences that are likely to occur if the full convergence between accounting and taxation will become a reality.

More particularly, the first part of the paper discussed a simple framework allowing a comparison of the recognition and measurement criteria proper to each set of accounting standards that might affect the accounting items for the computation of Irap base. The move from Italian Gaap to IFRS occurs departing from some commonly accepted principles for the design and the management of the modern tax systems, as the prevalence of the form over the substance, the concept of realized profits, certainty and stability of tax revenues. As a result, two different concepts of ability to pay might be involved in the Italian tax system. More precisely, we found that, in principle, Irap base is expected to diverge between IFRS subjects and companies under Italian Gaap, with a consequent potential violation of the principle of the equal treatment among taxpayers. However, the theoretical results did not give a clear evidence that the adoption of IFRS will entail an increase or will cause a decrease in Irap base.

In the second part of the paper, we empirically tested the assumptions provided by our qualitative analysis by estimating the Irap base using IFRS and Italian Gaap figures on a sample of Italian listed companies.

Our findings confirm that the shift to IFRS has produced a quite relevant impact on the amount of Irap base for the entire sample and they signal an average increase of the tax base of about 11 per cent. This is an important and original result that, *ceteris paribus*, might influence the companies' choice to adopt IFRS for the annual accounts.

The empirical study further reveals that the amortization of intangible assets and goodwill, the depreciation of tangible assets and the labour cost are the accounting arenas mainly responsible for the divergence in Irap base. In particular, on average, the amount of the amortization of intangible assets and goodwill decreases in a relevant way (about 35%), causing a consequent increase of Irap base. The results show that this gap is largely due to the fact that, differently from Italian Gaap, IFRS do not permit the amortization of intangible with indefinite useful life and goodwill, but require the impairment test. There is no evidence, in our data, that the impairment offsets the lack of amortization charge, so that the IFRS accounting treatment brings to a faster recognition of the tax burden. For tangible assets, the fair value accounting plays a significant role: most companies of the sample used the option of revalue their tangible assets to fair value (according to IFRS 1), as a consequence depreciation charges are higher than those determined under Italian Gaap (+2,4%). The reduction in tax base, that we estimate at the date of the transition, is likely to be a temporary effect, to the extent that Italian companies continue to apply the cost model, as reported in the note of accounts. Finally, the labour cost generates a positive effect of about 2,4%. Our qualitative analysis suggested that the inclusion of stock option in the labour cost obviously would increase the tax base for IFRS subjects, while the actuarial method applied under IFRS for evaluating the defined benefit plans (TFR) did not allow us to appreciate a priori the sign of its impact on the tax base. The results indicate a positive impact of the stock option pays (+0,4%) and assign a negative impact (-0,4%) to the effect of defined benefit plans (TFR).

## Appendix I- Technical explanation of the signs in Table 2

In the Appendix we consider, as accounting references, the Italian Civil Code (C.C.) and the accounting standards issued by the Italian standard setter "Organismo Italiano di Contabilità" (OIC); concerning IFRS, we refer to the standards endorsed by the E.U..

*Sales of goods*

Different from Italian Gaap, under IFRS when the selling price of the product includes an identifiable amount for subsequent services that amount shall be separately treated and recognized by reference to the stage of completion. As a consequence we expected an reduction of taxable base (-) due to a slower recognition of revenues.

*Rendering of services*

Moving from Italian Gaap to IFRS companies shall recognize revenues of the rendering of services by reference to the stage of completion instead of when the performance of services is ultimate: an increase of taxable base (+) is predictable due to a faster recognition of revenues.

*Inventories*

Under IFRS the LIFO method is no more admitted, so that,  when prices are increasing, a positive impact on tax base is expected (+).

*Construction contracts*

Under IFRS construction contracts shall be measured by reference to the percentage of completion method, whereas companies under Italian Gaap are allow to choose between the completed contract or the percentage-of-completion method; using the former method companies recognize revenues and gross profit solely in the period when the constriction has been completed, in this way carrying on positive component of tax base. Italian companies have the option to capitalize the interest costs related to investment in internally generated fixed assets while IFRS require the interest costs incurred for obtaining a qualifying asset to be capitalized. Two opposite fiscal effects are expected: an immediate increase of tax base resulting from the capitalization of interest costs (+); a deferred abatement of tax base due to the depreciation on the higher carrying amount (-).

*Expenditure on research, advertising and start up cost*

Expenditure on research, advertising and start up cost shall be recognized as an expense when they are incurred; while companies under Italian Gaap are allowed, under certain conditions, to recognize them as an intangible asset. IFRS subjects benefit immediately of a tax burden reduction versus the deferred benefit of Italian Gaap subjects through the amortization of the intangible asset over its useful life.

*Financial lease*

Under Italian Gaap all leases are treated as operating and the contingent rents are charged to P&L on an accrual basis; on the contrary, IFRS subjects follow the substance over form principle and charge to P&L depreciation and finance costs. Since, generally, the useful life of the asset exceeds the lease agreement term, we expected a reduction of tax base (-) moving from Italian Gaap to IFRS due to a slower recognition of deductible costs.

*Measurement of tangible and intangible assets*

Under IFRS, after their initial recognition, tangible and intangible assets shall be measured at cost or at a revalued amount (fair value); the choice of the revaluation model will occur in higher depreciation charges and then we expect a reduction of the tax base (-) during the useful life of the asset. A specific difference might arise in depreciating the tangible assets when companies under IFRS apply the "component approach": IFRS prescribe that significant components of a fixed asset with different useful lives be recorded and depreciated separately, and this requirement could influence the measurement of Irap tax base. The overall impact is unpredictable (+/-).

Differently from Italian Gaap, intangible assets with indefinite useful lives and goodwill shall not be amortized but tested for impairment in accordance with IFRS. This different accounting treatment will result in anticipating tax burden for IFRS subjects when the intangible assets do not require to be impaired or the impairment does not compensate the amortization charge for the period (+ tax base). An additional but relevant effect is the greater variability of the tax base that does not guarantee a stability of fiscal revenues for tax authorities. In order to sterilize this effect, Italian tax law does not give fiscal relevance to the impairment and requires companies to amortize brands and goodwill over a minimum 18 years period.

*Trade receivables*

Under both IFRS and Italian Gaap, trade receivables are measured at their estimated realizable value, that is, at face value net of write-downs that reflect the estimated losses related to the default risk. Any medium/long-term receivable that include a component of interest are discounted using an appropriate interest rate. No substantial differences arise for the computation of Irap tax base (=).

*Expenses for provision*

Non relevant differences emerge between IFRS and Italian Gaap in the criteria for measuring expenses for provisions. Under IFRS the cost of an item of property, plant and equipment comprises the initial estimate of the costs of dismantling and removing the item and restoring the site on which is located, while Italian Gaap recognize the costs of dismantling and removing as an expense in the period they are incurred and recognize the costs for restoring the site as an expense for provision during the useful life of the item. The IFRS subjects benefit of a reduction in tax base (-) due to the higher depreciation charges related to the measurement of the initial cost, while companies under Italian Gaap cannot deduct the expenses for provisions from Irap tax base and will deduct the dismantling and removing costs only at the end of the useful life of property, plant and equipment.

*Labour costs*

Labour costs are not deductible from Irap tax base, but the different accounting treatment of stock option pays and defined benefit plans has an indirect and composite impact on the tax base. In particular, under IFRS stock option pays are considered as a form of remuneration of employees and, hence, are qualified as a component of labour cost on the date they are granted to employees, while Italian Gaap do not consider this item until a liability rises. For what concerns the valuation of defined benefit plan (TFR), the actuarial method applied under IFRS gives room to a greater uncertainty and discretion in measuring the labour cost than under Italian Gaap criterion. As a result, whereas the inclusion of stock option in the labour cost increase the tax base for IFRS subjects (+); the complex and articulated evaluation method of TFR doesn't permit to appreciate a priori its impact on the transition to IFRS (+/-).

## References


Alley, C. and Simon, J. (2005) 'The use of financial reporting standards-based accounting for the preparation of tax returns', *International Tax Journal*, 31 (3), pp. 31-48.

Cristea, S.M. and Saccon, C. (2008) 'Italy between applying national accounting standards and IAS/IFRS', in *Romanian Accounting Profession's Congress*, Bucharest, Ed. CECCAR.

Desai, M. (2003) 'The Divergence between Book and Tax Income', in J. Poterba (ed.), *Tax Policy and the Economy 17* (Cambridge, MA: MIT Press, 2003), pp.169-206.

Eberhartinger, E. and Klostermann, M. (2007) 'What if IFRS were a Tax Base? New Empirical Evidence from an Austrian Perspective', *Accounting in Europe*, 4(2), pp.141-168.

European Commission (2008), *Report on the operation of Regulation (EC) No 1606/2002 of 19 July 2002 on the application of International Accounting Standards*, Brussels.

Freedman, J. (2004) 'Aligning Taxable Profits and Accounting Profits: Accounting Standards, Legislators and Judges', *EJournal of Tax Research*, 2(1), pp.71-9.

Freedman, J. (2008) Financial and Tax Accounting: Transparency and "Truth", in Schon (ed), *Tax and Corporate Governance* (Springer Science 2008).

Gammie, M., Giannini, S., Lemm, A., Oestreicher, A., Parascandolo, P., and Spengel, C. (2005) *Achieving a Common Consolidated Corporate Tax Base in the EU*, Brussels, CEPS.

Hogendoorn, M.N. (1996) 'Accounting and Taxation in Europe - A Comparative Overview', *European Accounting Review*, 5 (Suppl.), pp.783-794.

Holmes, K. (2001) *The concept of income: a multi-disciplinary analysis*, IBFD Publications BV, Amsterdam.

Jacobs, O. H., Spengel, C., Stetter, T. and Wendt, C. (2005) 'EU Company Taxation in case of a Common Tax Base', *ZEW Discussion Paper* No. 05-37, Mannheim.

James, S. (2002) 'The Relationship Between Accounting and Taxation', *Discussion Papers in Management*, No. 02/09, University of Exeter.

Lamb, M., Nobes, C. and Roberts, A. (1998) 'International Variations in the Connections Between Tax and Financial Reporting', *Accounting and Business Research*, 28(3), pp.173-188.

Lang, M., Obermair, C., Schich, J., Staringer, C. and Weninger, P. (2008) *'Tax Compliance Costs for Companies in an Enlarged European Community'*, Kluwer Law International, The Netherlands.

Manzo, M. and Monteduro, M.T. (20109 ' *From IRAP to CBIT: Tax Distortions and Redistributive Effects',* paper presented to the XXII SIEP Conference, September 20-21, 2007, Pavia, Italy.

Nobes, C. (2003) 'A Conceptual Framework for the Taxable Income of Businesses, and How to Apply it under IFRS', Certified Accountants Educational Trust, London.

Nobes, C. and Schwencke, H.R. (2006) 'Modelling the Links Between Tax and Financial Reporting: A Longitudinal Examination of Norway over 30 Years up to IFRS Adoption', *European Accounting Review*, 15(1), pp.63-87.

Oestreicher, A. and Spengel, C. (2007) 'Tax Harmonisation in Europe. The Determination of Corporate Taxable Income in the EU Member States', *ZEW Discussion Paper* No. 07-035, Manheim.

Rocchi, F. (1996) 'Accounting and Taxation in Italy', *European Accounting Review*, 5 (Suppl.), pp.981-989.

Shaviro, D. (2009), 'The Optimal Relationship Between Taxable Income and Financial Accounting Income: Analysis and a Proposal', *The Georgetown Law Journal*, Vol. 97, pp.423-484.

Schön, W. (2004) 'International Accounting Standards – A "Starting Point" for a Common European Tax Base?'*, European Taxation*, 10, pp.426-440.

Spengel, C. (2007) '*The Common Consolidated Corporate Tax Base'*, paper presented for the Tax Conference "Corporation Tax: Battling with the Boundaries", June 28-29, 2007, Said Business School, Oxford.

Zambon, S. (2002) '*Locating accounting in its national context: the case of Italy*', Franco Angeli, Milano.