*Gianni Guerrieri

The cadastre of values and income: some considerations

Abstract The article intends to verify the logical and methodological framework of a cadastre of values, based on the market prices, in addition to cadastre of incomes, as provided by the reform guidelines which have been discussed by some time in the Italian Parliament, also in view of the criticism made and the issues inherent in the theoretical and empirical determination of the asset values for the intended purpose.

INTRODUCTION

In the past Legislature, following the intervention provided by the Decree of 6 December 2011, number 201[1] with regards to property tax, with the introduction of its municipal tax (IMU), which replaced the municipal property tax (ICI), and the restatement of methods for calculating property values the unavoidable issue of reforming the system for determining the "cadastral income" has been raised.

In fact, it is known that the tax base for the new IMU is determined, as for the ICI, on the basis of these cadastral income, to which firstly (as first step) a re-evaluation of 5%[2] and then the multipliers for different cadastral categories are applied.[3] These multipliers were increased with respect to those existing for the ICI, in order to increase the tax levy resulting from the real estate. Although the cadastral income has been increased, however, the taxable values still remain below the current market values (in 2008 the average market value of a dwelling was about 3.7 times the corresponding average taxable value for ICI purposes).[4]

*Director of the Real Estate Market Observatory and of the Estimation Services in the Italian Revenue Agency.

The considerations made in this article exclusively reflect the opinion of the author, without binding the institution to which he belongs.

1 The IMU, which replaced the ICI, was introduced by Legislative Decree 14 March 2011, number 23, with effect from 2014 as part of the so-called municipal federalism. With the Decree of 6 December 2011, number 201, converted into the law of 22 December 2011, number 214, the IMU was brought forward to 2012, the increase of the tax base compared to the existing ICI and the re-introduction of taxation on the principal residence.

2 Article 3, paragraph 48, of the law of 23 December 1996, number 662.

3 At present, for the IMU, there are the following:
— 160, for the buildings classified in the cadastral group A and in the cadastral categories C/2, C/6 and C/7, excluding cadastral category A/10;
— 140, for the buildings classified in cadastral group B and in the cadastral categories C/3, C/5 and C/5;
— 80, for the buildings classified in cadastral group D/5 and A/10;
— 60 for the buildings classified in cadastral group B, excluding the buildings classified in cadastral group D/5. This multiplier is increased to 65 starting from 1 January 2013;
— 55 for the buildings classified in cadastral group C/1.

4 See Agenzia del Territorio – Dipartimento delle Finanze (2010), page 109. The figure refers to 2008.

At the same time, it is also known that the cadastral rents show such signs of age[5] and obsolescence[6] that they require a deep revision with the aim of achieving greater equity among taxpayers.

Actually, problems of horizontal and vertical iniquity have been observed.

Horizontal iniquity is among the taxpayers in relation to the area where the real estate properties are located, due to a change of the relative values (prices and rent fees) between the different zones of a municipality or of different municipalities. In particular, this has happened in the last fifteen years, where there has been one of the longest positive cycles of the real estate market which has brought about a significant differentiation in the levels of value and of rents between the different areas.

Vertical iniquity, is shown by the fact that the difference between the actual market values and those calculated on the basis of the cadastral income and the multipliers, tend to increase for the wealthier segments (in terms of wealth-owned housing) of owners.[7]

Furthermore, the failure to update the cadastral income over the last twenty years has led to a consequent relative lack of dynamism of the corresponding tax base (with respect to prices and income). This has entailed, at the same tax rate, a loss of revenue in real terms, *i.e.* the nominal revenue is equal but hits "purchasing power" has been reduced.[8]

Previously it has been stated that the increase in taxation implemented with the growth of the IMU tax base, obtained in turn by enhancing the multiplier to be applied uniformly to the cadastral income[9] – by real estate category – has brought an increased inequity of the system. This derives from the fact that, increasing the multipliers proportionally, the incidence of taxation (of the IMU) on the actual market value decreases while there is an increase of the difference between the cadastral value (taxable IMU) and the market value. Figure 1 is constructed by assuming different properties all having the same cadastral income but different market values. As these real estate properties have the same cadastral income, the ICI tax base is the same for all properties, as well as that for IMU purposes, as the increase in taxation is also equal (both in absolute and percentage terms). The incidence of the taxation on the actual market value with the switch from ICI to IMU however is not the same, but decreases to the growth of the difference between market value and cadastral value (whether the latter is measured for ICI that for IMU). In Figure 1 the X axis

---

[5] The cadastral rents are now obsolete because for the past 21 years they have not been revised even if the present law provides that this is to happen every decade. In fact, Articles 28 and 37 of the Presidential Decree of 22 December 1986, number 917, establish that by a decree of the Minister of Finance (now Economy and Finance) at least every ten years there shall be a revision of the rates of valuation and annuities, both with regards to the cadastre buildings as well as the land cadastre. The decrees, after the revision of 1990, have never been issued.

[6] The obsolescence of the cadastral income derives from the fact that the system of categories and classes was never updated, remaining essentially as it was in the beginning (1939). This system does not allow adequately following the evolution in time of the urban configuration of settlements and construction. Therefore, the denomination and the classification of the real estate has become inadequate over time. Furthermore, the classification, or the process of classifying the value of a specific real estate unit in an ordinary category and in a relative class of value, has remained the same since the start of the cadastre, except for re-structuring measures and changes in buildings reported by the owners to the cadastre. This results in further iniquity amongst the different municipalities and within the municipalities: for example, homes classified as "popular", and hence with low income, have not been newly-reclassified over time, even if today, as these ones are situated in central locations, they have a much higher market value than a good "civil" building in the mid-central zones in a city where, instead, a higher income has been applied (rated). In this respect, it should be noted that the previously-mentioned review of the appraisals which took place at the start of the 90s has only changed the monetary value of the estimate tariffs and not even a revision of the classification of the real estate units of the ordinary categories.

[7] Cfr. Agenzia del Territorio– Dipartimento delle Finanze (2011), pages 55-56 and also in Agenzia del Territorio-Dipartimento delle Finanze (2012), page 120.

[8] This meant that the tax authorities, in order to counter the loss of revenue in real terms, have increased the rates, eroding the margins of effective fiscal autonomy. It was calculated that 1/3 of the whole ICI increase registered between 1994 and 2004 was necessary to maintain the real value of the revenue at 1994 levels. Cfr. Guerrieri (2006), page 185. Furthermore, it is possible that the necessity to recover the depleted revenues in real terms, has led some local authorities to choose urban policies aimed at increasing the stock of property on its area to increase the tax base and thus the capacity of total revenue with distorted results for good use of the land. It is also true, however, that following the trend of real estate values can lead to a dependence of public budgets, in particular those of local authorities, from the trends of the real estate prices cycle. With effects that are to be verified and studied in order to verify the ability to control spending as a function of the cyclical part of the revenue.

[9] Cfr. note 4.

shows the difference between the market value and the cadastral value (VM/VC); the Y axis shows the extent of the different incidence gap on the market value between IMU and ICI.

Figure 1 Different theoretical incidence of the IMU in respect of ICI on the market value (Source: our processing)
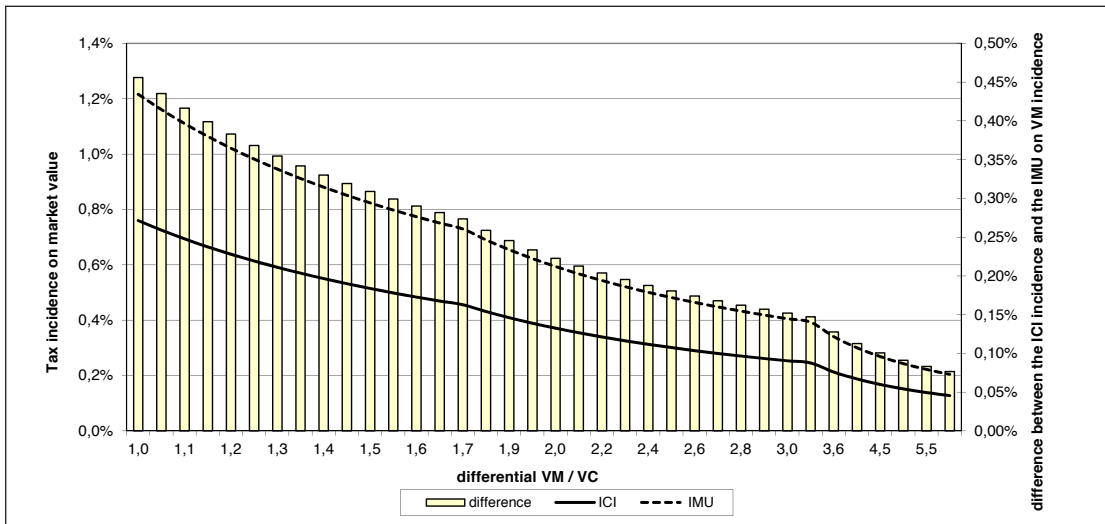
The curves show how the incidence varies to a change in the ratio VM/VC respectively for the ICI and the IMU. The histogram, whose measure is shown on the right side of the ordinates, represents the difference between the two above-mentioned incidences.

As a consequence only a reform in the estimation system of the buildings may modify the actual situation towards a more equitable cadastral taxation.

In fact, on this subject Italian Government and Parliament, over the years have taken various legislative initiatives which have not reached any desired goals. This testifies, on the one hand, that the reform of the cadastral system has been felt as an necessity from a long time even from the political point of view; on the other hand that there has been a persistent difficulty to pass the necessary laws and, therefore, to actually start the process of reform.[10]

---

10 The Italian Parliament has been legislating on this subject many times for the last fifteen years. The first time, in 1996, approving the enabling act for the general revision of the urban cadastre through which the foundations were laid to start a comprehensive revision process. The addresses of the legislator were incorporated into DPR of 23 March 1998, number 138, regulation of the general discipline of the whole process of revision, approved after a process of about two years, which provided for the completion of activities by 1 January 2000. However, in the course of revision operations, complex due to the existence at the time of strong lack of information, the law was passed on 13 May 1999, number 133, stating in paragraph 1 of Article 18 the delegation to the Government to issue one or more legislative decrees, intended to rationalise the real-estate tax system and the neutralisation of the effects on tax revenue from the revision of the estimates. Such delegation which, however, indicated implementing innovative principles to be regulated through specific measures within nine months from the entry into force of the law was not actually carried out. In conjunction with these new provisions the Legislative Decree of 31 March 1998, number 112 was issued, which compised, among other things, the decentralisation of services and cadastral functions to municipalities, including the activities relating to the audit of the estimates. Subsequently, with the reform of the organisation of Government (Legislative Decree of 30 July 1999, number 300), there was established, between the various tax agencies, also the Agenzia del Territorio, with particular jurisdiction to carry out services in the cadastre field, with functions of a technical body (pursuant to Article 68 of Legislative Decree number 112 of 1998). Consequently the procedure of revision, in the face of these legal uncertainties, was not carried out. In the XV legislature, the Government presented the Bill for the «Delegation to the Government for the re-organisation of the law on the taxation of capital gains, on the collection and verification of tax revenues, on the estimate system of the cadastre buildings, as well as for the preparation of consolidated texts on the provisions of state taxes», in which, in Article 4, there was the specific delegation for the reform of the estimation system of the cadastre buildings. The approval process was not seen through due to the premature termination of the legislature. Something similar happened during the XVI Legislature when the Monti Government had, on 15 June 2012, presented the Bill for the "Delegation to the Government laying down rules for a tax system that is more fair, transparent and aimed at growth", where Article 2 laid down the rules of delegation for the review of the cadastre buildings. The enabling act was approved by the Chamber but did not complete the process in the Senate due to the resignation of the Government and the premature ending of the legislature. At the time of writing, the new Parliament has taken up the text approved by the Chamber and is debating it in the Finance Committee of the Chamber of Deputies.

The reasons for these difficulties are caused, probably, by the complexity, duration and cost of the reform of the cadastre, whose outcome can only occur in a medium-term timeframe which is not always compatible with the time required by politics. On the other hand, this intervention represents a real structural reform, which is indispensable if one wants to bring fairness and equalization in the system of property taxation.

In any case, both the draft law presented during the XV Legislature as well as in the one presented in 2012 by the Monti Government, it was introduced the principle of a cadastre of buildings focused not only on the determination of the rent of the building units surveyed (*i.e.* net of imputed income), but also on the determination of their **asset values.**

This principle significantly modifies the cadastre and especially the method of determining the tax base commensurate to the value of real estate assets, since the latter would no longer be based on the application of a specific multiplier to the cadastral income, but directly from the estimated value of the "cadastre."

The actual aim of this essay is to investigate the reasons and the consequences of the transition from a cadastre on income to a cadastre on **values** and income. Clearly, the issue of the **values** within the cadastre framework attracts the concept of **normal value** and this, in turn, evokes debates on the normal prices and their determination in the **long-term equilibrium**. While trying not to circumvent the theoretical issues, the reasoning that we will propose will be focused more on the empirical aspects of procedure to determinate the tax base of property tax , but without discussing about limitations and advantages of economic policy own of property tax.

THE NORMAL VALUE: WHICH DEFINITION ?

The cadastral system originates from the need to determine the tax base for income related to the fruits of land ownership. An underlying reason that historically has led to the construction of these systems, in addition to the census of the properties, consists of the difficulty and the burden of ascertaining the actual income and therefore it is advantageous, to the Treasury, to simplify such an assessment by a determination of normal income, or which can normally be obtained from the ownership of the land.

According to a productivist approach,[11] in the agricultural sector this mode of predetermination of income has another advantage: the one of providing tax incentives for investment aimed at getting an actual income higher than the "normal" income, given that the difference would not be taxed. Conversely, the less efficient behaviour would not be incentivised, in that if the actual income would turn out to be inferior to the normal one, the owner would suffer a tax penalty.

Assuming that this incentive function really existed,[12] it certainly refers to a predominantly agricultural economy with rules of production and financing of the agricultural sector completely different from the present ones, focused on a large public subsidy to agriculture. Moreover, this function is unfounded with respect to buildings ownership. Actually, «no stimulus to the efficiency of taxation is recognised on the basis of the cadastral buildings and housing in particular».[13]

---

[11] In this respect one is to see Einaudi (1983), in particular page 254.

[12] For this fiscal incentive/disincentive to be effective, as a necessary condition, the cadastral income must be subject to periodic updates with regards to the evolution of the actual income, otherwise these incentivising systems would be lost over time. In this respect, the same Einaudi (1983) affirms that: "the ordinariness of the income to be submitted for tax does not mean a "perpetual" cadastre (page 252). Because historically the revision and the adjustment of the cadastral rents has only occurred very few times, one can widely doubt that there ever existed this function to incentivise production efficiency.

[13] Artoni, (1999), page 108. In this respect, Muraro (1998) claims that «[...] Undoubtedly the concept has some severe limitations with respect to the scope of application typically constituted by agriculture. In fact, the building offers a small scope for the activity of manager, which reduces the strength of the incentives implicit in the system of normal income».

Moreover, the appreciation of both the income and the assets linked to the ownership of the buildings is often due to the result of public policies (infrastructure, urban environment quality, etc.) and not to the building improvements carried out by the owners on the property.

Therefore, the use of a cadastral system for fiscal aims is based essentially on, since the fiscal reform of the seventies, a **simplification** of the means of income assessment for the administration and of the bureaucratic-fiscal formalities for the taxpayer of.[14]

The gradual switch over of the tax system on real estate from income tax to property tax, whose reasons, even under the theoretical aspect, are beyond the scope of this essay, require a measurement of the **asset value** as tax base.[15]

The choice made in Italy with the introduction of ICI in 1993 was to determine the taxable values of a financial nature applying a specific multiplier for each class of property to the cadastral income. At that time these multiplicative coefficients[16] represented the reciprocal of a **conventional national average** capitalization rate. In other words, the **normal value** was approximated by the capitalization of a perpetual annuity and its **normality** was conceptually grounded, on the one hand, on income as an expression of a **normal** long-term price (rent) for the use of the real estate (residential and not) net of the **normal** maintenance and management expenses and, secondly, by a **conventional** capitalization rate.

In this context the reference to the **normal value** implies, or at least evokes, a condition of long-period «equilibrium».

The issue, from a theoretical point of view, concerns the soundness of the concepts of **normal value** and «equilibrium». Within the framework of neo-classical economic theory one can only refer to the long-run equilibrium prices of Marshall or to the *tout court* equilibrium prices in the general economic

---

14 «The problem of establishing the medium income can be imposed for practical motives. In fact, when the units to be evaluated are numerous, with a modest amount of tax for the taxpayer, [...] a direct estimate of the actual income is impossible and in any case excessively onerous, and therefore it is necessary [...] to proceed with cadastral systems», Cosciani (1977).

15 The tax system, with specific reference to the buildings, until the introduction of the municipal property tax (1993), was centred substantially on the taxation of income, as set by the reform of the seventies, and on the transfer tax. In a nutshell the cadastral system, based on the determination of income (net income) obtainable in the medium term from the ownership of the property, had essentially three roles until 2006:
1. determine the basis of assessment of figurative income taxed for the purposes of income tax, in the absence lease;
2. contribute to determine, through the application of specific multipliers to the cadastral income, the limit to the adjustment in the tax assessment of the taxable declared for the purposes of tax transfer (including succession);
3. help to determine the values taxed asset (ICI) applying to cadastral income specific multipliers that, originally, represented conventional rates of return on a national basis for typological aggregates of properties.

After 2006, the role described in point 2) has changed since, on the one hand, in the case of the registration tax on purchases of dwellings by individuals who do not act as entrepreneurs or professionals, the "cadastral value" (*i.e.* the cadastral income for multipliers) has directly become the tax base on which to calculate the tax; on the other hand, with the only exception of inheritance tax, there were removed limits on the adjustment in the tax assessment of the taxable declared. However, the most radical change to the system came with the so-called "municipal federalism". The new legislation, insofar as relevant here, provides in particular:
1. the possibility for the taxpayer to apply a tax proportional to the rental income; in other words this type of income, instead of contributing to the total income taxed progressively in personal income tax, is taxed apart with a proportional tax (like the investment income) at a rate equal to 21%;
2. the introduction of IMU, which "substitutes the income tax of individuals for the real-estate component, and the related additional due, in relation to earnings related to assets not leased, and the local property tax", with a tax base substantially identical to that of ICI.

For the purposes of the fiscal function of the cadastre, the profound novelty introduced is evident: the imputed income attributable to real estate is no longer taxed, taking on even more relevance, in contrast, the patrimonial taxation through the IMU. This choice (foreseen originally to start from 2014) was brought forward to 2012 as part of the so-called "Save Italy" decree. In addition, the anticipation of the IMU has taken place with a higher tax base than the ICI, obtained by increasing the multiplier to be applied to the cadastral income. As already shown in the previous paragraph, besides leading to increased inequity compared to those already present in the current cadastral income compared to the relative market values, the increase of the multipliers has made the latter devoid of any conceptual ratio, in that they now represent pure conventional rates dropped from any even weak correlation with average rates of return.

16 The multipliers were equal to: 34 for the cadastral category C1 (shops), 50 for the A10 category (offices) and for group D (real estate special production, commercial and services sector) and 100 for all other types including dwellings.

equilibrium systems.[17] In different theoretical frameworks it refers to the natural prices of Smith, as reconsidered in terms of long-period positions, around which "gravitate" the market prices,[18] characterised by the uniformity of the rate of profit on the offer price of capital goods (as well as by the uniform rates of the wage and rent). Evidently «the long-period position must be persistent, and therefore must depend on permanent causes and not temporary elements».[19]

In this respect it was observed that the «only "general rules" which the market prices follow are those regarding the direction of their deviations from natural prices and the tendency of these deviations to correct themselves».[20] The problem is that unfortunately the argument that the average market prices, calculated on fairly lengthy periods, tend to match with the natural prices, is questionable.[21]

In fact, the market forces do not guarantee that in fairly lengthy periods the positive and negative deviations of the market price from the natural price balance out. If this lack of compensation does not put into any difficulty the theory and the role of natural prices,[22] instead it makes quite problematic the empirical reference to the market prices in order to draw some light on the normal or natural values of the assets.

This is not the place, and probably i have not the required competence to deal with analytical depth the implications of each of these theoretical references mentioned earlier.[23]

Nonetheless, every property tax cannot, by definition, do without a measure to determine the taxable amount, even though regularly updated, and, on the other hand, the only elements of knowledge verifiable in the real world are formed exclusively by the prices of the real-estate registered in the contracts of sale and by the gross income obtainable by the same assets (rents). In the best case, therefore, even if the theoretical analysis should lead to the definition of a concept consistent of **normal value**, from the empirical point of view the concrete determination for operational purposes cannot be separated from those unique elements of knowledge.

Therefore in this simply operative and not analytical sense, the values expressed daily by the exchange of goods on the real estate market and by that of rent market should be taken as a benchmark even although approximate, on which set up the tax base of real estate provided that they reflect normal exchange or renting conditions[24] of a number of sufficiently similar goods (with the approximation dictated by the peculiar heterogeneity of real estate already mentioned).

This condition is important because, of course, a measure of the tax base that takes as reference the price observed on the market must be able to be used for all goods which, even if not homogenous, may be the object of comparison in some significant way. Therefore this requires, as stated above, that the traded or rented good is not "eccentric", in other words, that includes elements of similarity with the goods that make up the stock, and that the determination of the exchange or rent value

---

17 The criticism to which the neo-classical approach was subjected is well known. The literature on this topic is very extensive. I refer only to three texts: Napoleoni (1965); Lunghini (1993); Caravale (1994).

18 Cfr. Garegnani, (1979), pages 89-116 and also Garegnani (1994) pages 163-198. On this topic see also Gozzi – Boggio (1991).

19 Lunghini (1993), page 124. In particular for a debate on these themes see: Caravale (1994).

20 Vianello (1992); page 129.

21 Cfr. *ibidem*, pages 134-139.

22 Cfr. *ibidem* page 138.

23 The bibliography on the topic is clearly endless. It is chosen to refer all to a short and popular book which in the intentions of its author «is addressed to the common reader that knows little or nothing about economic theories», Lunghini (2012).

24 For example, the exchange conditions relating to goods subject to a special sale price are not ordinary conditions, such as in the case of the divestments by public bodies whose prices are regulated by discounts ruled by law and the demand directed to the right of pre-emption.

takes place in market conditions where the seller or the buyer are both «not influenced, independent and with opposite interests» and that the trade takes place «after proper marketing activities during which both parties act with equal ability, with caution and without any costraint».[25]

In conclusion, in our opinion, a non-controversial definition of the theoretical significance to be attributed to **normal value** is not immediately available. One should choose the approximation of the value of the good from the prices observed on the market in relatively normal conditions in the above-mentioned sense and consider that these prices allow approximating the asset value as useful reference for taxation.

In this respect, it is useful, the fact that for taxation purposes market prices are not so relevant for the determination of the **absolute level** of each property value, as they are important to determine the **relative distance** of value between the different properties.

Criticism about the cadastre with real estate asset values and about estimating income from them

Although there is little disagreement about the need of reform of the cadastral estimation system, there are different point of view on how to implement it, in particular on the introduction, even in Italy, of a cadastre of values in addition to one on income.[26]

Evidently the function of a cadastre of values would allow a direct measurement of the tax base, mainly for taxation of real estate values, that is not calculated by using the capitalization of a perpetual annuity as happened for the ICI and as happens today for the IMU.

The position of Prof. Francesco Forte expresses a fundamental criticism, on a theoretical level, regarding the possibility of building a cadastre of asset values which can be used for tax purposes.[27] The attack on this possibility is made up of three fronts.

The first one relates to the **variability** of market values over time, which makes them unsuitable for the principle of stability which should instead characterise the cadastre tax base. This variability derives from the fact that «the capital values of real estate depend not only on their income, but also on the interest rate. And this, in terms of conventional money [...] is an unstable variable, which is managed in order to control other variables, such as the inflation rate, the exchange rate and the volume of financial transactions on domestic and international markets».[28] In other words, the capitalization rate that affects the value of the *asset* depends on the level of the monetary interest rate and other variables (even of a speculative nature) and therefore, in brief, «the market value of the goods does not have the characteristic of 'ordinary value'».[29]

The second front of attack is aimed at the specific determination of the value of buildings. In particular, according to Prof. Forte, there are reasons that make «systematically differs the market value from the capitalization of the ordinary income derived from them», [30] even independently from the change in interest rate by which the capitalization is computed. The reasons for this systematic gap depend, on the one hand, on the different technical and functional obsolescence of property over time and, on the other hand, on the variation of the underlying soil value mainly related to the urban or cultural

---

25 *International Valuation Standards* (IVS – 1,3.1). Cfr. even Tecnoborsa (2011), page 48.

26 For a compendium of criticism, under various points of view, of a cadastre of values cfr. AA:VV (2007).

27 Forte (2007), pages 15-23.

28 *Ibid.*, page15.

29 *Ibid.*, page 16.

30 *Ibid.*, page 18.

constraints.[31] This should imply that the flow of future income is independent of these variables (obsolescence and value of underlying land) and therefore does not react to their change.

The third front of attack, assuming the unfitness of the market values as the tax base, lies in proposing the «income […] capitalised at a conventional rate of interest which gives rise to an ordinary stable value»[32] as a source of determination of the tax property.

Finally, as a coherent corollary following the premises, it is absolutely not possible to take the opposite path, that one which determines the imputed income (cadastral) from the market value. In fact, with the application at the market value «of a rate of return, one does not get a reliable value of income» due to non-related income and capital value of the real estate and the instability over time of the market values.

Ultimately, for the purposes of property taxation, beyond any consideration about its convenience, Prof. Forte maintains that the taxable cadastral value must derive, if anything, from the capitalization of income, preferably with the adoption of a conventional rate, because if the capitalization rate depend on the interest rate, this lead to an instability of values. Surely, one should not refer to a market value observed on a certain period.

A different position is expressed by Professors Roscelli and Simonotti.[33] In fact, according to the authors, «an efficient cadastral system should refer both to the real-estate income as well as to their values at the time of trade».[34] Their criticism lies in the construction of a «cadastre based solely on the asset values [where] the calculation of income [is] surreptitiously obtained by applying the rent rates to the asset values».[35] In other occasions the authors expressed concern, without prejudice to the above critical objection, on how to implement the proposals for reform of the system of the cadastral estimates[36] formulated during the XV Legislature (2006-2008).

Objections to the criticism: theoretical aspects and empirical evidence

It is considered convenient to deal with the different issues in the same order as they were forwarded in the previous paragraph.

Therefore, the first issue is the question of **instability** of the values relative to the earnings and thus the impossibility of determining an **ordinary value**.[37]

The fact that the values of the patrimonial asset are UNSTABLE cannot be questioned. It is a fact. Table 2 shows the change in the national average house prices between the first quarter in 2004 (set to 100) and the second quarter in 2011. The price index shows an increment of 29.9%. Two periods can easily be identified: from the first quarter in 2004 to the second quarter in 2008, where the prices increased by 29.6%; and a second period, from the second quarter in 2008 to the second quarter in 2011, where the prices remained largely steady, with a percentage change of 0.23% in this period. Therefore, the findings point out that the trend of values also varies significantly over time.

---

31 By referring to the constraints of a cultural nature, reference is made to the so-called historical and artistic heritage or cultural heritage subject to particular constraints of use and transformation.

32 Forte (2007), page 21.

33 Roscelli – Simonotti (2007).

34 Ibid., page 6.

35 Ibid. page 7.

36 Roscelli. – Simonotti (2007) (2006).

37 In this case the term "ordinary" is used in the sense of a **relatively stable value in time**. A concept that does not necessarily coincide with that of the **normal** value as the equilibrium or natural price around which the market prices turn.

Figure 2 Quotes index and quarterly variations (Source: OMI-Agenzia del Territorio)
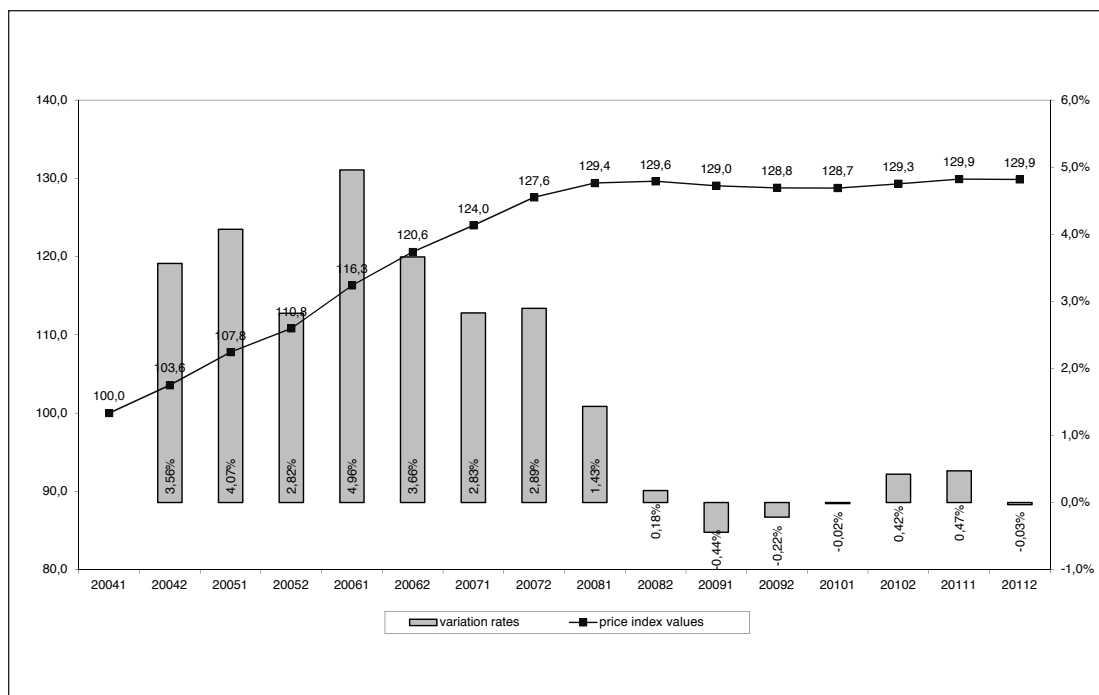
The following Figure 3 shows, once again, the price index of dwellings calculated, this time, on an annual and not quarterly basis, together with the price index of rent for new leases, the price index of the rents for all leases calculated by ISTAT and the index number of the NIC consumer prices of ISTAT. A first result is that even the real estate incomes (rents) significantly vary in time.

The price index of the new leases increased by over 16% between 2004 and 2008 and then fall by 2.3% between 2008 and 2011. The index of lease payments on all the contracts in force, recorded by ISTAT, actually because it reflects the contractual mechanisms that stabilise the trend of rents, increases in the first aforesaid period by 9.8%. Subsequently, between 2008 and 2011 the index continues to grow by a further 7.1%.

Figure 3 Housing price index, new lease index rents, ISTAT index rents, NIC index prices
(Source: our processing based on OMI data-Territory Agency and ISTAT)
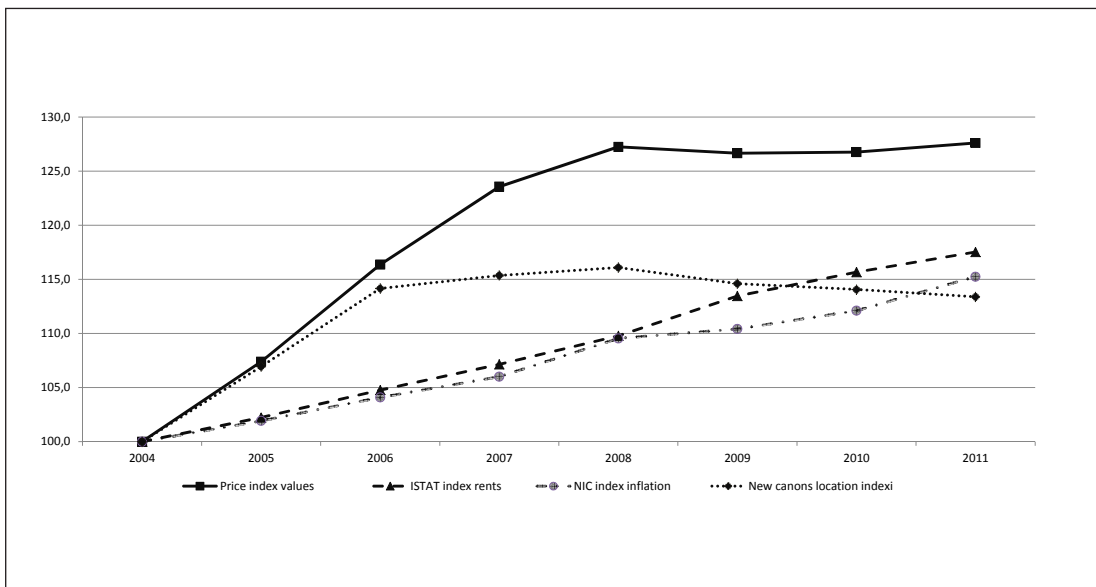
The differing performance between the index of the ISTAT rents and the index of the new lease in the last period depends precisely on the fact that the ISTAT index of rents covers both the stock of leases, whose move together with the trend of inflation for the contract period and the **flow** in new rents, that are determined by a set of variables (not recovered past inflation, expected inflation, the alternative return of investment (capital invested) in the dwelling and, therefore, even the present value of the fixed assets).

The inflation in consumer prices, in the two sub-periods considered, shows an increase of 9.54% between 2004 and 2008 and an increase of 5.72% between 2008 and 2011.

The prices of dwellings instead, grow on an annual basis of approximately 27% in the first sub-quarter and remain still (+0.3% overall) between 2008 and 2011.

It seems clear that, although mitigated, even average incomes from rents show varying trends over time, mostly explained with the inflation rate, but only in relation to the percentage of rents subject to annual contractual renewals, the average incomes are linked to the trend values of alternative returns with the same risk (abstractly summarised by the monetary interest rate).

From an empirical viewpoint, therefore, to the **instability** above mentioned of the real estate market values, it does not correspond, in alternative, an **full stability** of rental income.

There is, however, a specific reason why the normal (ordinary) income of buildings does not have those characteristics of stability implicitly requested by "normality". «[The building] produces income that is heavily dependent on a changing exogenous factor which consists of a differential rent affected by location of buildings (rent seeking), which reduces the second advantage of the system in examination, *i.e.* the relative stability over time of the tax base, at least in comparative terms between the various assets. A word of clarification in this regard is necessary because the old design, which is important in order to understand the beginning and the growth of the Italian building cadastre, seems based on the assumption of a structure of urban rents that are rather stable as determined by a mono-centric organisational model of urban space. In fact, this model tends to generate a structure of values which is not very sensitive to the variation over time in the sense that, if a city develops, all

the buildings will be worth more, but without the change of the prices relative (and this is, of course, what is important in the cadastre: not so much the absolute value as the correct representation of the relative values).

What happened, then, which made changing an element so crucial to the validity of the cadastre as the structure of urban rents? It happened that the Italian cities have significantly changed in recent decades and today they still show a rather accentuated dynamic both in the physical organization of space and, especially, in the pratical use of the same spaces»[38]

It is no coincidence, moreover, that in the Italian taxation system, the cadastral rents have been used (before the introduction of the ICI) as the tax base only for imputed incomes. The incomes related to leased real estate is taxed on actual income.

It follows that the reference to "normality", even in a less deep analytical sense compared to that one connected to the equlibrium values or to the "long-period positions", cannot contain an implicit concept of long-term ordinariness – of **stability** – attributable to a world (which no longer exists, but is essentially **agricultural**) also stable over time.

The idea of an asset value on a cadastral basis must therefore go back, now, to a more prosaic and instrumental concept of "average values relative to a period of reference" and must imply a system of periodic updating of this "mean value".[39]

If this is the reference point, the instability is an issue no more from a conceptual point of view, instead it is still an open issue from the standpoint of the empirical definition of "average values". This aspect, however, arises with respect both to the asset values as well as rental income.

The second criticism, highlighted in the previous paragraph, relates to systematic differentiation between the market value and the capitalization value of average ordinary income that may depend on different technical and functional obsolescence of property over time, from the variation in the value of the land resulting from planning restrictions or constraints of a cultural nature.

Even leaving aside the concept of "**ordinary** average income" for the above argument with regards to the aforementioned problem of **instability**, it is true that the rent corresponds to the current use of the building and its current characteristics. While the value of an asset may depend on its **potential**.

In this regard first of all one must start by recognising that in the current income the differentials of income position between the different areas in a city or between cities are included, similarly to what happens in the system of asset values.

For example, Figure 4 shows, the differentials lease payment and the asset value for the housing market about the city of Milan in 2011, compared to the corresponding minimum, for each zone. The areas, in a clockwise direction, go from those centrally-located (letter B), to those mid-central (C), to those on the outskirts (D) and, finally, those sub-urban (E).

---

38 Muraro (1998).

39 Consider also what S. Steve stated in reference to cadastre of land: «In fact it can be assumed that the maintenance of the cadastral assessment about income of the land will be, in the long-run, conditioned by a technical transformation that makes possible the review, even on an annual basis, of the cadastral valuation and the imputed income to cadastral unit of land, in order to rapidly take into account the changes in prices and costs that significantly alter the relative position of the different crops and the different lands. In this sense, namely for the maintenance of the cadastre conditioned on the fact that it is made flexible, the Commission has recently taken a stand for tax reform [ndc it is the Commission chaired by C. Cosciani of 1962-1963]». Steve (1976). *A fortiori* this extends, *mutatis mutandis*, to the building cadastre.

Figure 4 Differentials with respect to the minimum value of the lease payments and assets at market prices. Year 2011 – Milan (Source: our processing based on OMI data-Agenzia del Territorio)
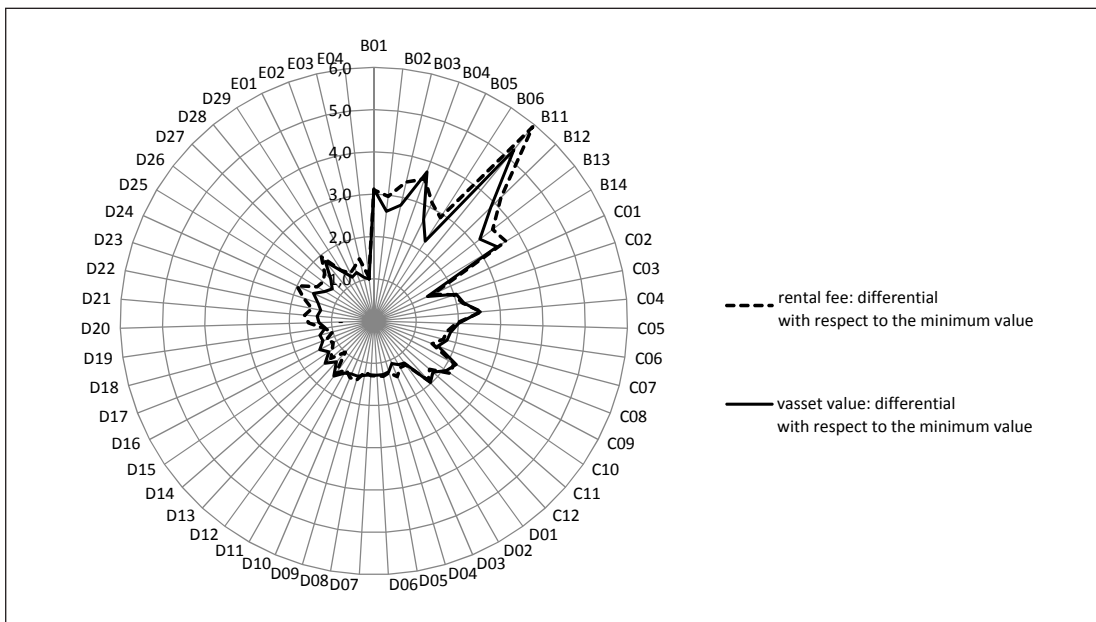
It seems evident that the two differentials are moving in a very similar way and that therefore the relative differentials, which reflect the differences in appreciation of the single zones of the city, are quite homogenous between rents and market prices. Therefore, the urban structure and urban infrastructures that characterise the different zones of a city reflect in an analogous way, in relative terms, both with regards to values and income.[40]

In the asset value, however, there may also be reflected the potential value which is undetectable by buildings and deriving from the planning rules (constraints, but also new opportunities).

Let us assume the following case: there exists an insistent building on a parcel of land only partially built when compared to that foreseen in the planning acts (zoning, building permits, etc) and therefore with a part today used as a park still susceptible to be built. Let us assume that this asset (building with park) is given on lease by the owner. Its derivable income must co-relate to the current use (say, for offices) and the current characteristics of the asset (building with offices plus park). The built-in value of the asset, however, necessarily includes also the value of the building area that still exists.. In this case, it is evident that the value calculated through the capitalization of the current income (assuming that this is equal to the ordinary average) will result differently from the current market value of the asset itself. This reasoning may even be extended to variations in planning rules that over time may change the values, while leaving unchanged the current income until changes in the characteristics of the good are observed (use, buildability, etc). [41]

In this regard, two considerations are to be made. The first concerns the fact that this divergence,

---

40 Analogous conclusions were verified even for Rome and Naples.

41 For example, recently the different later regulations (national and regional) on the so-called "home plan" have included, in specific cases, the possibility of over-elevation. In practice, an increase in cubic capacity building for building that had already achieved the maximum allowed by the planning laws previously in force. Even in this case, obviously, the value of the asset is increased, while the income, related current use of the asset -, should not undergo any variation.

from a theoretical point of view, fades if in the actual income there is also included the accrued (or expected) income in terms of capital gains. In this case, in fact, the market value and that resulting from the capitalization of income tend to match. The relevance of this aspect can be appreciated if one reflects on the large fraction of the existing housing stock not used in Italy (for housing, there is an under-utilisation with only partial use in the holiday periods). The economic logic of maintaining ownership of properties totally or partially unused can be explained by future income from capital gains that represents the only income which grow over time.

So, in addition to the arguments about the weakness of a regular **ordinary** income, the concept of **ordinariness** tends to diminish if capital gains due to a change in the real estate value are taken into account and incorporated into the measure of income.

The second consideration is, however, absolutely empirical and specifically relates to the detection of average values for cadastral purposes. These must refer to values correlated to the use and the current characteristics of the real estate asset. In fact, the dimension of the estimation problems is such that it is impossible to build a cadastral system based on point estimates, which also include the influence on its value of the variables and constraints urbanistic. The estimate can be made only on the basis of mass appraisal, using samples of ordinary real estate units (this time!) in the specific sense that they must represent, by typology and use, the characteristics more frequently relevant that determine the value of the assets. On the other hand, the rules of taxation of real estate values, in Italy, both with the ICI and with the new IMU, indicate, at least for areas or portions of building areas, a determination of the tax base which is independent from the cadastral income and is based on the fair value.[42]

For what concerns constraints of a "cultural nature" the issue is subtler. There surely exist few cases where the net income derivable from the asset may tend to zero (the maintenance and management expenses exceed the income derived from the lease of the asset) and, at the same time, the value of the asset, for its historical and artistic characteristics, may be very high. In this case, therefore, the **rate of return of that real estate is consistently lower than "normal"**. The issue is that it is not very realistic to assume full uniformity of the rates of return for the real estate assets. A tendency to uniformity certainly exists, but within a distribution whose tails include many particular cases of a real-estate market stratified over time (in Italy during hundreds of years of history). In these cases it is quite obvious that the value of capitalization of the average ordinary income gives systematic results that are different from the market value if the rate of capitalization is that of "ordinary" real estate. The capitalization rate of the historical-artistic heritage is usually inferior to that of the "ordinary" goods.

In this respect, the current issue is another: the one linked to the use of the asset value as an indicator of ability to pay. It is quite clear that the taxes are paid on the actual current income. The asset value in general represents an index of ability to pay and is also positively correlated, in statistical terms, to income. Therefore, if the tax base of these properties, as the historical-artistic heritage, are estimated, even if in unusual and unlimited situations, with reference to the average values of the current market, it is evident that there can be a bias in terms of their ability to pay. The correction, however, should not be focussed in the process of determination of the tax base, but rather within the structure of the tax system, foreseeing in the determination of the taxation (through deductions, subtractions, special or reduced tax rate, exemptions) the smoothing and the necessary flexibility to deal with these special cases.

---

42 This legally unimpeachable option then presents great operational problems with its application. As a consequence the municipalities implemented choices aimed at a kind of parameterisation of values to more or less objective criteria, in fact, surrogating a sort of "cadastral value" even for building areas.

Finally, with respect to the technical-physical obsolescence that varies through time and that determines a systematic divergence between value of capitalization of average income and the market value, it is believed that its effect, is reflected in relative terms between real estate with different obsolescence rates, to a similar extent both in terms of income as well as market price, similarly to that observed for different urban structures in a city.

So far, it was tried to argue the non-finality of the criticism with respect to the decision to set up a cadastre even **for values**.

However, the critics propose to operationally identifying the tax base for a property tax, if you really must be determined, with the capitalisation of income using a conventional rate, in such a way as to obtain an ordinary value which is **stable** in time.[43]

On the other hand, according to these criticisms, a more or less conventional rate of return cannot be applied to a market value in order to estimate an income.

Firstly, this stability is just theoretical (has to be empirically tested), because it depends not only on the interest rate, assumed fixed as it is **conventional**, but also on the stability of income – which, as seen previously, is not verified at empirical level –; secondly, the proposed solution contains a big weakness in that it introduces a strong and **arbitrary** inequity between the different abilities to pay embedded in the different values of the goods.

First of all, we remind that the taxation of real estate values has a meaning because the asset value represents an index of the ability to pay. The latter, as measured by the asset value, can only be conceived as a potential income (and consume) not only in terms of current income that it may generate and of the relative capital gains, but also, for example, as an means to amplify the spending capacity through the ability to offer goods as a guarantee to loans.[44] In this sense, the asset value must have the capacity to measure, in relative terms between taxpayers, for a certain period, the "potential" described above. If for the determination of the taxable value we were to adopt an interest rate conventional to figurative incomes, we would have a tax base (and a measure of ability to pay) not only conventional but also arbitrary.

Let us imagine an asset with **ordinary characteristics** (therefore not a historical or artistic asset, neither having potential for construction) whose cadastral rent is calculated exactly equal to market rent net of expenses. Let us assume, then, a **conventional** rate through which to capitalise the income (for the sake of simplicity let us assume a perpetual annuity). The result that one would obtain in the taxation can be formally analysed as follows:

$RC = RM$

$VC = RC/i_c$

$i_c \neq i_m$

$i_m = RM/VM$

where:

RC = Cadastral income

RM = Rental market income

VC = Cadastral patrimonial value

VM = Market patrimonial value

i_c = conventional capitalization rate

i_m = net rate of return of the market

---

43 Cfr. Forte (2007).

44 The real estate asset is not only (and maybe not as much) capital as it is a part of the means necessary for the production or the fulfilment of a need (instant value in use), but insomuch as its property (registered and certain) incorporates a value that can, through the banking system, activate a new flow of capital to be used in the process of accumulation or consumption plans in "life cycle" perspective.

The patrimonial taxation (Tpc) on cadastral basis would be equal to:

$Tpc = t_p\ VC;$

while that on the basis of the market value (Tpm):

$Tpm = t_p\ VM$

Where :

t_p is the rate of the property tax.

Making the adequate substitutions, the difference between the two models of taxation can be expressed as:

$\Delta Tp = Tpc - Tpm = t_p\ (RC/i_c - RM/i_m) = t_p\ RM(1/i_c - 1/i_m)$ [1]

Therefore

$\Delta Tp = 0$ if $i_c = i_m$

$\Delta Tp < 0$ if $i_c > i_m$

$\Delta Tp > 0$ if $i_c < i_m$

For the property unit whose corresponds to a conventional rate higher than the net rate of return of the market, there will be a fiscal advantage, in relative terms, with respect to the alternative situation. In other words, in the first case the tax base will be less than the one of the asset valued at market prices (related to the actual ability to pay); in the second case the opposite occurs. From this point of view, the result would also be criticised on the basis of a productivist approach, since it would penalise, in relative terms, the taxpayers who managed to obtain a higher return from their real estate investment.[45]

This unfairness is implied in a system where the taxation of real estate values is applied to cadastral values determined on the basis of the capitalization of the rent (which expresses the average net rent of the market) to a conventional rate. This kind of inequality is measured by the distance with respect to an amount of taxation applied to the asset values of the market.

This is one of the iniquities caused by the ICI (and now the IMU). It should be noted, in fact, that the multipliers applied to the rent (at least those originally determined for the ICI and the registration tax) represent the reciprocal of **conventional** capitalization rate of annuities. Their «conventionality» is given not only by the fact that these ones express, at least originally, an approximation of a national average rate for different cadastral types, but even more so by the fact that, since the mid-2000s, the multipliers, first, about the registration tax and then also about the ICI (even more for the IMU) ranged widely without any correlation to a specific economic variable, but, in fact, making use mostly by their «conventionality».

Therefore, for the purposes of taxation of real estate values, one should refer to an average market value over a period, estimated by suitable techniques for **mass appraisal** that approximate as much as possible the estimate to the market value of the property regarding their conditions of use (*i.e.* net of the construction potential and the **high best use**), leaving to a different and direct approach – the fair value – the determination of the specific tax base for construction potential.

Furthermore, when dealing with the matter of determining the taxable income, as already mentioned, one must take into account the size of the operational problems depending on the abundance and the diversity of the buildings (in Italy there are more than 60 million housing units excluding the land). We have already mentioned that technical statistics which correlate the value of the property to the

---

[45] This **productivist** approach, as already mentioned, linked to the concepts of **normality** and **stability** of the cadastral tax bases, is still very questionable for buildings.

characteristics of the same property through appropriate regressive techniques has to be preferred to the estimate of the market value This method implicitly accepts the presence of the approximation and tolerates (allows) some statistical error.

There is no doubt, in this respect, that the use of a conventional capitalization rate can represent a further notable simplification for the calculation of values to be used as tax base, as long as one can determine the income on the basis of the current market rates (these ones should be estimated with the same technical statistics mentioned above). Given the inequity of fiscal treatment that we can encounter , the choice between a conventional rate or an alternative method (and at what level), with the aim of simplifying the process of determination of tax bases, becomes primarily a political and non-technical choice, relative to the level of **politically** acceptable iniquity in front of a simplification of the tax base determination.[46]

The problem remains the same even if the **conventional** rate is used to determine the income (rents) from the market value. However, in this case, assuming that the property tax would be set applying a cadastral value equal to the market value, the iniquity moves onto the taxation of imputed income. Moreover, in this case, the relative tax reduction would pass on to those who portray a net return exceeding the conventional. In fact, re-writing the [1] on the taxation of imputed income and assuming VM = VC and interpreting t_r as the proportional rate, we have:

$\Delta Tr = Trc - Trm = t_r (VC \times i_c - VM \times i_m) = t_r VM(i_c - i_m)$ and therefore

$\Delta Tr = 0$ if $i_c = i_m$

$\Delta Tr > 0$ if $i_c > i_m$

$\Delta Tr < 0$ if $i_c < i_m$

Even in this case the choice of the use for operative simplification purposes becomes a political and non-technical one.

Nevertheless, the techniques and the choices must take into account, as already mentioned, the concrete and actual system of taxation on real estate value: even the perspective of simplification can take on different orientations according to the relative weight of taxes on the real estate value and those on real estate income.

CONCLUSIONS

This article tried to show the increased iniquity that characterizes the taxation of real estate value and therefore the necessity to set up a new cadastral system that, on one side, removes these iniquities and, on the other, is purposeful to the taxation of the assets that recently, with the IMU, has become predominant. In fact, as the taxation on **figurative income** (*i.e.* on cadastral income) has been excluded, the real estate income is only taxed on its **current** value.

The problem is how to determine the tax base of a property tax. The reference to market values (even the average with respect to a period of time) is strongly criticised by some authors, in that the values are excessively volatile and do not reflect the capitalization of income due to the effects of technical-functional obsolescence of the goods, of the urban planning and cultural constraints. Actually, the volatility of the trends in time regards the market values **but also the market income**. For what concerns the effects of urban and cultural constraints, the issue exists, but cannot be considered within the ambit of the CADASTRAL valuation of assets and is to be solved in the range of the tax design (taxation based on the fair value of the building area and tax breaks for the historical-artistic goods). This criticism therefore, cannot represent a limit to the use of market values for the determination of cadastral values.

---

[46] Obviously all this opens up an issue with respect to the constitutional principles.

The alternative approach is to employ the capitalization of income through a conventional interest rate. However, it has been shown the iniquity that such a solution would bring about (moreover the latter has currently been chosen to set up the ICI and now the IMU).[47]

Ultimately, with an real estate taxation in which are prevailing the property tax and the transfer tax and the taxation on income imputed is now irrelevant, the construction of a cadastre of values and the maintenance of a cadastre of income, as a form of aid to ascertain the actual income, seems totally logical and well-founded.

Nonetheless, the reference to market values does not represent an easy route, because the heterogeneity of the Italian buildings and the limited extent of its market (only 2.8% of the dwelling stock was transacted in the years of market boom), results in a low quantity of data available to carry out statistical and economic analysis. In any case it is the only route which can lead towards a system of determination of taxable assets which may be substantially more equal.

[47] One should consider, moreover, that the use of a conventional rate that makes much easier to manipulate the "patrimonial" tax base, with respect to a direct determination of the latter on a cadastral basis.

References

AA.VV.(2007), *Catasto patrimoniale. Chi lo vuole ?*, Roma, Confedilizia Edizioni

Agenzia del Territorio – Dipartimento delle Finanze (2010), *Immobili in Italia - 2010*, Roma

Agenzia del Territorio – Dipartimento delle Finanze (2011), *Gli immobili in Italia 2011*, Roma

Agenzia del Territorio – Dipartimento delle Finanze (2012), *Gli immobili in Italia 2012*, Roma

Artoni R. (1999), *Lezioni di scienza delle finanze*, Bologna, Il Mulino

Caravale G. (1994), *Equilibrio e teoria economica*, Bologna, Il Mulino

Cosciani C. (1977[8]), *Scienza delle finanze,* Torino, UTET

Einaudi L. (1983[2]), *Miti e paradossi della giustizia tributaria*, in *Scritti economici, storici e civili* (a cura di Romano R), Vicenza, Mondadori, (I Meridiani), già pubblicato da Torino, Einaudi nel 1940

Forte F. (2007), *Il mito del catasto basato sui valori immobiliari* in *Catasto patrimoniale. Chi lo vuole?*, AA.VV, Roma, Confedilizia Edizioni

Garegnani P.(1979), *Di un cambiamento nella nozione di equilibrio in lavori recenti su valore e distribuzione. Un commento a Samuleson*, in *Valore e domanda effettiva* a cura di P. Garegnani, Torino, Einaudi

Garegnani P. (1994), *Su alcuni presunti ostacoli alla tendenza di "prezzi di mercato" verso i prezzi "normali"*, in *Equilibrio e teoria economica*, a cura di Caravale G., Bologna, Mulino

Gozzi G.– Boggio L. (1991), *La stabilità dei prezzi di produzione*, Rapporti Scientifici del Dipartimento di Scienze Economiche, Università di Bologna, n. 107, http://www2.dse.unibo.it/wp/107.pdf. [01/07/2013]

Guerrieri G. (2006), *Le fonti di entrate degli enti locali: i tributi propri*, in *La finanza locale in Italia - Rapporto 2005,* a cura di ISAE-IRES-IRPET, Milano, Franco Angeli

Lunghini G. (1993), *Equilibrio*, Torino, Bollati Boringhieri

Lunghini G. (2012), *Conflitti, crisi, incertezza*, , Torino, Bollati Boringhieri

Muraro G. (1998), *Reddito normale e rendita catastale nel patrimonio residenziale: il difficile rapporto tra teoria e pratica*; in *Atti del XXVIII Incontro di studio- Valori immobiliari, catasto e fiscalità*, a cura di Gajo P. e Miccoli S, Roma, Ce.S.E.T

Napoleoni C. (1965), *L'equilibrio economico generale*, Torino, Boringhieri

IVSC *International Valuation Standards* (2007), Londra, edizione 2007.

Roscelli. R – Simonotti M (2006), *Catasto, valori e regole chiare*, in *Sole 24 ore* 16 ottobre 2006

Roscelli. R – Simonotti M. (2007), *Catasto di redditi e catasto di valori*, in *Catasto patrimoniale. Chi lo vuole ?*, AA.VV, Roma, Confedilizia Edizioni

Roscelli. R – Simonotti M. (2007), *Per le tariffe d'estimo l'algoritmo non basta*, in *Sole 24 ore* del 28 maggio 2007

Sergio Steve (1976[7]), *Lezioni di Scienze delle finanze*, Padova, Cedam

Tecnoborsa (2011[4]), *Codice delle valutazioni immobiliari,* Roma, Tecnoborsa

Vianello F. (1992), *Precisazioni in tema di prezzi naturali*, in *Saggi di politica economica Vol. II*, a cura di Acocella, N. Rey G.M., Tiberi M., Milano, Franco Angeli