



Local taxation and urban development. Testing for the side-effects of the Italian property tax[☆]



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ABSTRACT

Land is an essential yet limited natural resource. Its current unsustainable use asks for a better understanding of the main determinants of urban expansion. A heuristic approach is used to analyze urban development in Italy. In particular, the paper estimates an econometric model to test the impact of the Italian property tax (ICI) on the local authorities' behavior and, in particular, on urban planning and development. It tests whether its introduction has fostered rather than dampened construction activity. The hypothesis put forward is that, because of the concurrent market conditions, the introduction of the tax has facilitated urban development. The structure of the tax and the devolution process that began in the '90s induced local municipalities to adopt less tight (accommodative) urban policies to offset budgetary needs. A more elastic urban policy reduces price volatility. However, its overall welfare effect is not clearly determined. Indeed, *ceteris paribus*, geographical areas with more elastic housing supply witness larger land consumption. The land use changes we witnessed in the last decades could be the combined effect of financial and fiscal aspects. If this is so, careful attention should be given to the issue of whether leaving urban planning and the power to levy property taxes under the same jurisdiction.

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1. Introduction

The recent introduction into the Italian tax system of the IMU (Imposta Municipale Unica: single municipal tax), a local property tax on residential and commercial buildings and developable land, has revived an old political debate that started in 1993, when Italian municipalities were given permission to tax properties by means of the ICI (Imposta Comunale sugli Immobili). This is a local property tax levied by the local administration. It is an annual levy based on the cadastral rental value of the property (*valore catastale*).

Together with the political debate, a parallel scientific debate developed, mainly dealing with themes such as yardstick competition and the equity aspects of the tax (Pellegriano and Piacenza, 2011; Longobardi, 2008; Baldini et al., 2005; Bordignon et al., 2003). To the authors' knowledge, no one has investigated the possible impact of these taxes on the real estate market. In particular, nobody has explored whether the introduction of the tax dampened the supply of new housing or, almost paradoxically, as a side-effect of its structure, contributed

to increasing the issuance of building permits and fostering the Italian urban development and the ensuing soil sealing. Among all the typologies of land use changes, urban development is the most alarming. In contrast to other changes, such as in agricultural land, the development of farmland for new housing or infrastructures is permanent or very difficult and slow to reverse, and only remediable at very high costs (EEA and JRC, 2006). Urbanization is therefore the ultimate "soil consumption" activity (EEA and JRC, 2010). Therefore, considering the important role that soil has in all ecosystem processes (Dominatia et al., 2010) and the ongoing debate on the economic and environmental impact of soil sealing (Fischer et al., 2013), it is of paramount interest to investigate the main determinants of urban expansion and local public policies.

The heuristic is applied to Italian land-use policy. Drawing on experts and local administrators' opinions and empirical evidence, the hypothesis put forward in this study is that, because of the favorable market conditions and the fiscal and institutional reforms passed in the '90s, the introduction of the property tax effectively fostered, or at least did not hinder, construction activity. It has, rather, produced a mutually beneficial interdependency between developers and municipalities. Indeed, as a consequence of the fiscal reform, the ICI tax became the most important tool to increase local revenues and compensate for the reduction of central government transfers to municipalities. Therefore, since municipalities have the power to grant planning and issue building permits, *ceteris paribus*, construction may have benefitted from less stringent (accommodative) land use and/or urban policy.

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In other words, due to the decentralization process undertaken in the '90s and the increasing financial needs of municipalities that ensued, local administrations may have used urban planning as a way of dealing with budgetary constraints.¹ While this behavior may have reduced price volatility, it has simultaneously caused a larger land use change.

These issues were not dealt with in the Italian literature. They also remained essentially on the sidelines of international scientific debate. Researchers have only recently begun to deal with these aspects, and in particular to analyze the relationship between physical and regulatory constraints and the supply elasticity of new buildings. In this line of investigation, land regulation is considered for its ability to dampen or promote the swiftness of the supply response to exogenous demand shocks and, therefore, as a factor that can affect the equilibrium price of the real estate market (Hilber and Vermeulen, 2012; Glaeser et al., 2008). Other studies have analyzed the relationship between “impact fees”, as a particular kind of regulatory policy, and the supply of new housing (Ihlanfeldt and Shaughnessy, 2004; Burge and Ihlanfeldt, 2006a,b). In line with the theoretical expectations, results when statistically significant, demonstrate that development or impact fees have a negative (although small) effect on new construction (Mayer and Somerville, 2000a).

Normally, as it is in the case of Italy, development, regulation, impact fees and property taxes are the responsibility of local municipalities. If they are not well implemented and integrated, a trade-off between fiscal and urban planning policies may arise. If this is so, what happens when the local authority's tax revenue goals enter into conflict with its land use aims? If the property tax represents the main source of the municipality's revenue, which of these interests will prevail?

This study aims to spur reflection on such aspects. To this end, following the methodological framework developed in the literature on the topic, it estimates an econometric model to verify the impact of the main economic variables on local urban policy and, therefore, on housing supply. Then, in order to validate the research hypothesis, i.e. that the introduction of ICI tax effectively affected the municipalities' behavior, we test for the presence of a structural break in the series (Chow test). This ascertains no change in the parameters in the period considered. However, the statistical significance of the coefficient of the dummy variable evidences a time effect. It reflects a non-stability of the intercept in the sample period and, therefore, a change in the behavior of the endogenous variable (emitted permits). In the authors' opinion, a possible explanation for it is that, due to the decentralization process that started in the '90s in Italy, local municipalities capitalized on the concurrent market conditions to offset budgetary needs.

The remainder of the paper is structured as follows. In the next section we review the literature. Then, before presenting and discussing the results of the empirical analysis, in Section 3 we provide useful background information on the Italian context and the evolution of the main social and economic variables. Finally, we discuss the results and present conclusions with some thoughts on future research.

2. Regulation and Supply of New Housing

At first, the literature on the real estate market, and on new housing in particular, focused mainly on analyzing the elasticity of the supply curve and on the relationship between house prices and certain important variables affecting the demand and supply side, i.e. production costs, ease of access to loan market, interest rates (Muth, 1960; Follain, 1979; Poterba, 1984). Before the *subprime* and ensuing economic crisis, it was a quite firm belief that researchers should mainly focus

their attention on estimating the supply function. Indeed, it was a common argument that housing demand was much better understood than the supply side (Ball et al., 2010).

Two basic approaches have been used to estimate housing supply, with the main aim of estimating the price elasticity of supply: reduced form estimation and structural estimation (DiPasquale, 1999). Perhaps partly due to the different models and datasets used, the results have been quite inhomogeneous (Vermeulen and Rouwendal, 2007; Caldera and Johansson, 2013). Nevertheless, some consensus exists on the variables that can be considered among the main determinants of the supply of new housing: population dynamics; house prices; construction costs; credit constraints; interest rates; land use regulations; impact fees; time elapsed to deliver a permit.

While the results concerning elasticity are neither convergent nor homogeneous, a greater consensus exists on the impact of other variables, such as land use regulation and urban planning policies, on residential development. More than other factors, the latter seem to be the only elements able to dampen the impact of demand shocks on urban growth and, therefore, hinder the economic and environmental consequences of expansion cycles or price bubbles (Caldera and Johansson, 2013; Green et al., 2005; Monk and Whitehead, 1996). *Ceteris paribus*, supply elasticity is also affected by: geographical and environmental constraints (Paciorek, 2013; Li et al., 2013; Saiz, 2010); customs and historically determined aspects of land use (Meen and Nygaard, 2011); the length of time it takes to obtain planning permission, its cost and the uncertainty of outcomes (Ball, 2011; Ball et al., 2009; Mayo and Sheppard, 2001; Mayer and Somerville, 2000a).

Many studies demonstrate that all these aspects reduce housing supply elasticity (e.g., Green et al., 2005; Quigley and Raphael, 2005; Saiz, 2010; Ihlanfeldt and Mayock, 2014) while raising price volatility (e.g., Glaeser et al., 2005; Quigley and Raphael, 2005; Saks, 2008; Hilber and Vermeulen, 2012; Huang and Tang, 2012; Stevenson and Young, 2014). But, as pointed out by Green et al. (2005), while it is a matter of fact that an inelastic supply curve causes higher price volatility, it is also evident that the overall welfare effect is not clearly determined. Indeed, geographical areas with more elastic housing supply respond to a bubble more extensively which may cause additional land consumption.

The responsiveness of the housing supply obviously depends on other important factors too, such as user costs, and in particular interest rates and taxation. However, their impact turns out to be relatively reduced (Levin and Pryce, 2009). As for user costs, empirical models achieve contrasting results, with coefficients that are frequently insignificant or even of the wrong sign (Caldera and Johansson, 2013; Andrews et al., 2011; McQuinn and O'Reilly, 2008; Himmelberg et al., 2005; McCarthy and Peach, 2004; Case and Shiller, 2003). With regard to taxation, the results are more convergent. Yet empirical data demonstrate that *una tantum* taxes (e.g. impact fees) have limited impact on the housing development of a given area. Indeed, their impact is significantly lower than other forms of regulation, such those that tend to lengthen the development process (Mayer and Somerville, 2000a). In many cases, *una tantum* taxes merely affect the timing of an investment, delaying it (Mayer and Somerville, 2000a; McFarlane, 1999). However, as emphasized by Burge and Ihlanfeldt (2006a,b), when the tax is earmarked for the provision of specific public services, the net effect on the housing supply may be positive.

The same applies to empirical research on property taxes. As expected, the results of these studies, when statistically significant, highlight that a negative (albeit modest) relationship between taxation and investment exists in terms of new houses (Green et al., 2005; Plassmann and Tideman, 2000; Malpezzi and Mayo, 1997) or house sizes (England et al., 2013). Obviously, this impact also depends on the way the tax is structured and the tax base. According to Arnott (2005), the impact on construction is neutral if the tax is imposed on land, regardless of whether or not it is developed. On the contrary, the relationship is positive if the tax discriminates between developed

¹ In his study on Catalonia and Galicia, Keating (2001) maintains that, instead of putting in place rigorous urban planning policies, municipalities permit sprawl, hoping to expand the property tax-base as an alternative to increasing rates.

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