

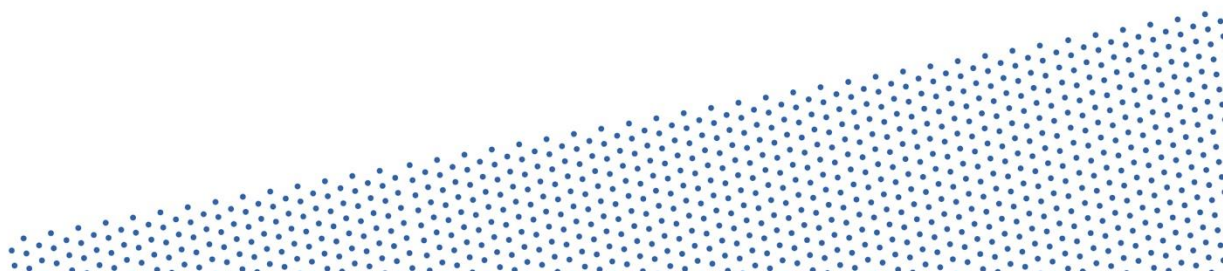
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## **ARE HIGHER PROPERTY TAXES COSTLY FOR EMPLOYMENT?**



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# ARE HIGHER PROPERTY TAXES COSTLY FOR EMPLOYMENT?

## KEY FINDINGS

- Property taxes significantly impact Belgium's fiscal landscape. In the EU, Belgium ranks fifth in property tax generation, collecting 3% of government revenues as property taxes.
- While policymakers generally view immovable property taxes as having a limited detrimental effect on economic growth, their influence on employment remains underexplored.
- Higher property taxes can adversely affect employment by driving down property prices. Employment reduces due to lower household consumption as housing wealth declines (*housing wealth channel*) and lower labor demand because firms use real estate assets as collateral to obtain new loans (*firm collateral channel*).
- We present evidence on both channels by analyzing the employment response to Italy's 2012 property tax reform. Our findings indicate that municipalities increasing property taxes by more experience a higher employment decline. In line with the capitalization hypothesis, real estate prices in residential and commercial sectors decrease more in municipalities with higher tax rates. Approximately 50% of the employment drop can be attributed to the *housing wealth effect* or *firm collateral effect*.

## INTRODUCTION

Recurrent land and real estate property taxes are prevalent in most countries worldwide. Nowadays, property taxes play a crucial role as governments face increasing pressure to fund public services and address budget deficits. For developed economies, property taxes are pivotal in the fiscal landscape, constituting the primary revenue source for local governments to fund essential services such as education, infrastructure, public safety, and healthcare.

Policymakers often view recurrent taxes on land, residences, and non-residential structures as less disruptive to investment and labor decisions than alternative tax measures. In general, immovable property taxes are regarded as the least detrimental to economic growth (See Arnold et al., 2011 and Blöchlige, 2015 ). The argument in favor of property taxation lies in three points. Firstly, they constitute an essential element of fiscal decentralization, serving as local government's primary source of discretionary revenue. Secondly, taxes on immovable property are challenging to evade and relatively easy to enforce, thus providing a stable and dependable revenue stream, which aids governments in maintaining fiscal sustainability. Lastly, property taxes are inherently progressive, as they are levied on real estate owners in proportion to their assets, making them a vital fiscal tool for promoting more equitable wealth distribution.

The consensus among policymakers regarding the benefits of property taxation has led to a push for reforms to enhance government fiscal sustainability and address budgetary issues. However, the evidence on the effect of property tax reforms on local economic conditions is inconclusive. The importance of this topic is of particular relevance for Belgium, as [reports](#) indicate that a rise in the indexation coefficient for annual cadastral income will result in a 9.6% increase in property taxes at the end of 2023. This note provides a discussion of the employment consequences of higher property taxes. We provide novel evidence on the effect of property taxes on non-tradable employment during the 2012 tax reform in Italy. Moreover, our study quantifies the role of real

estate prices in explaining employment changes during a property tax increase.

## PROPERTY TAXES AND LABOR RESPONSE

We begin with a general overview of the impact of higher property taxes on employment. To better understand the potential mechanisms, we analyze the case of a permanent, unexpected increase in property tax rates.

Initially, an increase in property taxes boosts the revenues of local governments. If this translates into increased spending on public goods, it can lead to higher employment and economic activity. However, the direct effect can diminish or completely offset due to changes in the tax base. Tax changes induce mobility among households and firms, causing them to relocate to jurisdictions with lower property tax rates (Löffler and Siegloch, 2021). When firms move to areas with lower tax burdens, there should be an increase in employment demand in those locations. Similarly, households choosing to reside in areas with lower tax rates should contribute to an increase in labor supply.

The importance of tax base mobility in capturing the effect of raising property taxes on employment depends on the relative costs of relocating across jurisdictions and, most importantly, on the agents' expectations regarding the tax increase's permanence. Since moving to a more tax-friendly location can be prohibitively costly in the short term, only permanent tax increases are likely to produce a substantial response in labor demand and supply through this channel.

A recent mechanism studied in the literature explores the role of financial constraints to understand the impact of property tax increases on local employment. On the one hand, higher property taxes can exacerbate liquidity constraints because they are based on an illiquid stock (Brockmeyer et al., 2023), affecting sales and employment in areas with a significant proportion of constrained agents. On the other hand, according to the capitalization hypothesis (Oates 1969, 1973), the price of real estate assets is determined by the net present value of the services that immovable property provides, minus all the costs associated with owning a property.

Within this narrative, higher property taxes reduce property prices, lowering the financial resources available to households and firms as real estate assets are commonly used as collateral to secure new loans (*collateral effect*). Additionally, lower residential prices reduce household consumption (*wealth effect*), resulting in lower sales and demand of labor for firms that rely on local market demand.

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*Higher property taxes affect the local labor market through several channels. On the one hand, shifts in residential and corporate locations negatively impact labor supply and demand. On the other hand, financial constraints interact with the negative effect of higher property taxation on real estate prices, resulting in lower labor demand due to a housing wealth effect and firm collateral effect.*

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Compared to the labor mobility response, an unexpected permanent increase in property taxes can substantially impact employment through the net wealth and collateral channel in the short run. The importance of these two channels depends on the elasticity of the supply of real estate assets in a jurisdiction, as locations with inelastic supply experience a higher drop in real estate prices for a similar drop in demand.

Finally, we must also consider that a property tax reform generates a general equilibrium effect as prices of tradable goods and mobile production inputs change, affecting employment in each jurisdiction locally.

In summary, an unexpected permanent increase in property taxes affects the local labor market through various mechanisms. In the medium and long run, changes in the locations of households and firms decrease labor market demand and supply. In the short run, the decline in demand for real estate assets and its interaction with financial frictions can also play a significant role in explaining the employment response. The final response also depends on the size of the general equilibrium effect on the local labor market.

## PROPERTY TAXATION IN THE EU

Property taxes play a significant role in generating revenue for member states of the European Union (EU). In 2021, the EU averaged 1.1% of recurrent immovable property taxes relative to GDP and 2.5% concerning total taxation (see Figure 1). These numbers are comparable to those found in developed countries. Within the EU, France (5%), Denmark (4.5%), and Poland (3.7%) rank as the top three countries in terms of property tax generation as a share of total government revenues. For Belgium, the share of revenues collected by property taxes is 3%, which is still above the EU average and places the country in sixth place within EU member states.

With the EU debt crisis starting around 2012, many member states pushed for fiscal reforms, adjusting most of the available tax instruments to speed up fiscal consolidation. For EU countries affected by debt sustainability problems, such as Greece, Ireland, Italy, Portugal, and Spain, the characteristics of the fiscal reforms included a rise in the taxes levied on immovable properties either by adjusting statutory rates or introducing measures to increase the tax base.

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*In 2021, Belgium collected 3% of government revenues as property taxes, which placed the country fifth in terms of property tax generation within the EU.*

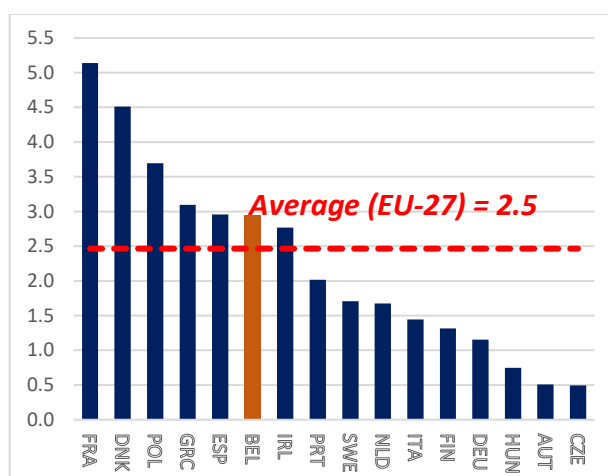
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Overall, the property tax reforms introduced during the EU debt crisis aimed to increase revenue and address budget deficits. However, they were also controversial, with many arguing that they placed an unfair burden on homeowners and contributed to the housing affordability crisis in some countries.

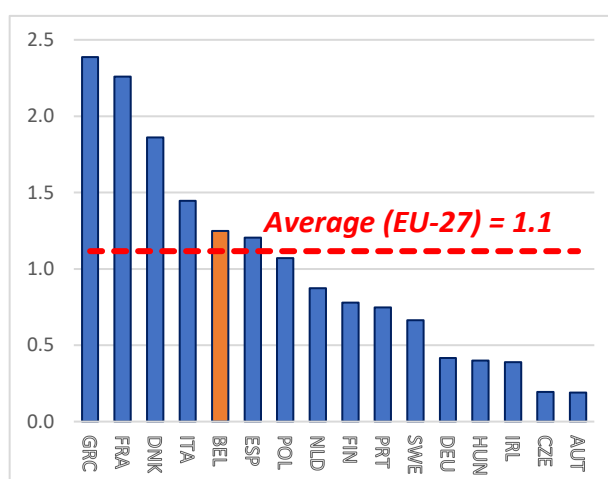
Next, we provide the details of the Italian property tax reform. We used this episode to provide empirical evidence on the effect of higher taxes on employment and decompose the relative importance of the *housing wealth effect* and *firm collateral effect*. The employment consequences of the 2012 Italian Property tax reform is a valuable case study for Belgium and many other EU countries due to the similarities of the property tax

system, such as: (i) property taxes are levied on owners., (ii) residential and non-residential properties are usually taxed differently, (iii) tax rates are defined at the local level on an annual basis, (iv) the tax base is calculated using a national cadastral value uncorrelated with the market price of real estate assets, and (v) the total amount owners pay is the product of the local tax rate, the national cadastral value, and an annual revaluation coefficient.

**Figure 1– Recurrent taxes on Immovable property in the EU: 2021**



**(a) Percentage total taxation**



**(b) Percentage of nominal GDP**

Source: [European Commission: Taxation and Customs Union](#)

## THE 2012 PROPERTY TAX REFORM IN ITALY

Like most EU countries, the property tax system in Italy is managed by local governments. In particular, each year, municipalities decide the property tax rate within a range defined by the central government. There are two tax rates applied to immovable properties based on their use. The principal tax rate is applied to residential properties used as the main dwelling of the owner. The secondary tax rate is paid by owners of properties used for productive purposes and other residential properties not used as the owner's principal residence.

At the end of 2011, the sharp increase in the spread of government bonds forced the newly appointed government to push forward an emergency fiscal package named the "Save-Italy" decree, which relied primarily on reforming the property tax system with the creation of the new "Own Municipal Tax" or "Experimental"-IMU system. The announcement of the "Experimental"-IMU was not anticipated by the general population and local authorities as they initially expected a minor rise in only the secondary tax rate by 2014.

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*Studying the employment response during the 2012 tax reform in Italy is a valuable case study for many EU countries with similar property tax systems. For Belgium, our study provides a baseline estimate of the employment response to increasing property tax rates through a drop in real estate prices.*

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The changes introduced by the "Experimental"-IMU required that: (i) municipalities set the property taxes within the range 0.2%-0.6% for the principal tax rate and 0.46%-1.6% for the secondary tax rate, (ii) tax rates had to be deliberated before October 31st, (iii) the default rates of 0.4% for principal and 0.76% for secondary automatically applied if a municipality did not deliberate before the deadline (iv) municipalities needed to transfer back about 50% of the IMU tax revenues to the general government.

The tax increase during the tax reform in Italy was significant compared to prior years, in which property taxes were almost constant. In 2012, the average

increase in the principal and secondary tax rates across municipalities was 0.43% and 0.24%, respectively. The latter implied that property taxes for households' primary dwellings were higher by 322 euros. At the same time, firms owning commercial real estate (CRE) proper

However, as with other EU property tax reforms introduced in this period, the "Experimental"-IMU was not well received by the general population and municipal authorities. The widespread opposition to the new tax system forced the central government to cancel the initial tax reform by 2014.

**Table 1. Property tax increase estimates: Employment and real estate prices**

Growth rate change (in pp.)		Employment	Real Estate Price	
			Housing	CRE
Tax increase = 1 pp	Residential Tax	-0.087*** (0.015)	-0.022** (0.009)	-0.005 (0.010)
	CRE tax	-0.045*** (0.011)	-0.017*** (0.006)	-0.032*** (0.008)

Source: [Working paper](#)

ties had to pay, on average, 200 euros more in property taxes. Moreover, based on the 2012 Italian Survey on Household Income and Wealth, 67% of the households across the Italian territory considered that the change in tax rates would be permanent.

*The 2012 tax reform in Italy was not anticipated, but the population expected that the increase in property taxes would be permanent. The evidence shows that in the short run, employment, and real estate prices declined in municipalities with higher tax rates, but there was no response in migration patterns across municipalities, which is consistent with the fact that the tax increase policy was reverted the following year.*

At the aggregate level, the property tax reform significantly affected the central government's finances. In 2012, property tax revenues increased by approximately five billion euros, of which four billion euros were reimbursed to the central government. At the same time, transfers to local governments were reduced by more than eight billion euros in 2012. Ultimately, the central government's deficit was reduced by almost eight billion euros, representing approximately 0.5% of the Italian nominal GDP in 2012. In contrast, the 2012 revenue of municipal governments increased by only one billion euros, significantly lower than the average growth of approximately eight billion euros observed during 2000-2011.

## METHODOLOGY AND EMPIRICAL ESTIMATES

In a recent [working paper](#), we exploit the increase in property taxes during the 2012 tax reform in Italy to estimate the effect of higher property taxation on employment. We employ a difference-in-differences strategy using municipal-level data from 2008 to 2015 to estimate the impact of higher tax rates on local employment.

The main outcome variable of interest is non-tradable employment, which is expected to respond more to local shocks. Additionally, we calculate the response of residential and CRE prices to provide evidence of the capitalization of property taxes.

We use the changes in tax rates for residential (principal) and CRE (secondary) properties as treatment intensity variables. The idea behind this approach is that each tax rate change acts as a specific shock, impacting only the asset subject to heavier taxation. Consequently, the estimated impact of higher residential taxes on employment should capture the housing net worth channel. In contrast, the shift in labor due to elevated CRE tax rates should encapsulate the firm collateral channel.

Our empirical results in Table 1 show that higher property taxes correlated with lower employment growth. We also find that house and CRE prices decrease in response to higher property taxes.



As we report in the first column of Table 1, a one percentage point (pp) increase in residential taxes leads to a reduction in the growth of non-tradable employment by 0.087 pp. Conversely, the same increment in the tax rate for CRE results in lower growth of non-tradable labor by 0.045 pp.

The second and third columns of Table 1 present our results for residential and CRE prices. Notably, the response of real estate prices to their respective tax rate is relatively higher than their response to the other tax rate. Specifically, a one pp increase in residential taxes reduces housing price growth by 0.02 pp but appears to have no discernible impact on the prices of commercial real estate properties. Meanwhile, a one pp increase in the tax rate for CRE reduces its price growth by 0.032 pp, whereas its effect on residential price growth is only half (0.017 pp).

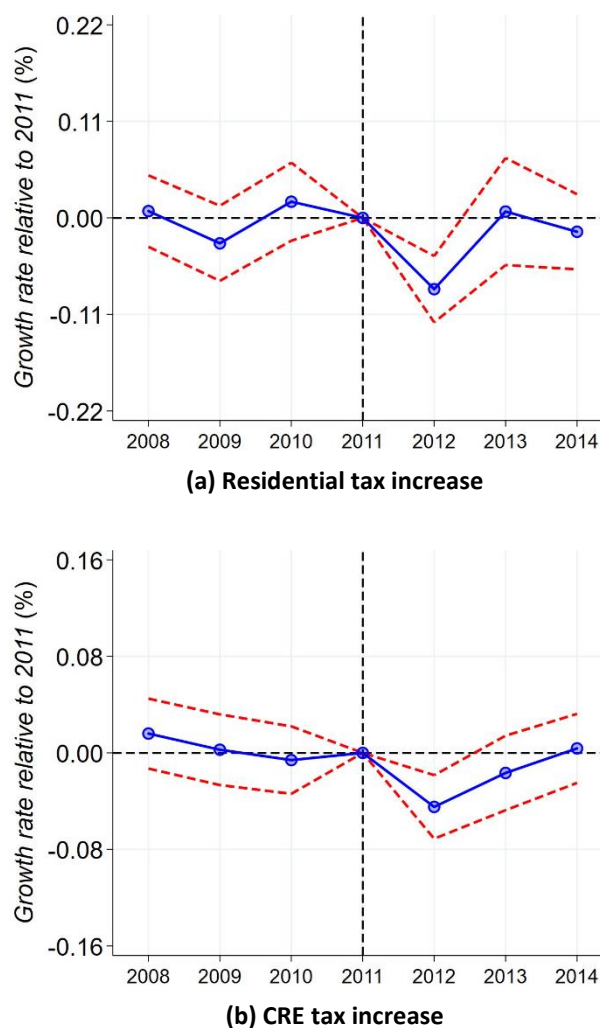
Regarding economic significance, our baseline estimates capture 20%, 12%, and 17% of the interquartile range for employment, residential, and CRE prices, respectively.

Conversely, as seen in Figure 2, employment growth was not systematically different across municipalities choosing different property tax changes in 2012 before the tax reform. Moreover, we find that employment declines only during the year of the reform. This effect disappeared one year later, consistent with the cancellation of the "Experimental"-IMU at the end of 2013.

Our study also finds that the increase in property taxes during the 2012 tax reform does not significantly affect in-migration and out-migration rates. Additionally, the revenues of municipal governments increase, but this does not translate into higher expenditures on public goods. Instead, local governments use the additional revenues to pay back their debts.

In summary, the evidence shows that the increase in property taxes during the 2012 tax reform in Italy was unexpected and initially perceived as a permanent raise in tax rates. However, there was no response in migration patterns across municipalities, as this policy was canceled the following year. Consistent with the latter, we only observe a short-term drop in employment, which is explained by a decline in house and CRE prices the year the property tax rate increased.

**Figure 2– Employment response to higher prop. taxes**



Source: [Working paper](#)

## EMPLOYMENT RESPONSE DECOMPOSITION

The empirical estimates regarding the 2012 tax reform in Italy suggest that decreasing housing and CRE prices was crucial in reducing employment levels. To investigate this further, we construct a general equilibrium model that incorporates financial constraints and replicates the most essential aspects of the tax reform. We aim to separate and quantify the impact of employment changes due to the *housing wealth effect and firm collateral effect*, captured by the employment reduced form effects estimated for Italy.

Using the model, we can decompose the labor response to higher property taxes into three parts: one capturing either the *housing wealth channel* if residential taxes

**Table 2. Decomposing the employment response to higher property taxes**

Response of employment growth (in pp.) due to		Total Effect	Housing Wealth	Firm Collateral	GE Effect
		(A) + (B)	(A)	(B)	(B)
Tax increase = 1pp	Residential Tax	-0.071	-0.036		-0.035
	CRE tax	-0.061		-0.043	-0.018

Source: [Working paper](#)

increase or *the firm collateral channel* if taxes for commercial properties increase, and a remaining part representing adjustments in labor supply and additional changes in labor demand due to a general equilibrium adjustment of prices and wages.

The first column of Table 2 shows the model's predictions for the reduced-form effects on employment. As we can observe, in the model, a one pp increase in the residential tax rate reduces employment growth by 0.071 pp. Simultaneously, a one pp increase in CRE tax rates reduces employment growth by 0.061 pp. It's worth noting that the employment predictions closely align with the estimates derived from Italian municipal data.

*Our quantitative exercise for Italy predicts that 50% of the decline in municipal employment due to higher residential taxes is explained by the housing wealth channel, and 70% of the labor drop due to higher CRE taxes is attributed to the firm collateral channel.*

The remaining three columns of Table 2 provide a quantitative breakdown of the primary effects contained within the reduced-form response of employment predicted by the model. Our model isolates the *housing wealth* and *firm collateral* channels from the general equilibrium effect on employment following a property tax rate increase. Our results reveal that the two channels associated with the response of housing and CRE prices explain at least half of the employment response to higher property taxes.

Specifically, the first column shows that a one pp increase in residential taxes reduces employment growth by 0.036 pp due to the *housing wealth effect*, accounting for over 50% of the reduced-form effect of higher residential taxes. Similarly, the model predicts that a one pp increase in CRE taxes reduces employment growth by 0.043 percentage points due to the *firm collateral effect*, capturing 70% of the reduced-form effect of higher CRE taxes on employment.

## CONCLUSIONS

Property taxes are an essential tool for government taxation and represent the primary source of revenue for local governments to fund essential services such as education, infrastructure, public safety, and healthcare. This is no exception for countries within the EU, as property taxes provided an average of 2.5% of the total tax collection in 2021.

Policymakers regard immovable property taxes as having the least detrimental impact on economic growth. However, the literature argues that increasing property taxes can be costly for employment. Firstly, it can result in a drop in labor supply and demand induced by the out-migration of households and firms to jurisdictions with a lower tax burden. Moreover, if higher property taxes translate into lower real estate prices, employment demand should decline due to a *housing wealth* or *firm collateral effect*.

In this note, we present evidence of the magnitude of employment decline from lower real estate prices after



a property tax reform. Empirically, we exploit the 2012 Italian tax reform to estimate its effect on employment. Then, we build a quantitative model that reproduces the reduced form effects on employment and provides a decomposition to quantify the size of the *housing wealth effect* and *firm collateral effect* resulting from a property tax increase.

Our empirical results show that a one pp increase in residential taxes reduces employment growth by 0.087 pp. Our model predicts that more than half of that decline is explained by the *housing wealth effect*. Similarly, we estimate that a one percentage point increase in CRE taxes reduces employment growth by 0.045 pp, with our model predicting that a *collateral effect* on firms captures 70% of that decline.

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