OECD Economics Department Working Papers No. 1205

Reforming the Tax on Immovable Property: Taking Care of the Unloved

Hansjörg Blöchliger

https://dx.doi.org/10.1787/5js30tw0n7kg-en

OECD

Unclassified **ECO/WKP(2015)23**

Organisation de Coopération et de Développement Économiques
Organisation for Economic Co-operation and Development **22-Apr-2015**

English - Or. English

ECONOMICS DEPARTMENT

ECO/WKP(2015)23
Unclassified

REFORMING THE TAX ON IMMOVABLE PROPERTY: TAKING CARE OF THE UNLOVED

ECONOMICS DEPARTMENT WORKING PAPERS No. 1205

By Hansjörg Blöchliger

OECD Working Papers should not be reported as representing the official views of the OECD or of its member countries. The opinions expressed and arguments employed are those of the author.

Authorised for publication by Jean-Luc Schneider, Deputy Director, Policy Studies Branch, Economics Department.

All Economics Department Working Papers are available at www.oecd.org/eco/workingpapers

JT03374931

Complete document available on OLIS in its original format
This document and any map included herein are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

English - Or. English

OECD Working Papers should not be reported as representing the official views of the OECD or of its member countries. The opinions expressed and arguments employed are those of the author(s).

Working Papers describe preliminary results or research in progress by the author(s) and are published to stimulate discussion on a broad range of issues on which the OECD works.

Comments on Working Papers are welcomed, and may be sent to the Economics Department, OECD, 2 rue André-Pascal, 75775 Paris Cedex 16, France, or by e-mail to eco.contact@oecd.org.

This document and any map included herein are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

© OECD (2015)

You can copy, download or print OECD content for your own use, and you can include excerpts from OECD publications, databases and multimedia products in your own documents, presentations, blogs, websites and teaching materials, provided that suitable acknowledgment of OECD as source and copyright owner is given. All requests for commercial use and translation rights should be submitted to **rights@oecd.org**

Abstract/Résumé

Reforming the Tax on Immovable Property: Taking Care of the Unloved

The tax on immovable property recently started to regain its former significance, but the tax yield still remains low, with slightly more than 1% of GDP and wide variation across countries. Against this background this paper surveys property tax policy in OECD countries and analyses the efficiency, distributional and stabilisation properties of property tax. Despite rising house prices, property tax revenues are modest, because tax values of property are set below market values; and because myriads of tax exemptions reduce the tax base and tax revenues further. While property taxes are considered the least harmful to growth, a pure land tax is preferable to a tax on investment. Property taxes can be anything from progressive to regressive, depending on tax incidence and the distribution of immovable property across income groups. Property taxes tend to stabilise house prices, although the effect is rather small. Finally, property taxes can underpin sustainable land use. Political economy factors largely explain resistance against property tax reform, which, among others, might include measures for poor and cash-strapped households. Property taxes are an overwhelmingly sub-national tax, and property tax reforms that include reforms of intergovernmental fiscal frameworks may turn out to be more successful.

JEL classification: H21; H71; H77

Keywords: Immovable property taxation, local taxation, fiscal federalism

Réformer la taxe foncière, parent pauvre du régime fiscal

L'impôt sur la propriété immobilière a récemment commencé à regagner de son ancienne importance, mais les recettes qu'il procure restent faibles, à peine plus de 1 % du PIB et avec de larges variations d'un pays à l'autre. Dans ce contexte, ce document examine les politiques en la matière dans les pays de l'OCDE et analyse les propriétés de l'impôt foncier en termes d'efficacité, de redistribution et de stabilisation. Malgré la hausse des prix des logements, les recettes de l'impôt foncier sont modestes, parce que la valeur fiscale des biens immobiliers est fixée à un niveau inférieur aux prix du marché ; et parce qu'une myriade d'exemptions fiscales réduisent l'assiette d'imposition et minorent les recettes. Les impôts fonciers sont considérés comme les moins préjudiciables à la croissance, et une taxe foncière pure est préférable à une taxe sur l'investissement. Les impôts fonciers peuvent être plus ou moins progressifs ou régressifs, en fonction de l'incidence fiscale et de la distribution des biens immobiliers entre groupes de revenus. Les impôts fonciers ont tendance à stabiliser les prix des logements, bien que cet effet soit assez minime. Enfin, les impôts fonciers peuvent favoriser une utilisation durable des terres. Des facteurs liés à l'économie politique expliquent pour une bonne part la résistance à la réforme de la fiscalité immobilière, qui pourrait englober entre autres des mesures visant les ménages pauvres et à court de liquidités. L'impôt foncier est essentiellement un impôt infranational, et les réformes qui s'emploient également à refondre le cadre budgétaire interadministrations seront probablement plus efficaces.

Classification JEL : H21 ; H71 ; H77

Mots-clés : impôts sur la propriété immobilière, fiscalité locale, fédéralisme budgétaire

TABLE OF CONTENTS

REFORMING THE TAX ON IMMOVABLE PROPERTY: TAKING CARE OF THE UNLOVED.....5

1. Introduction.....6
2. Main trends and developments.....6
   2.1. The property tax: A capital, income and consumption tax.....6
   2.2. The significance of the property tax varies strongly across countries.....7
   2.3. The share of the property tax is shrinking.....8
3. Property tax systems in OECD countries: an overview.....9
   3.1. Scope of recurrent immovable property taxation.....9
   3.2. Valuation and assessment of immovable property.....10
   3.3. Tax abatements and reductions.....11
   3.4. Tax rates.....13
4. Economic effects of property taxation.....13
   4.1. Property taxation is efficient – but that depends on design.....13
   4.2. Property taxation is not very progressive.....14
   4.3. Property taxation can stabilise housing markets.....15
   4.4. Property taxation can promote sustainable land use.....17
5. Property taxation and intergovernmental fiscal relations.....19
   5.1. Property tax reforms may entail reforms of intergovernmental relations.....19
   5.2. Intergovernmental relations may help underpin property tax reform.....20
6. Personal income tax on imputed rent: An alternative to the property tax?.....20
7. Making property tax reform happen.....22
   7.1. Political economy issues in property tax reform.....22
   7.2. Making property tax reform happen.....23

REFERENCES.....25

ANNEX.....28

Tables

1. Property taxation dampens house price developments.....16
2. Property taxation is counter-cyclical or a-cyclical.....16
3. Strategies for property tax reform.....24
A1. The valuation of immovable property.....28
A2. Property tax abatements and property tax rates.....30

Figures

1. The significance of the recurrent immovable property tax varies across countries.....7
2. The share of the property tax is declining.....8
3. Business property taxation is still important in some countries.....9
4. The property tax is a typical sub-central tax.....14
5. The personal income tax and the property tax tend to be substitutes.....21

Box

Box 1. A short assessment of a long exemptions list.....12

REFORMING THE TAX ON IMMOVABLE PROPERTY: TAKING CARE OF THE UNLOVED

By Hansjörg Blöchliger[1]

MAIN MESSAGES

- The share of recurrent immovable property tax revenue in GDP varies between 0.1% and 3.5% of GDP across countries. Its share in the total tax take declined over the past decades, despite sharp rises in property values. More than 95% of tax revenue accrues to state and local governments.
- Most OECD countries tax both land and investment, while only three boast a pure land tax. Many countries do not up-date property values regularly, and if they do, they apply indexation rather than fair market valuation. Various exemptions reduce the property tax base further. This implies that the link between property taxes and house prices is weak in most countries.
- Most sub-central governments have tax-rate-setting autonomy, while the tax base is usually shaped by an upper-level government. Tax rates vary strongly across countries, and some appear to be stuck in a low-tax-base-high-tax-rate trap.
- The efficiency effects of the property tax depend on whether the tax base includes land, investment, such as buildings, or both. A pure land tax is considered most efficient since it hardly affects households' and firms' behaviour. The tax on investment may reduce capital spending, especially of businesses. Still, the property tax affects growth less than other taxes.
- The redistributive effects of the property tax depend on tax incidence, i.e. the question of who pays the tax. Along the income distribution, the property tax can be anything from progressive to regressive. Over the life-cycle, the tax is likely to be neutral. The tax can be designed so as to make it more progressive, e.g. by introducing tax exemptions for low-income households.
- Econometric analysis suggests that property taxes tend to reduce house price volatility, although the effect is small. Property taxation tends to dampen property market cycles and the probability of housing bubbles and slumps. Property taxes provide relatively stable revenues – important for sub-central governments with largely non-cyclical spending – and their budgetary effect is therefore largely neutral over the cycle.
- Property taxes can underpin sustainable land use. A pure land tax can help contain urban sprawl and foster the conversion of developed land instead of greenfield development. The land-use effects of property taxes – which also tax investment – are more ambiguous. Specifically designed "green" property taxes (soil-sealing taxes, development charges, etc.) can further help internalise land-use externalities.
- The property tax is unloved by voters and taxpayers and property tax reforms in OECD countries are rare. There are many political economy factors that explain the resistance to reform, such as salience, the presumptive character or perceived regressivity of the property tax.

---

1. The author is member of the Economics Department of the OECD and head of the OECD Fiscal Network. The author would like to thank Bert Brys, David Bradbury, Peter Hoeller, Pierre Leblanc, Vincent Koen, Jean-Luc Schneider, Alastair Thomas and the delegates of the OECD Fiscal Network for useful comments and suggestions. He also thanks Michel Lahittete for statistical assistance and Celia Rutkoski and Violet Sochay for editorial assistance.

- To overcome reform resistance may require the tax to be better aligned with ability-to-pay, implying means-tested exemptions for low-income households. Some transitional measures may also help shepherding through tax reforms. Technical measures that reduce salience or soften liquidity constraints (e.g. deferral) may also provide relief.
- Since the property tax is a sub-central tax, property tax reforms require reforms to intergovernmental frameworks. These may imply changes to the sub-central tax mix or to inter-governmental transfers. One way to raise sub-central government's interest in collecting more property tax is to remove property tax revenues from equalisation or to link some transfers to tax effort.

1. Introduction

1. Land and property have been taxed for thousands of years. Ancient civilisations taxed immovable property long before they discovered income, business or consumption taxes. More recently, policy-makers have again become enthusiastic about this oldest of taxes. The tax on immovable property, especially when levied on households, is considered the most appropriate to fund local governments; it is supposed to be one of the least harmful to economic growth; it could act as an automatic stabiliser; and it can even be designed so as to have desirable redistributive properties. Yet the tax is unloved by voters and taxpayers. Over the last decades, most OECD countries have resisted reforms that would give the tax a more prominent role in the total tax take. Today the immovable property tax makes up around 1% of GDP and 2½ per cent of total tax revenues on average, and its share is declining. No tax shows a wider gap between hailed benefits and entrenched reform resistance. It is therefore worth having a closer look at the property tax; how it works; what are its side effects besides raising revenue; which reforms should be pursued; and how reforms can be successfully implemented.

2. This paper surveys and evaluates current property tax policy and practice in OECD countries and is organised as follows. The second section provides an overview on the property tax and its significance in OECD countries. Section three surveys its economic impact, such as effects on investment and growth; on income distribution; on macroeconomic stability and revenue buoyancy; and finally on land use. Section four covers the relationship between property taxation and intergovernmental relations. Section five provides a survey of property tax regimes in OECD countries. Section six presents an alternative to property taxation, namely taxation of imputed rent as part of income taxation. The seventh and final section deals with the political economy of property tax reform. The paper relies on answers to a questionnaire sent to OECD member countries in spring 2014; on two country notes describing successful property tax reforms; and on four input papers on specific property tax policy issues. The paper focuses on the *recurrent immovable property tax* and its role as a revenue source for sub-central governments. Other taxes affecting property (i.e. transaction taxes, personal income or value-added taxes) are treated where relevant.

2. Main trends and developments

2.1. The property tax: A capital, income and consumption tax

3. Taxes on immovable property comprise levies on land and buildings and other physical capital like machinery. The recurrent immovable property tax (often simply called "property tax" or "real estate tax") escapes an easy assignment to one of the broad tax categories. It can be considered a capital tax since it taxes an asset or an input to production. It can be considered a consumption tax since it taxes the services that derive from owning or renting a house. It can be considered an income tax since it taxes the imputed rent from owner-occupied housing. The tax on immovable property tax is not neutral since it taxes certain forms of property only (e.g. physical assets), while leaving other types of property untaxed (e.g. financial assets). The taxation of property shows up not only in the "recurrent immovable property taxes" category

of the OECD Revenue Statistics, but also in income taxes (e.g. tax on rent or imputed rent) or consumption taxes (e.g. value-added-taxes when a house is refurbished).

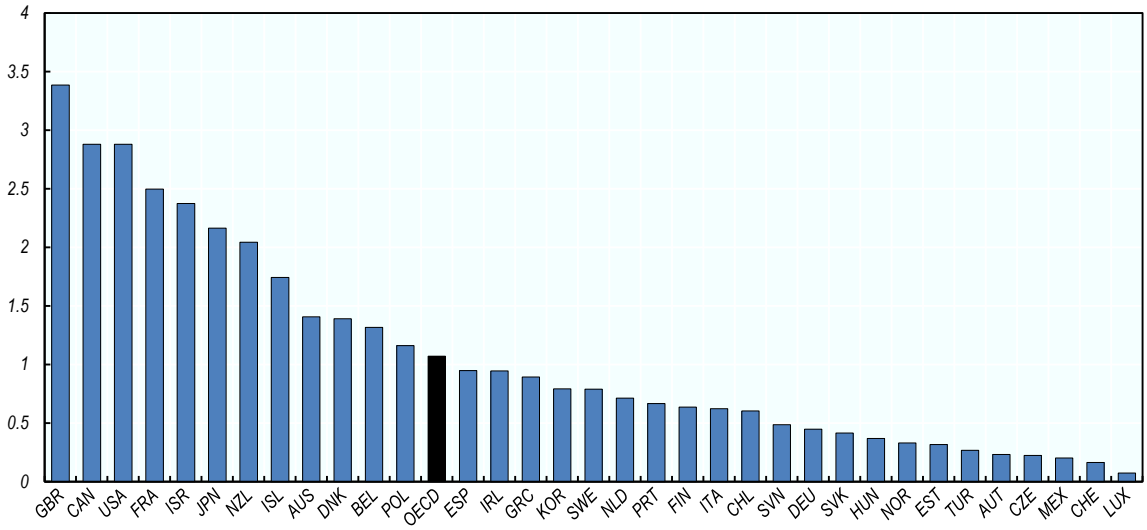
4. The specific character of immovable property taxation is policy-relevant. It suggests different policy approaches for land and buildings, for residential and business property; and for owner-occupied and rented houses. The interaction of the immovable property taxation with other taxes must be carefully evaluated. The degree of efficiency of the property tax depends much on design. While the pure land tax is seen as one of the most efficient and equitable taxes – since it is a tax on a pure rent – the tax on built capital is much less well-regarded, because capital taxes can deter business investment, economic development, and efficient land use.[2] The distributive effect of property taxation also depends on policy design, e.g. on whether poorer or liquidity-constrained households benefit from tax exemptions. The immovable property tax can either be paid by the owner or the occupant of the property; and in several countries both types of recurrent immovable property tax co-exist.[3]

2.2. The significance of the property tax varies strongly across countries

5. The size of the property tax take varies strongly across countries, both in terms of percentage of total tax revenue and in per cent of GDP (Figure 1). Overall, its significance is modest. Across the OECD, taxation of immovable property makes up around 2½ per cent of the total tax take and a bit more than 1% of GDP. Countries with a high property tax-to-GDP ratio include the United Kingdom, Canada and the United States, while the ratio is almost nil in countries such as Luxemburg, Greece and Mexico. The property tax is more prevalent in Anglo-Saxon countries, while the constitutional set up plays no role: there are both federal and unitary countries with both high and low property taxation.

Figure 1. The significance of the recurrent immovable property tax varies across countries

Share of recurrent immovable property tax revenue in GDP, 2012



Source: OECD (2014), *Revenue Statistics 2014*, OECD Publishing. The recurrent tax on immovable property corresponds to category 4100.

2. The property tax is sometimes said to be the combination of the "best and the worst of all taxes" (Vickrey, 1999). See also Mirrlees Review (2011)

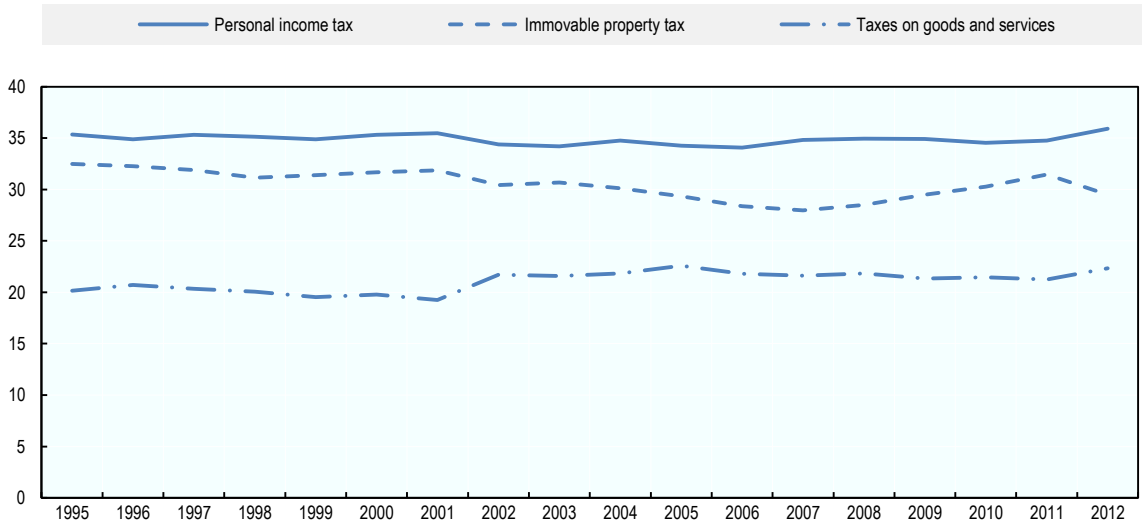
3. For example France has a recurrent tax both on the owner of an immovable property (t*axe foncière*) and on the occupant of an immovable property (t*axe d'habitation*).

2.3. The share of the property tax is shrinking

6. Despite the advantages ascribed to the property tax, its share in GDP remained largely stable over the last decades, hovering at around 1% of GDP. The share rose a bit between 2008 and 2010 when property tax withstood the great recession better than other taxes but shrank again afterwards. However, the share of the immovable property tax in total sub-central taxation has gradually declined. Property tax revenue currently represents less than 30% of sub-central tax revenue, compared to 37% for the personal income tax and 23% for consumption taxes and the remaining 10% for other taxes (Figure 2).

Figure 2. The share of the property tax is declining

Share of major taxes in the total sub-central tax take

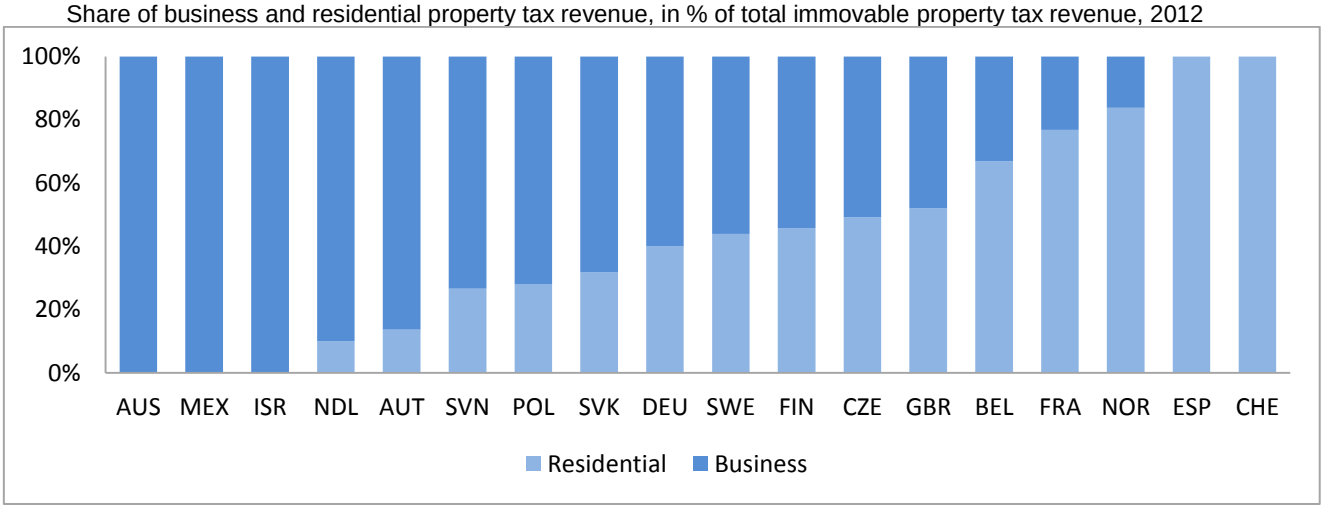


Source: OECD (2014), *Revenue Statistics 2014*, OECD Publishing.

7. Various factors, mostly related to political economy features, could explain the dwindling significance of immovable property taxation. Voters contest the tax. It is not linked to ability to pay, thereby hitting social groups that are income poor, but housing wealthy. The rise of property prices prior to the recent crisis created sustained political pressure on SCGs to limit property tax increases, as exemplified by the tax revolts in many US states. As a result, a variety of often social policy-induced measures such as tax caps, abatements and exemptions, are gnawing away local property tax revenue. In many OECD countries, the tax base, i.e. property/cadastral values, has not been updated for years or even decades, creating distortions and unfairness between different types of property and property owners. As for business property taxation, the dwindling significance of manufacturing with large physical plants – for long the backbone of property tax revenues in many jurisdictions – may also explain the declining share of property tax revenue in the total local tax take. Business taxation represents still a significant fraction of total immovable property taxation in some countries (Figure 3).

Figure 3. Business property taxation is still important in some countries

Share of business and residential property tax revenue, in % of total immovable property tax revenue, 2012



Source: OECD (2014), *Revenue Statistics 2014*, OECD Publishing. In the United States, in 1989 – the latest year for which data are available – the share of business property taxation was around 55%.

3. Property tax systems in OECD countries: an overview

8. This section presents an overview of property tax regimes in OECD countries. Results were mainly obtained through a questionnaire sent to OECD member countries during spring 2014. Property tax systems are presented and evaluated along four main lines: 1) coverage and scope; 2) assessment and evaluation; 3) tax abatements; and 4) tax rates. For more details see Tables A1 and A2 in the Annex.

3.1. Scope of recurrent immovable property taxation

9. The scope of the property tax can be assessed along two lines: 1) the purpose of use i.e. residential (main and secondary) and business property; and 2) the taxed items, i.e. land and improvements. Some countries also tax agricultural land, forests, and undeveloped land. Most countries exempt state owned property and non-profit-organisations.

- *Residential and business taxation*: Most countries tax residential and business property. In a few countries separate taxes for the two types of property exist (such as in Belgium), and quite a few exempt the main residence from the tax (such as Italy). Secondary homes are always taxed, while undeveloped land is quite often tax-exempt. Agricultural land is often not taxed or subject to special agricultural tax regimes.
- *Taxation of land and taxation of improvements/buildings*: In most countries both land and the buildings are taxed, sometimes with lower rates on the buildings and other investment than on land. Only three OECD countries feature a pure land tax. These are Australia (the state of New South Wales), Denmark and Estonia. On the other hand, property taxes in Ireland and Italy (TASI) comprise improvements only.

10. The institutional setting for property taxation varies: most countries have a single integrated property tax; some have separate land and property taxes (e.g. Denmark), some have separate property and buildings taxes (e.g. Italy), and finally some have separate land, property and buildings taxes. A few countries use physical indicators such as a plots' or buildings' size to assess property values (e.g. Czech Republic). The variety of tax bases is sometimes related to intergovernmental frameworks: in several countries different property taxes accrue to different government levels, e.g. in Australia the land tax accrues to the state/regional level and a property tax accrues to the local/municipal level.

3.2. Valuation and assessment of immovable property

11. Adequate valuation and assessment of immovable property are key for an efficient and fair property tax system (Table A1). Unlike for most other taxes, property values are pre-emptive, that is they must be *estimated* in general. Appropriate valuation and assessment of land and improvements is hence crucial both for tax policy and administration. The value at which a property could be potentially sold on the market is usually considered the most appropriate method to determine the property tax base. Indexation can help update property values between market updates, but the less frequent is such market assessment, the more indexed property values will deviate from actual market values.

12. Property assessment policy across the OECD can be summarised as follows (see also Almy, 2014, for more detail):

- *Valuation methods*: Comparing sales prices is the most common method to assess property values. Mass appraisal has become more and more widespread, whereby a property's value is determined by comparing the sales price of other properties with similar characteristics. Several countries combine the sales price method and the cost method. In this case land tends to be estimated at sales prices while the value of improvements is approximated by the cost to construct or replace a building (e.g. Finland and Italy). A few countries use the income method, i.e. effective or imputed annual rent, to calculate property values (e.g. Belgium). Finally, a few countries apply all three forms of property valuation, depending on the type of property and the purpose of its use (e.g. United States). Some countries apply simplified versions of "fiscal zoning", where a few indicators (size of the plot, location close to public infrastructure help assess property values (e.g. Poland).
- *Value updates*. Updating property values and hence the tax base is arguably the most difficult issue both administratively and politically. OECD countries deal with this issue in various ways. Some countries – such as Denmark or Korea – update property values annually, while others – such as Portugal or Turkey – update every three to four years. Several countries are required by legislation to update property values periodically but actually fail to do so (e.g. Belgium or Germany). Many countries apply indexation such as a construction price index, a house price index, the consumer price index or a combination thereof, to update property values. Indexation is an alternative to regular reassessment and can help maintain buoyancy in tax revenues. However, property values may evolve differently across different areas, distorting property assessments.[4] A few countries use a simplified assessment method, whereby properties are assigned value bands (e.g. the United Kingdom has eight value bands).
- *Government level responsible for assessment rules*. In general, property tax revenues accrue to local governments. But the responsibility for determining assessment rules – and hence for setting the tax base – is usually assigned to higher levels of government, i.e. the state level in federal countries and the central level in unitary countries. Research in the United States suggests that larger geographical responsibility increases assessment quality and that standard setting by a higher government level improves assessment quality (Strauss and Sullivan, 1998). In many countries valuation is assigned to special valuation agencies, mirroring the arguments for some centralisation, at least of administration. In a few countries, taxpayers are required to self-assess their properties, including imputed rent of owner-occupied houses, and wrong declarations may be sanctioned (Ireland, Italy, and Mexico).

4. In 2011, the German Federal Court of Justice considered the German property tax system unfair because it put different tax values on otherwise identical properties (Schulemann, 2011).

3.3. Tax abatements and reductions

13. Tax abatements reduce the property tax base and create a wedge between assessed and taxable immovable property values. Tax abatements can partially explain the decline of property tax revenues in total tax revenue (Kenyon et al., 2012). Most countries provide a wide range of tax expenditures, i.e. reliefs, credits and exemptions for both residential and business property. Some of these reductions can be justified on equity grounds and can make the system less regressive or even progressive, while others are difficult to defend on economic grounds.

14. Policy concerning tax abatements and reductions can be summarised as follows (Table A2):

- *Taxable values are often set below assessed values*. In some countries taxable values are set as a fraction of assessed property values. Setting taxable values below assessed values is a major reason for the large and persisting difference in the ratio of property tax revenue to GDP across countries. In Germany taxable values are set at 33% of assessed values only, while in other countries the percentage is higher. In Korea, a broad property tax reform initiated in 2005 aimed at bringing taxable values in line with assessed values, but political obstacles keep the percentage at 60% to 70%. In 2013, the US-city of Philadelphia, in the framework of a broader property tax reform, lifted the percentage from around 30% to 100%, while lowering tax rates to one-third of their previous level.

- *Tax exemptions for residential property*. There is a broad range of tax exemptions for property owners in most OECD countries. In several countries owner-occupied housing is tax-exempt (e.g. Italy). Tax exemptions are widely granted to low-income households. Lump-sum allowances are granted to both residential and business property owners, usually in the form of one allowance per owner – and more rarely per property. Moreover, a few countries grant specific deductions for certain spending categories, e.g. for green housing technologies and energy-saving investment. Some countries grant a tax holiday for new housing construction (e.g. Austria or Slovenia). The taxation of under-use is particularly interesting. While some countries *reduce* the taxable amount if a property is under-used (e.g. the United Kingdom), others *increase* due tax if a property is under-used (e.g. Slovenia). While lighter taxation of under-used property can be defended on social grounds, especially for elderly single-person households unable to pay high property taxes, occupational density is a rather imprecise indicator for social indigence.

- *Tax exemptions for business*. The corporate sector benefits from a variety of tax abatements and tax breaks, such as a tax holiday for start-ups or tax allowances for certain types of activity. With increased corporate cross-border mobility, property taxation has become an economic development policy tool for local governments. However, it seems that the effect of property tax reliefs on corporate behaviour tends to be negligible. Experience from the United States suggests that business property tax incentives have a poor record in promoting long-term economic development (Kenyon et al., 2012). In some cases they may help revamp distressed areas, if properly designed.

15. Property tax exemptions are like any other tax exemption: they are sometimes well-intended, but they narrow the tax base, and often they have unintended side-effects. A short assessment of some property tax exemptions is provided in Box 1.

Box 1. A short assessment of a long exemptions list

There is a long tradition of granting property tax exemptions to people viewed as vulnerable or to promote desirable activities. Educational, religious and charitable institutions are exempted from property taxes in most countries. Upper-level governments usually pay no tax on property they own in local jurisdictions. Policy measures to reduce property tax liabilities include reductions of assessed or taxable property values, reductions and exemptions for low-income earners, exemptions for selected property uses or property owners, special tax abatement programmes for enterprises, certain types of spending on property, and many others. Other policy measures including caps on annual property value or tax liability increases (sometimes called "circuit breakers") also narrow the tax base but are not considered "tax exemptions".

There is wide-ranging analysis of the effects of property tax exemptions both for residential and business property taxation, especially in the United States (e.g. Kenyon et al., 2012). The overall opinion on the effectiveness of exemptions is rather sceptical, since exemptions reduce the tax base and tax revenues, and they can have undesired consequences. Sometimes they even fail to achieve the desired objective. A few common (and some less common) tax exemptions as obtained through the questionnaire are discussed below.

- *Lump-sum and proportional exemptions*. Lump-sum exemptions are a fixed-amount deduction from assessed or taxable property values. They tend to make property taxation more progressive with respect to property values – but not necessarily with respect to income – since the resulting effective tax rates are lower on small than on large properties. Granting a lump-sum exemption for *every* property – rather than just one per owner – provides incentives to split up properties for tax purposes. Granting a *proportional* exemption – i.e. taxing property below 100% of assessed values – may reduce tax revenues severely and is likely to have no discernable effect on equality.
- *Tax holidays*. Tax holidays are tax abatements over a limited time. Tax holidays are often granted for new buildings and for periods up to ten years. Tax holidays for new construction put a wedge between different types of property. They provide an incentive to invest into new developments rather than to re-use infrastructure on developed land. They thereby foster rather than limit urban sprawl. They are unlikely to have any effect on progressivity.
- *Tax exemptions for under-use*. A few countries provide tax relief for underused properties, e.g. houses that are inhabited by less people than what could be considered "normal". Many of this type of exemptions were designed to help elderly people retain family houses even after their offspring has left for good. Although many people own large houses but have a small income after retirement, there is no automatic relationship between age and poverty, so this exemption might not be well targeted from a social policy point of view. Moreover, providing incentives to stay in a dwelling reduces opportunities for others, or, put more generally, reduces spatial and intergenerational mobility.
- *Tax deductions for certain types of spending*. More recently, property tax exemptions to promote energy-saving technologies and other green investment have become popular. The overall experience with this type of tax exemption is mixed (Brandt, 2014). While some studies claim that exemptions are indeed able to "green" housing investment, others are more skeptical, concluding that property owners are largely free-riding – i.e. they would have invested in green technologies anyway.
- *Business property tax exemptions.* Most countries provide a myriad of tax incentives for businesses, mostly in the form of tax holidays for new or expanding firms and other property tax abatement programmes. These incentives are usually designed to attract and retain businesses and to promote local economic development. Again there is a vast body of analysis which is largely skeptical about the effect of targeted incentives – as opposed to lower tax rates – or sometimes sees them as a pure zero-sum game since in the end tax revenues are lower but no real development effect can be discerned (Kenyon et al., 2012). Experience from the United States suggests that when targeted at distressed urban areas, business property tax exemptions might benefit local development.

Some tax exemptions may be more justified than others. Exemptions for low-income households are defendable on social grounds, although means-tested income support would still be more targeted. More generally, transparency about the costs and benefits of tax exemptions and the foregone revenues could help policy makers to make informed decisions about when and where to provide property tax exemptions. A property tax expenditure database showing foregone tax revenue for each tax exemption could be useful to start with.

3.4. Tax rates

16. Differences in average property tax rates explain the differences in the share of property tax in GDP between countries to a large extent (Table A2). Average tax rates range from 0.1 or 0.2% to more than 2% of the tax base. Property tax rates are usually the only tax policy lever for local governments, while the tax base tends to be determined by upper level governments. As such, in many countries tax rates vary by two-or three fold across jurisdictions. In a few countries local governments do not have tax rate setting power or do not make use of it. A few countries apply a progressive scale, with tax rates rising with rising property values. However, statutory property tax rates might be a misleading guide to assess effective tax rates, since the tax base – i.e. property values – is not assessed uniformly across countries or even jurisdictions.

4. Economic effects of property taxation

4.1. Property taxation is efficient – but that depends on design

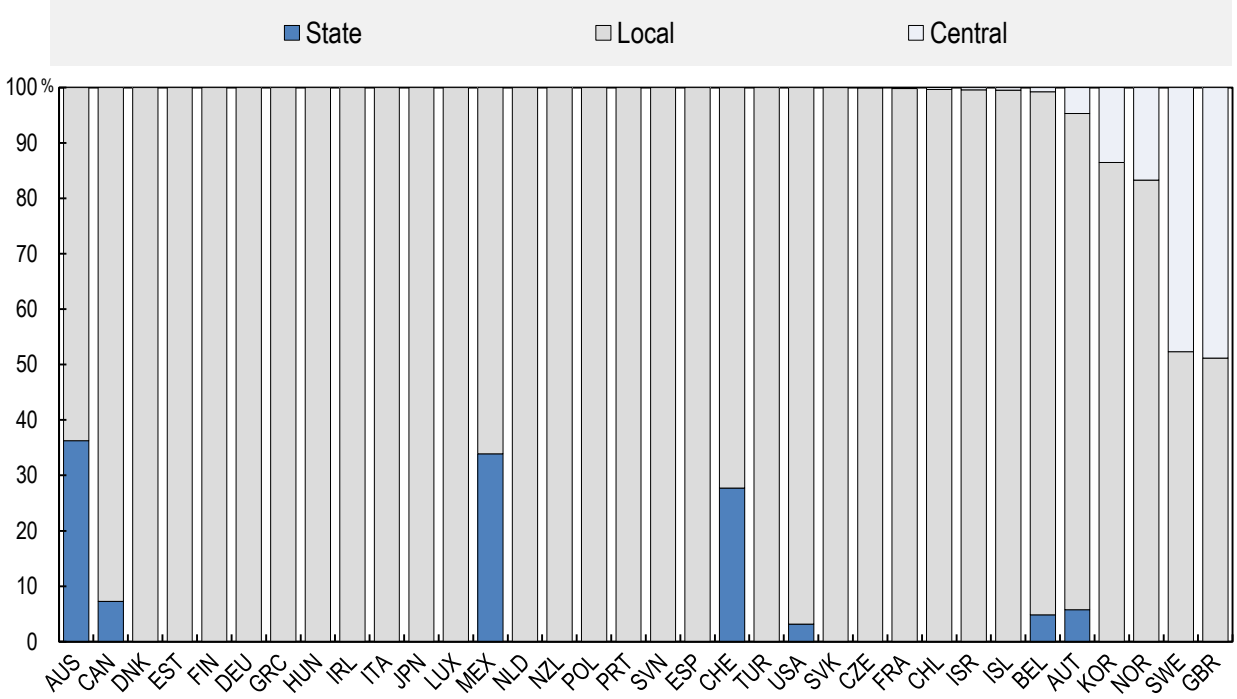
17. The tax on immovable property is usually seen as one of the most efficient and least detrimental taxes to economic growth.[5] The tax base is immovable and inelastic, i.e. households usually react little to changes in tax policy. The property tax differs from income or business taxes which tend to change behaviour – to work, to save, to invest – more markedly. Property taxation also provides a close link between taxes paid and public services received, which make the property tax more like a user fee for local services (Figure 4). As such, property taxation tends to be kept at levels that are commensurate with the preferences of residents. Differences in property taxation and service levels across jurisdictions are capitalised in house prices, thereby reducing tax competition (Blöchliger and Pinero Campos, 2011). Since property taxation largely maintains households' decisions to save and invest, it should be less of a drag on economic growth. OECD analysis suggests that immovable property taxes are the least harmful to economic growth (Arnold et al., 2011).

18. There is a major caveat to this rosy view of property taxation, however. Property taxation is not neutral because it discriminates between physical and non-physical capital. As such, taxing property might affect capital spending of both businesses and homeowners. Businesses may be discouraged to invest in physical capital, especially if machinery is included in the property tax base (Zodrow, 2001). Homeowners will be discouraged to improve their dwellings since the result is higher taxes. More specifically, business property taxes are difficult to defend on the grounds of the beneficiary principle since the business sector receives fewer services from local communities than residents, and taxes may be exported to non-residents - consumers, workers, capital-owners. Finally, taxing improvements may prompt the underutilisation of land and urban sprawl as the land-to-capital ratio may decline (Brandt, 2014). Still business property taxes can act as a backstop to excessive incorporation in order to avoid the residential property tax, much as the corporate income tax acts as a backstop against avoiding the personal income tax (OECD, 2007).

5. Some environmental taxes such as a carbon tax might even have less harmful effects on welfare and, perhaps, growth.

Figure 4. The property tax is a typical sub-central tax

Share of each government level in the property tax take, 2009



Source: OECD (2014), *Revenue Statistics 2014*, OECD Publishing.

19. If different property tax regimes are to be ranked, a *pure land tax* with a uniform tax rate across types of property and property owners comes out first[6]. Land is immobile, and land taxation has hardly any impact on investment decisions[7]. And a pure land tax tends to be more effective against urban sprawl than the two-tier property tax. Still, a move towards stronger land taxation requires careful policy design. Land values are only a fraction of property values, so in order to keep tax revenues constant, land tax rates would have to be raised (Brandt, 2014). Property taxes with a higher tax rate on land than on improvements could be an intermediate solution. Finally, since land values have to be separated from the value of improvements, methods to assess land values properly have to be well-designed.

4.2. Property taxation is not very progressive

20. The progressivity of property taxation depends on *tax incidence*, e.g. which individuals and households are the final payers of a tax (Zodrow, 2001). The views on incidence, in turn, are often overshadowed by debates about the true nature of the property tax. Those who see the property tax as a tax on the consumption of housing services see the tax as regressive since they argue that the share of spending for housing decreases with increasing income. Those who see the property tax as a capital tax see the tax as progressive since capital is more concentrated in the hands of high-income earners. Those who see the property tax as a fee for local public services (benefit taxation) argue that the property tax is neutral since

6. Henry George, 19th century political philosopher and economist, was the most influential proponent of the land value tax and the capture of land rents (George, 1881).

7. Land use may react to a land tax *at the margin*, however. The taxation of "polder" in the Netherlands may affect human-led transformation of sea into land and hence total land surface.

any redistributive effect of taxation is compensated by the redistributive gains from consuming public services. Moreover, the property tax can be designed so as to make it more or less progressive, e.g. by allowing for lump-sum tax allowances or for tax exemptions for low-income earners.

21. The empirical research on tax incidence suggests that the property tax can indeed be anything from progressive to regressive. In a life-cycle perspective the tax seems to be proportional since spending on housing is supposed to increase in line with income over the life span (Fullerton and Metcalf, 2002). In highly urbanised areas where capital tends to be more concentrated among high-income groups and where the tax is difficult to be shifted upon renters, the tax is considered progressive (e.g. Chang, 2006). An OECD analysis relating income deciles and property tax payments suggests that the property tax is regressive, probably because homeownership is more equally distributed than income (Joumard et al, 2012). Tax incidence also depends on the wider central or sub-central policy setting like land use policy, rent control or labour market policies. The more property owners are able to forward-shift the property tax to renters, consumers or workers, the more it tends to become regressive. As such, the tax might change its redistributive properties over the income distribution: it might be regressive for the low-to medium-income range while progressive for the highest income brackets.

22. Summing up, the redistributive effect of property taxation hinges on various factors, but overall the property tax is probably less progressive than the personal income tax which is sometimes seen as an alternative in sub-central government finance.

4.3. Property taxation can stabilise housing markets

23. The tax on immovable property can be used as a policy instrument for asset price stabilisation. Property taxes may dampen house price volatility and excessive house price increases. Rising property tax revenues that evolve in line with rising property prices – on the basis of regular updates of property values and hence a broadening tax base – can dampen the intricate boom-and-bust-cycle of property markets. As such, property taxation may help reduce fluctuations of the overall economy and act as an automatic (counter-cyclical) stabiliser over the business cycle.

24. The house-price-stabilisation effect of property taxation can be explained by capitalisation, i.e. the inverse link between house prices, imputed rent and the property tax. Property taxes are capitalised in house prices, i.e. the net present value of a house is given by the discounted stream of cash-flow (rents) or services (imputed rent) less maintenance costs and property taxes. As house prices rise, property taxes will represent an increasing share of rents, thereby reducing the net present value and counteracting further house price appreciation (Muellbauer, 2005). Higher property taxation may also reduce the *amplitude* of house price fluctuations around the long-term trend and thereby help avoiding property boom-and-bust cycles. This is because in a high-tax environment the demand for housing with respect to house prices is more elastic, whereby an (exogenous) housing demand shock has a weaker impact on house prices (van den Noord, 2005). Lower house price fluctuations would in turn dampen GDP fluctuations, given the various channels between house price developments and GDP.

25. The empirical analysis provides some support for the volatility-dampening impact of property taxes, although the effect is relatively weak (Table 1). Doubling the tax-to-GDP share – e.g. by lifting it from 0.5% towards the current OECD average of 1% – would dampen house price volatility by between 1% and 4%.The dampening effect remained largely stable over the last 50 years, as well as during and after the 2008 crisis. Similarly, a higher property tax-to-GDP share seems to dampen house price growth; moreover, house prices tend to follow the business cycle (Table 1b). Countries with low property taxation and less frequent property value updates tend to have higher house price fluctuations, although the relationship is again weak (for details see Blöchliger et al., 2015).

Table 1. Property taxation dampens house price developments

a) Changes in house price *volatility* and changes in the property tax-to-GDP ratio

Period: 1965-2012	Reaction of house price volatility to …			
Property-tax-to-GDP ratio	**-0.033****	**-0.040****	**-0.009***	**-0.010***
Volatility of output gap	0.008**			
Volatility of changes in output gap		0.005**		
Volatility of real growth			0.867**	
Volatility of changes in real growth				0.353**

b) Changes in house prices and changes in the property tax-to-GDP ratio

Period: 1965-2012	Reaction of house price volatility to …			
Property-tax-to-GDP ratio	-0.036**	-0.002	-0.009	-0.024**
Output gap	0.003**			
Changes in output gap		0.013**		
Real growth			1.209**	
Changes in real growth				0.790**

Note: Coefficients are derived from multi-variate regressions linking house price volatility to the property tax-to-GDP variable and a number of variables reflecting the business cycle, without other control variables. Coefficients represent percentage changes, e.g. -0.04 means that a 10% *increase* in the property tax-to-GDP share *reduces* house price fluctuations or growth by 0.4%. A * means significance at the 10% level, ** at the 5% level. Details of the estimation strategy are provided in Blöchliger et al, 2015.

26. Empirical results also suggest that property taxes do not respond much to the business cycle and as such provide for a relatively stable revenue source (Table 2). Property taxes are a-cyclical or pro-cyclical, depending on the measure for the cycle. As such, they do little to stabilise the economy. The a-cyclical stance may be the result of two countervailing forces: on the one hand, property taxes may have a stabilising effect on the economy by lowering house price volatility; on the other hand, they may have a destabilising effect due to their inertia over the business cycle. Rapid tax increases during a slowdown – or tax reductions during a boom – seem to make property taxation strongly destabilising, which suggests raising property taxes only when both the housing market and the economy are in good shape. A more regular update of the tax base in line with property market developments could make property tax revenues evolve more in line with the cycle – although it would then provide a less stable revenue source for SCGs.

Table 2. Property taxation is counter-cyclical or a-cyclical

Association between property taxes and the cycle, various tax and cycle variables, 1965-2012

Period 1965-2012	Reaction of the tax-to-GDP ratio to…	Reaction of real tax revenue growth to…
Output gap	-0.004	-0.001
Changes in output gap	-0.013**	-0.003
Real growth	-1.227**	-0.457
Changes in real growth	-0.206	0.159

Note: Coefficients are derived from multi-variate regressions linking the tax variable (real tax revenue growth or growth of the tax-to-GDP ratio) to a number of variables reflecting the business cycle, without other control variables. Coefficients represent percentage changes, e.g. -0.013 means that a 10% increase in real growth reduces tax revenue growth by 0.4 per cent. A ** means significance at the 5% level. Details of the estimation strategy are provided in Blöchliger et al. (2015)

4.4. Property taxation can promote sustainable land use

27. Land use has become a prominent environmental policy issue, as urbanisation and urban sprawl are gradually reducing open space. The loss and fragmentation of open space threatens biodiversity and the recreational and aesthetic value of land. Dispersed land use patterns are likely to increase energy use or transport needs (e.g. commuting), with a negative environmental impact. Since property taxes are – at least partially – a tax on land and its use, they could potentially serve as an instrument to affect land use patterns. Property taxation could help internalise the negative externalities of land use. It could reduce pressure on land development or re-direct it towards areas which are already well connected to infrastructure. Properly designed property taxes might support land use planning and help reduce the environmental impact from transport and energy use. When the property tax is used as a tool for effective land-use, a few policy issues have to be addressed (see also Brandt, 2014):

- Property taxes have to be viewed in the context of other policy instruments to influence land use, such as land use planning and transport policy that can also help internalise externalities related to urban sprawl. These will often have a much stronger impact on land use than the property tax, which is typically low. Moreover, while property taxes can have an overall impact on land use patterns, they are too rough an instrument to ensure the protection of *specific* land plots or to foster *specific* land use patterns, e.g. protecting certain natural amenities from development altogether. The property tax can, however, underpin land use policies such as urban spatial planning or transport policy.

- The impact of property taxation on land use depends on design, and it is again useful to distinguish between different property taxes. A pure land tax increases the cost of hoarding land and provides incentives to put land to its most valuable use. Development becomes more attractive, particularly in areas where land values are high, such as around existing infrastructure. As such, a pure land tax fosters denser cities. The effect of the traditional property tax (or two-tier tax) which covers both land and improvements is less clear-cut. On the one hand, if the tax is shifted onto consumers, house prices increase, increasing the demand for smaller housing units and thereby population density. On the other hand, the property tax can promote urban sprawl as it reduces the capital-land ratio and thereby the number of housing units per unit of land area and density.

- Property transaction taxes are bad for sustainable land use. They increase incentives to buy cheap land, which is generally farther away from city centres and transport infrastructure, and they discourage transactions that might help put land to a more efficient use. They also encourage the purchase of undeveloped land for new development at the expense of upgrading developed areas.

- The empirical evidence usually confirms the theoretical arguments. A two-tier property tax, with a higher tax rate on land than on buildings tends to increase development in general, but the impact on urban sprawl and density is not clear. The effect tends to be stronger the higher the tax burden on land relative to improvements. A few studies find that a two-tier tax discourages land conversion for development, although the effect is small. One study suggests that higher property taxes reduce city size, i.e. they contain urban sprawl.

- A number of specific land-use taxes to contain urban sprawl and reduce excessive land use are discussed in OECD countries. A tax on land *area* sets a stronger incentive to make efficient use of land than a tax on land *value*, especially where land values are low. Another proposal discussed in Germany is a land use tax, which would differentiate land tax rates depending on how land is used and the associated environmental costs. Taxes on new developments – such as development or soil-sealing taxes – to internalise negative environmental externalities – are also

being discussed. A tax on the welfare loss associated with the loss of open space due to development has been discussed in the Netherlands and the United States, although estimating the social value of open space is difficult. Another proposal is to tax land value-added following re-zoning. Since changes in land value are often caused by re-zoning and hence essentially windfall gains, it is often argued that these gains should be taxed. Some Swiss cantons are discussing provisions for taxing the value-added (and compensating the value-lost) after land is re-zoned. Finally, development impact fees to cover the costs of new infrastructure are fairly common in North America. Such development impact fees could ensure that developers internalise infrastructure cost of new development and slow down urban sprawl.

- Spatial planning is the most commonly used and the instrument that can best target different land uses. In some countries it is an explicit instrument to contain urban sprawl, for example, through urban growth boundaries and greenbelt policies. Spatial planning and land/property taxation are complements rather than substitutes. Property taxes should be designed so as not to encourage sprawl, while the more arms-length land use planning can achieve specific targets, such as protecting individual land plots from development.

- Property taxes generate revenues, which might create perverse incentives for SCGs whose tills they fill. SCGs might eye land development or re-zoning for purely fiscal reasons. They might even be tempted to increase revenues from environmental land taxes such as a soil-sealing or greenfield taxes, thereby undermining the original purpose of such taxes.[8] Governments should tackle such perverse incentives through adequate land-use planning instruments: local government should address local land-use externalities; and upper-level government should address externalities with a wider geographical reach.

- Property taxes may be redesigned to foster green investment. Local governments in the United States count numerous property tax incentives for raising energy efficiency and renewable energy use. The Czech Republic, Italy, Norway and Spain are further examples of countries that provide property tax relief for renewable energy installations. The efficiency and effectiveness of these property tax rebates would have to be weighed against their costs in terms of a narrower property tax base and less tax revenue. Studies assessing the efficiency of property tax relief to promote investments in energy efficiency and renewable sources of energy are not available.

28. Property taxes can be a useful instrument to increase the density of land use and hence curb urban sprawl, above their main objective of raising revenue. The Fiscal Network will continue the work on local (property) taxation in the framework of the project "Land Use and the Transformation to a Low-Carbon Economy". This project, funded by the OECD's Central Priority Fund, will deal with land use policy, local taxation and their impact on land use. The project will assess empirically the impact of different types of local taxes on land conversion and on urban sprawl. The project could be complemented by individual country studies. It will finally provide a set of reform options for land use policy and local taxation to foster sustainable land use.

8. This is a more general problem of ecological tax reform, which has to do with the fact that ecological taxes should change behaviour but also, as a side effect, generate revenue. Often tensions arise between the ecological and fiscal objectives of environmentally-related taxation, with governments interested in green taxes for fiscal reasons rather than to improve the environment.

5. Property taxation and intergovernmental fiscal relations

29. The property tax is mainly a state and local tax (Figure 4). Any reform to property tax regimes must hence be linked to reforms of intergovernmental fiscal frameworks. In this section, two aspects of the link between property tax and fiscal relations will be discussed: 1) do property tax reforms require reforms of sub-central taxation and spending and of intergovernmental grants?; and 2) do reforms to fiscal relations provide sub-central governments with incentives to raise property tax revenues?

5.1. Property tax reforms may entail reforms of intergovernmental relations

30. Property tax reform with the aim to increase the share of property taxation in the total tax take may require changes to the wider intergovernmental fiscal framework. Without flanking policies, an increase of SCG property taxation increases both the share of sub-central in general government taxation and the share of tax in GDP, both of which may not be warranted. A revenue neutral and/or level-of-government neutral property tax increase will hence require amendments to both spending and taxation across government levels. There are different options for property tax reforms to be carried out in a revenue-neutral way:

a) The easiest option is to adapt the sub-central tax system, without changing intergovernmental fiscal frameworks. One way forward is to abolish sub-central property *transaction* taxes – stamp duties and similar taxes on the transfer of ownership –, considered harmful for labour mobility and unfair since the tax does not depend on the value of the property but on how often it is traded (Norregaard, 2013). Another way forward is to reduce sub-central business or labour (payroll) taxes, if those exist. In order to avoid disruptive changes implying hefty tax increases for some property owners, reforms could be phased in, with annual tax base or tax rate changes being relatively small.

b) The second option consists of reducing intergovernmental grants. While tax revenues at the local level would increase, grants from central government could be reduced accordingly. Since grants exceed property tax revenue by a multiple in all countries, central government funding may be reduced without damage to sub-central finances, especially since around half of all grants are non-equalising and therefore raise little redistributive concern (Blöchliger and Petzold, 2007). Moreover, since property tax revenues tend to be less pro-cyclical than revenues from intergovernmental grants in many countries, overall SCG revenues would become more stable over the cycle (Blöchliger and Egert, 2013). Still, since tax raising capacity varies across jurisdictions and will do so even more after a property tax hike, remaining grants will have to focus more clearly on equalisation.

c) The third reform option would be to introduce a dual central/sub-central property tax, with the additional property tax revenues allocated to the central level. Central government would have to reduce some other taxes to compensate for property tax increases. The grant system would remain untouched. The flipside to this option is that it would complicate the property tax system and could lead to vertical tax competition between central and sub-central governments with a tendency to excessive tax rate increases (Devereux et al., 2007). A dual property tax also goes against standard policy recommendations to keep the property tax at the sub-central level or to devolve it entirely where this is not yet the case.

d) The fourth and most complex reform option is to devolve additional responsibilities to the sub-central level commensurate with increased property tax revenues. This might be an option in countries where there is room for further decentralisation of spending responsibility. Countries where spending decentralisation is clearly below the OECD average could follow this approach.

The flipside of this option is that it does not only require reforms on the tax side but also on the spending and responsibility side within the intergovernmental fiscal framework, which may be difficult to achieve. Moreover, inter-jurisdictional disparities might become an issue if new spending responsibilities have a redistributive effect.

31. Property tax reform could lead to an uneven evolution of tax revenues across SCGs, since house prices assessed at market value evolve differently. A study for Germany finds that – depending on the model chosen – property tax reform with the objective to value property at market value would considerably change relative tax capacity across the *Länder*. In order to offset re-distributional effects, fiscal equalisation would have to be adapted (Färber et al., 2013). The need to combine a tax reform with the need to amend intergovernmental relations makes a reform more complex, but it also offers opportunities in political economy terms since it allows bundling different reform elements (Blöchliger and Vammalle, 2012).

5.2. Intergovernmental relations may help underpin property tax reform

32. Reforms to intergovernmental fiscal frameworks may in turn trigger property tax reform. In many countries, equalisation penalises tax collection. If a SCG raises tax revenue, equalisation grants are often being reduced, thereby thwarting its interest in property tax collection. Cutting the link between equalisation and property tax collection or at least reducing the marginal equalisation rate – the rate at which additional tax revenue is equalised away – could increase the incentive of SCGs in collecting more property tax revenue. Central government may even foster tax effort, by setting up transfer schemes that pay SCGs more intergovernmental grants if they collect more property tax.

33. Some countries established property tax regimes that – at least partially – reward SCGs for collecting more property tax revenue. Property tax revenues of Norwegian municipalities do not enter fiscal equalisation, while in Germany only 64% of municipal property tax collection is taken into account, leaving all or part of property tax revenues in the jurisdiction where they were generated. In 2012 Finland removed property tax from the municipal equalisation system. The extent to which property tax can be excluded from equalisation probably depends on their significance. In countries where property taxes are a minor local revenue source they are easier to exclude fully from equalisation.

6. Personal income tax on imputed rent: An alternative to the property tax?

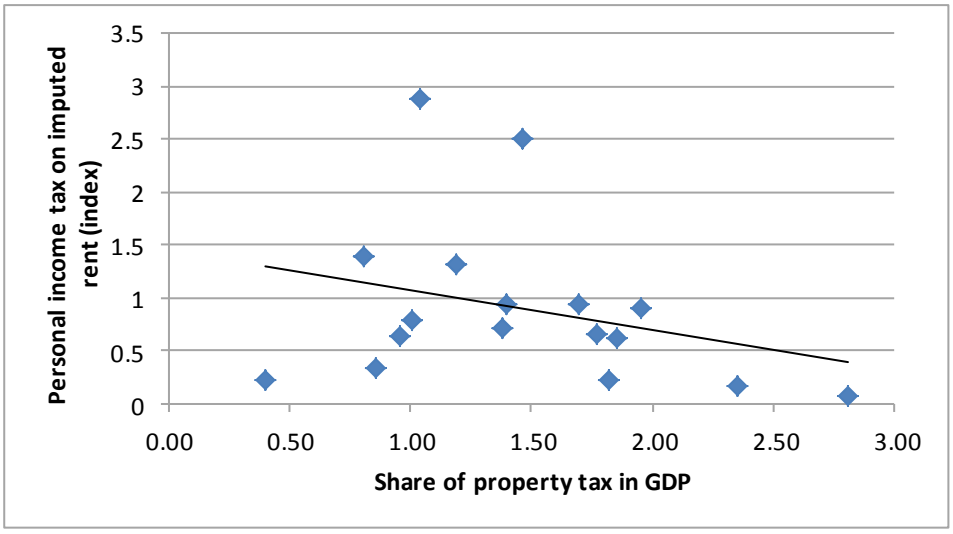
34. As an alternative to the property tax, immovable property may be subject to *personal income taxation*. In this case, imputed rent of owner-occupied real estate is considered personal income. The benefit stream from owning property is added to the other income sources of a household such as labour and capital income and taxed at the personal income tax rate.

35. Taxing income derived from imputed rent indeed seems to be a substitute for an immovable property tax to ensure the proper taxation of real estate in many countries. A strong real estate tax tends to go together with rather light income taxation of imputed rent and vice versa, suggesting that countries consider the two forms of immovable property taxation as alternatives. Also, countries boasting a wealth tax which includes the net value of immovable property usually have relatively low immovable property taxes. The relationship is however relatively weak, and in some countries real estate is hardly subject to any tax (Figure 5). Subjecting immovable property to an income or wealth tax rather than to the tax on immovable property results in an overall tax system that tends to become more progressive, because imputed rent is taxed at (usually progressive) income tax rates. The European Union also sees the taxation of immovable property through the income tax system as an alternative to the immovable property tax (Gayer and Mourre, 2012).

36. Taxing immovable property through the income tax system has been the subject of numerous OECD work (van den Noord, 2005; André, 2010; Brys, 2010; OECD, 2010; Andrews et al., 2011; Caldera Sánchez and Johansson, 2011; and Harding, 2013) and will hence be treated only summarily here. Basically imputed rent should be taxed jointly with personal income from other sources. If the tax system allows for different tax rates for capital and labour income, real estate may be taxed at capital tax rates, although this might distort households' incentives to shift between labour and capital income. Mortgages should be deductible but maximum loan-to-value ratios might be applied to avoid excessive leverage. In order to reduce the tax burden for poor and/or liquidity-constrained households, a basic allowance which exempts part of the owner-occupied immovable property from the personal income tax might be applied. Such provisions already exist for the tax on immovable property. Property values and imputed rent need to be assessed in a way that treats all property and property owners on an equal basis – possibly at fair market value. Overall, subjecting imputed rent to personal income tax together with some limited deductibility of mortgage interest could make the taxation of immovable property politically more palatable.

Figure 5. The personal income tax and the property tax tend to be substitutes

Immovable property tax-to-GDP ratios set against PIT taxation of imputed rent, 2012



Note: The vertical axis shows the sum of two indices: the extent to which mortgage interest payments are income-deductible and the extent to which imputed rent is subject to personal income tax. The mortgage deductibility index is taken from Andrews et al. (2011), The index of taxability of imputed rent is based on individual country information and takes on the value of 1 if imputed rent is taxable, 0 otherwise.

Source: OECD (2014), *Revenue Statistics 2014*, OECD Publishing; Andrews et al. (2011), "Housing Markets and Structural Policies in OECD Countries", *OECD Economics Department Working Papers*, No. 836, OECD Publishing.

37. Taxing real estate through the income rather than property tax would fundamentally change intergovernmental fiscal relations, however. While revenue from the immovable property tax overwhelmingly accrues to local governments, the personal income tax belongs largely to central government. A shift from property taxation to income taxation would hence shift tax revenue from local to national governments and deprive the former of their most important tax source. A partial solution to this problem could be a tax sharing system where national government would cede a part of the personal income tax to local governments. The income share allocated to a jurisdiction could reflect different criteria, such as the income generated from the taxation of imputed rent among others. Still such a tax sharing system would curtail sub-central tax autonomy and change the sub-central tax mix. A move from real estate taxation towards income taxation might also have redistributive consequences across sub-national governments.

7. Making property tax reform happen

38. The political economy of reform is about the interaction between policy proposals and procedures to adopt them. Political economy analyses how political factors influence the design, decision-making process, adoption and implementation of institutional changes – the property tax regime in our case – and discusses options and constraints when trying to implement reforms.

7.1. Political economy issues in property tax reform

39. There are a number of reasons why property tax reforms are relatively rare and piecemeal, or even more, why the property tax, despite its assumed benefits, is so deeply unloved. The following political economy issues may help explain why reforms are difficult to bring to fruition:

- The property tax is capitalised in property prices. Any tax hike will be reflected in lower property values and higher tax payments. Since property cannot be moved, unlike income or consumption for example, property owners will resist any tax hikes in their jurisdiction. In the context of "exit" and "voice", the incentive to "voice" against tax increases is particularly strong because there is no "exit".

- The property tax is a presumptive tax, i.e. a tax that is based on an estimated value. The need to value and assess properties sets property taxation apart from other taxes that are based on flows – income, sales or consumption – which can be measured more easily. Unless property is sold or bought in a transaction that adequately reflects its true value, valuation and assessment remain contentious. Even countries with relatively good property tax administrations do not update values on a regular basis. Updates of property values provoke political reactions from taxpayers that demand limits and breaks on higher tax payments. The "tax revolts" in the United States and other countries were the political reaction to rising house prices, property reassessments and unhappiness with ever-rising tax liabilities.

- The property tax is highly visible or salient. Property taxes are usually paid once a year and in retrospect, and they are difficult to avoid. This sets them apart from consumption taxes, which are paid in small amounts and continuously, or the personal income tax, which in most OECD countries is withheld at source. Salience is often seen as one of the major reasons for the unpopularity of the tax and seems to drive tax revolts (Cabral and Hoxby, 2012). Salience improves efficiency and accountability of the sub-central tax system since it makes taxpayers aware of the cost of providing public services. But if some taxes are more salient than others, and if voters dislike salient taxes, it is difficult to sell a reform that raises the burden of the most salient tax.

- The property tax is generally seen as being regressive. Although the distributional impact of a property tax hike is unclear – the property tax can be anything, from regressive to progressive – perceived regressivity makes it difficult to sell property tax reforms in the political process. Moreover, even if its precise redistributive characteristics are unknown, the property tax is probably less progressive than the personal income tax, even as an alternative to a flat sub-central surcharge on a (progressive) national income tax. An SCG tax reform package that aims at higher property taxation against lighter personal income taxation would hence be difficult to sell, or it would require even more complex changes to the intergovernmental fiscal framework.

- Property taxes can pose problems for liquidity-constrained households. The property tax is based on an illiquid asset rather than on cash-flow. Moreover, it is based on gross rather than net property values, which means that indebtedness (mortgages, etc.) is not accounted for. The

imperfect association between household income and property tax liabilities may create an excessive burden for income-poor but housing-wealthy households, such as seniors. One way to address liquidity issues is to provide tax relief to seniors through deferral schemes, where the tax only becomes payable when the property is sold. Although tax deferral is an efficient solution to the liquidity problem, it is not yet very popular and not widely used. Again the economics and the political economy of the property tax differ.

7.2. Making property tax reform happen

40. The costs and benefits of any tax reform are likely to be unevenly distributed across social groups, and there will always be winners and losers. Losers tend to defend acquired rights vigorously, while the winners have often lower stakes in a reform, and are often not even aware of its potential benefits. Such asymmetries might be particularly important for the property tax which is particularly salient and whose increase is immediately felt in the pocket of every household. Property tax reform is deeply country-specific and must be carefully calibrated to fit particular circumstances.

41. However, a few general approaches may help improve the probability that a property tax reform is successful in terms of being both economically efficient and politically palatable (Bird and Slack, 2013). The most striking feature of the property tax is that it has a presumptive tax base. Any reform must hence try to establish a property appraisal system that is considered fair and equitable. Country experience shows that regular market value updates can be successfully brought through the political process. Other crucial measures would include means-tested exemptions for low-income households and deferrals for the liquidity-constrained. Salience – itself a laudable feature because it shows taxpayers the cost of public services – may be tackled by permitting tax payments in instalments. Some transitional and phasing-in mechanisms may be necessary to reduce reform opposition, such as smoothing tax liabilities during the transition period (Blöchliger and Vammalle, 2012).

42. Property tax is a local tax, and it is in local governments' own interest to increase property tax revenues and to undergo a property tax reform. Nevertheless, central and/or state governments have a crucial role in fostering property tax reform. The tax base is largely shaped by upper-level government. Moreover, central and state governments have some scope to foster local incentives to increase the property tax take. They may, for instance, remove the property tax base from equalisation, thereby leaving all additional tax revenue in the hands of the collecting jurisdiction. Or they may link some intergovernmental grants to tax effort and local property tax collection. Governments should make use of such incentives as part of their property reform strategies.

Table 3. Strategies for property tax reform

Promising and less promising approaches

Issues and Problems	Promising Approaches	Problematic Approaches
Salience: property tax is more visible than other taxes	Couple tax reform with improvements in local services Tax paid in several instalments, withhold tax at source and other payment options	Assessment limits Property tax capping
Liquidity constraints: tax is a burden for the housing-rich but income poor, especially seniors	Tax deferrals for seniors More payment options	Assessment limits Property tax capping
Perceived regressivity: Taxes can be higher as a per cent of income for low-income taxpayers	Property tax credits Tax deferrals Bundle with other tax reforms Package with expenditure changes Low-income housing exemptions	Banding Classified tax rates Progressive tax rates Assessment limits Property tax capping
Volatility: potentially large swings in taxes for some taxpayers	Annual reassessment Indexing between reassessments Taxpayer education Communication in understandable form	Assessment limits Property tax capping
Presumptive tax: tax base is inherently arbitrary	Taxpayer education Consultation Accessible appeal process	Self-assessment Classified property tax rates Assessment limits Property tax capping

Source: Based on Bird and Slack (2013), "The Political Economy of Property Tax Reform", *OECD Working Papers on Fiscal Federalism*, No. 18, OECD Publishing and discussions held at the OECD Fiscal Network meeting of 27 November 2014.

REFERENCES

Almy, R. (2014), "Valuation and Assessment of Immovable Property", *OECD Working Papers on Fiscal Federalism*, No. 19, OECD Publishing, Paris.

André, C. (2010), "A Bird's Eye View of OECD Housing Markets", *OECD Economics Department Working Papers*, No. 746, OECD Publishing, Paris.

Andrews, D., A. Caldera Sánchez and Å. Johansson (2011), "Housing Markets and Structural Policies in OECD Countries", *OECD Economics Department Working Papers*, No. 836, OECD Publishing, Paris.

Arnold, J. M., Brys, B., Heady, C., Johansson, Å., Schwellnus, C. and Vartia, L. (2011), "Tax Policy for Economic Recovery and Growth", *The Economic Journal*, 121.

Bird, R. and E. Slack (2013), "The Political Economy of Property Tax Reform", *OECD Working Papers on Fiscal Federalism*, No. 18, OECD Publishing, Paris.

Blöchliger, H., B. Egert, B. Alvarez and A. Paciorek (2015), "The Stabilisation Properties of Immovable Property Taxation: Evidence from OECD Countries", *OECD Economics Department Working Papers*, forthcoming, OECD Publishing, Paris

Blöchliger, H. and O. Petzold (2007), "Taxes or Grants: What Revenue Source for Sub-Central Governments?", *OECD Economics Department Working Papers*, No. 706, OECD Publishing, Paris.

Blöchliger, H. and B. Égert (2013), "Fiscal Consolidation Across Government Levels – Part 3. Intergovernmental Grants, Pro- or Counter-cyclical? ", *OECD Economics Department Working Papers*, No. 1072, OECD Publishing, Paris

Blöchliger, H. and J. Pinero Campos (2011), "Tax Competition between Sub-central Governments", *OECD Working Papers on Fiscal Federalism*, No. 13, OECD Publishing, Paris.

Blöchliger, H. and C. Vammalle (2012), *Reforming Fiscal Federalism and Local Government: Beyond the Zero-Sum Game*, OECD Publishing, Paris.

Brandt, N. (2014), "Greening the Property Tax", *OECD Working Papers on Fiscal Federalism*, No. 17, OECD Publishing, Paris.

Brys, B. (2010), "Fundamental Tax Reform", in: OECD: *Making Reform Happen, Lessons from OECD Countries*, OECD Publishing, Paris.

Cabral, M. and C. Hoxby (2012), "The Hated Property Tax: Salience, Tax Rates, and Tax Revolts", *NBER Working Paper*, No. w18514.

Caldera Sánchez, A. and Å. Johansson (2011), "The Price Responsiveness of Housing Supply in OECD Countries*", OECD Economics Department Working Papers*, No. 837, OECD Publishing, Paris.

Chang, Sheng-Wen (2006), "Choosing between the Capital Tax View and Benefit View of the Property Tax: Evidence from Taipei City", *Department of Public Finance,* National Chengchi University (mimeo)

Devereux M.P., B. Lockwood and M. Redoano (2007), "Horizontal and Vertical Indirect Tax Competition: Theory and Some Evidence from the USA", *Journal of Public Economics,* Vol. 91.

Färber, G., M. Salm and S. Hengstwert (2013), Property Tax Reform in Germany – Eternally Unfinished or an Instrument of a more Equitable Tax System?, *paper presented at the Fiscal Network Copenhagen workshop 2013*.

Fullerton, D. and G. Metcalf (2002), "Tax Incidence", *in: Handbook of Public Economics,* Vol. 4.

George, Henry (1881). *Progress and Poverty: An Inquiry into the Cause of Industrial Depressions and of Increase of Want with Increase of Wealth; The Remedy,* Kegan Paul (reissued by Cambridge University Press, 2009)

Gayer, C. and G. Mourre (2012), "Property Taxation and Enhanced Tax Administration in Challenging Times", *Economic Papers 463*, European Commission.

Harding, M. (2013), "Taxation of Dividend, Interest and Capital Gain Income*", OECD Taxation Working Papers*, No. 19, OECD Publishing, Paris.

Joumard, I., M. Pisu and D. Bloch (2012), "Less Income Inequality and More Growth – Are They Compatible? Part 3. Income Redistribution via Taxes and Transfers across OECD Countries", *OECD Economics Department Working Papers*, No. 926, OECD Publishing, Paris.

Kenyon, D., A. Langley and B. Paquin (2012), *Rethinking Property Tax Incentives for Business,* Lincoln Institute for Land Policy, Washington.

Mirrlees Review (2011*), Reforming the Tax System for the 21st Century,* Institute for Fiscal Studies.

Muellbauer, J. (2005), "Property Taxation and the Economy after the Baker Review", *Economic Journal,* Vol. 115.

Norregaard, J. (2013), "Taxing Immovable Property: Revenue Potential and Implementation Challenges", *IMF Working Paper,* WP/13/129, International Monetary Fund.

OECD (2007), Fundamental Reform of Corporate Income Tax, *OECD Tax Policy Studies*, OECD Publishing, Paris.

OECD (2010), Tax Policy Reform and Economic Growth, *OECD Tax Policy Studies*, No. 20, OECD Publishing, Paris. DOI: http://dx.doi.org/10.1787/9789264091085-en

OECD (2014), *Revenue Statistics 2014*, OECD Publishing, Paris

Schulemann, O. (2011), "Reform der Grundsteuer – Handlungsbedarf und Reformoptionen", Karl-Bräuer-Institut des Bundes der Steuerzahler, Heft 109.

Strauss, R. and S. Sullivan (1998), "The Political Economy of the Property Tax: Assessor Authority and Assessment Uniformity", paper presented at the National Tax Association 91st Conference, Austin.

Van den Noord, P. (2005), "Tax Incentives and House Prices in the Euro Area: Theory and Evidence", *Economie Internationale*, No. 101.

Vickrey, W. (1999), "Simplifications, Progression, and a Level Playing Field", in K. Wenzer, (ed.), *Land Value Taxation: The Equitable and Efficient Source of Public Finance*, Armonk, NY: M.E. Sharpe.

Zodrow, G. R. (2001), "The Property Tax as a Capital Tax: A Room with Three Views", *National Tax Journal*, 54 (1).

ANNEX

Table A1. The valuation of immovable property:

Assessment and valuation of immovable property, OECD countries, 2014

		Coverage			Assessment and valuation				
Country	Property tax name	Scope	Main purpose	Other types of property taxed	Valuation method	Frequency of market value updates	Last market value update	Other updating methods	Responsibility for tax base setting
AUS	NSW Land tax	land only	residential and business, except owner-occupied	undeveloped land		every three years	2014		state government
AUS	NSW Council rates	land only	residential and business	undeveloped land, agricultural land	sales prices	every three years	2014		state government
AUT	LTA+LTB	land and buildings	residential and business	undeveloped land, agricultural land			1973	irregular updates	national government
BEL	Households	land and buildings	residential only	undeveloped land, agricultural land	income method	every ten years	1975	consumer price index	national and regional government
BEL	Businesses	land and buildings	business only	undeveloped land, agricultural land	income method	every ten years	1975	consumer price index	national and regional government
CAN	-	-	-	-	-	-	-	-	-
CHE	Canton of Berne	land and buildings	residential and business	undeveloped land, agricultural land	mix of sales prices and income		1998	irregular	state government
CHL		land and buildings	residential and business	undeveloped land, agricultural land	sales prices, cost method and income method		2009/2014		national government
CZE		land and buildings	residential and business	undeveloped land, agricultural land	area-based assessment				national government
DEU		land and buildings	residential and business				1935/1964	index	national government
DNK		land only	residential and business	undeveloped land, agricultural land	sales prices	bi-annually	2011		national government
ESP		land and buildings	residential and business	undeveloped land, agricultural land	sales prices			various indices	national government
EST		land only, all types of land	residential and business	undeveloped land, agricultural land	sales prices		2001		national government
FIN		land and buildings	residential and business	undeveloped	sales prices for land, cost method for buildings	every five years		construction price index	national government
FRA	-	-	-	-	-	-	-	-	-
GBR	CT	land and buildings	residential and business	none	sales prices		1991		national government
GBR	NDR		business only, including machinery	none	sales prices, cost method and income method	every five years	2010		
GRC	-	-	-	-	-	-	-	-	-
HUN		land and buildings	residential and business	undeveloped	sales prices	annually			national government
IRL	LPT	buildings only	residential and business	none	sales prices				national government
IRL	NPPR	buildings only	business only	none	Fixed lump sum		varies		
ISL	-	-	-	-	-	-	-	-	-

Table A1. The valuation of immovable property *(cont.)*

Assessment and valuation of immovable property, OECD countries, 2014

		Coverage			Assessment and valuation				
Country	Property tax name	Scope	Main purpose	Other types of property taxed	Valuation method	Frequency of market value updates	Last market value update	Other updating methods	Responsibility for tax base setting
ISR	Local authorities rates	land and buildings	residential and business	agriculture				consumer price index	
ITA	IMU	land and buildings	residential and business, except owner-occupied	undeveloped land, agricultural land	sales prices and cost method				national government
ITA	TASI	buildings only	residential and business	none	sales prices and cost method				national government
JPN	CPT	land and buildings	residential and business	undeveloped land, agricultural land	sales prices and cost method	every three years	2012		national government
JPN	MPT	land and buildings	residential and business, including machinery	undeveloped land, agricultural land	sales prices and cost method	every three years	2012		national government
KOR		land and buildings	residential and business	undeveloped land, agricultural land	sales prices	annually			national government
LUX		land and buildings	residential and business	undeveloped land, agricultural land	sales prices	no update			national government
MEX	Impuesto predial	land and buildings	residential and business	undeveloped land,	sales prices	annually	2014		
NLD		Buildings only	residential and business	undeveloped land	sales prices (and other methods for business property)	annually	2014		national government
NOR		land and buildings	residential and business	undeveloped	sales prices	every ten years		house price index	national government
NZL		land and buildings			sales prices		varies		local government
POL		land and buildings	residential and business	undeveloped land, agricultural land	area-based (residential), income method (business)				
PRT		land and buildings	residential and business	undeveloped land, agricultural land	sales prices	every three years			national government
SVK		land and buildings	residential and business	undeveloped land, agricultural land					national government
SVN	DPQ		residential and business	none					local government
SVN	NUSZ	land and buildings	residential and business	undeveloped					local government
SWE		land and buildings	residential and business	none	sales prices			Income base accounts	national government
TUR		land and buildings	residential and business, except owner-occupied	undeveloped land, agricultural land	sales prices for land, cost method for buildings	every four years		GDP inflator	
USA	Philadelphia local property tax	land and buildings	residential and business	undeveloped land, agricultural land	sales prices, cost method and income method, depending on type of property	annually	2013		state and local government

Source: OECD Immovable Property Tax questionnaire.

Table A2. Property tax abatements and property tax rates

OECD countries, 2014

		Tax abatements		Tax rates	
Country	Property tax name	Tax value set below assessed value	Exemptions	Level and variation across local governments	Progressive tax rates
AUS	NSW Land tax		Low income households		0% to 2.6% depending on property value
AUS	NSW Council rates				
AUT	LTA+LTB		Tax holidays for new buildings	no local variation	0.25% to 0.75% depending on type and size of properties
BEL	Ménages	tax value is 140% of assessed value	Lump-sum exemption for one property; exemptions for under-use		
BEL	Sociétés	yes	Certain businesses		
CAN	-.	-	-	-	-
CHE	Canton of Berne		Low-income households	0%-1.5%	
CHL		yes, 63% (residential), 79% (business)	Lump-sum exemption for each property; exemptions for disabled	0.98%-1.14% (residential)	Only for agricultural land
CZE					No, rate depends on type of property (CZK 1 to 6 per square metre)
DEU		yes, 33%			
DNK				1.6%-3.4%	no
ESP		yes	Low-income households; spending types; certain businesses	0.3%-1.3%	
EST			Lump-sum exemption for each property; low income pensioners		
FIN		yes, 70% (buildings), 74% (land)		0.32%-0.7% (owner-occupied), 0.6%-1.35% (other)	no
FRA	-	-	-	-	-
GBR	CT	8 value bands	Various reliefs granted individually by local governments		
GBR	NDR		Lump-sum exemption for each property; low income pensioners		
GRC	-	-	-	-	-
HUN		18 value bands		no local variation	
IRL	LPT			no local variation	0.18% below, 0.25% above EUR 1 million property value
IRL	NPPR				

Table A2. Property tax abatements and property tax rates *(cont.)*

OECD countries, 2014

		Tax abatements		Tax rates	
Country	Property tax name	Tax value set below assessed value	Exemptions	Level and variation across local governments	Progressive tax rates
ISL	-	-	-	-	-
ISR	Local authorities rates		Low income households		
ITA	IMU	yes, 50%	Low income households	0.2% (land)/0.46% (buildings) - 1.06%	
ITA	TASI		Low income households	0.10%	
JPN	CPT	yes	Low income households; certain spending; certain businesses		
JPN	MPT	yes	Low income households; certain spending; certain businesses		
KOR		yes, 60-70%	Certain spending; certain businesses	no local variation	0.1%-4%
LUX		no abatements		3.3%-100%	no
MEX	Impuesto predial	yes			Between 0.13% and 0.33% depending on property value
NLD		No, 100%	none, except some local exemptions	0.04%-0.5%	
NOR		Tax holiday for new buildings	Each local government to decide	0.2%-0.7%	
NZL					no
POL			Low income households		
PRT			Lump-sum exemption for each property	0.80%	
SVK					
SVN	DPQ		Lump-sum exemption for one property; higher tax for under-use		
SVN	NUSZ		Low-income households; tax holiday for new buildings		
SWE		yes, 75%			yes
TUR		no	Low-income buildings	0.1%-0.3%, double in metro areas	
USA	Philadelphia local property tax	no, 100%	Lump-sum exemption for one property; tax holiday on new buildings, certain spending; certain businesses		

Source: OECD Immovable Property Tax questionnaire.

WORKING PAPERS

The full series of Economics Department Working Papers can be consulted at www.oecd.org/eco/workingpapers

1204. *Taxation and Investment in Colombia*
(April 2015) By Sarah Perret and Bert Brys

1203. *Efficiency and contestability in the Colombian banking system*
(April 2015) By Christian Daude and Julien Pascal

1202. *Fiscal decentralisation in Colombia: New evidence regarding sustainability, risk sharing and "fiscal fatigue"*
(April 2015) By Guillaume Bousquet, Christian Daude and Christine de la Maisonneuve

1201. *Effects of economic policies on microeconomic stability*
(April 2015) by Boris Cournède, Paula Garda and Volker Ziemann

1200. *The 2013 update of the OECD's database on product market regulation – policy insights for OECD and non-OECD countries*
(April 2015) by Isabell Koske, Isabelle Wanner, Rosamaria Bitetti and Omar Barbiero

1199. *Improving taxes and transfers in Australia*
(April 2015) by Philip Hemmings and Annamaria Tuske

1198. *Federal-state relations in Australia*
(April 2015) by Vassiliki Koutsogeorgopoulou and Annamaria Tuske

1197. *Sharing the fruits of growth with all Mexicans*
(April 2015) by Eduardo Olaberriá and Valéry Dugain

1196. *What makes Mexicans happy?*
(April 2015) by Valéry Dugain and Eduardo Olaberriá

1195. *Improving the labour market integration of immigrants in Belgium*
(March 2015) by Álvaro Pina, Vincent Corluy and Gerlinde Verbist

1194. *Raising the potential of the domestically oriented sector in Germany*
(March 2015) by André Eid and Andrés Hutfilter

1193. *Improving transport infrastructure in Russia*
(March 2015) by Alexander Kolik, Artur Radziwill and Natalia Turdyeva

1192. *Improving the business climate in Russia*
(March 2015) by Arthur Radziwill and Yana Vaziakova

1191. *Determinants of female entrepreneurship in India*
(March 2015) by Arnaud Daymard

1190. *The changing role of the exchange rate for macroeconomic adjustment*
(March 2015) by Patrice Ollivaud, Elena Rusticelli and Cyrille Schwellnus

1189. *Boosting productivity in Russia: skills, education and innovation*
(March 2015) by Lilas Demmou and Andreas Wörgötter

1188. *Boosting growth and reducing informality in Mexico*
(March 2015) by Sean Dougherty

1187. *The conduct of monetary policy in the future: instrument use*
(March 2015) by Kei-Ichiro Inaba, Rory O'Farrell, Łukasz Rawdanowicz and Ane Kathrine Christensen

1186. *A constant market share analysis of Spanish goods*
(February 2015) by Alberto Gonzalez Pandiella

1185. Raising the economic participation of women in India – a new growth engine?
(February 2015) by Piritta Sorsa

1184. *Improving health outcomes and health care in India*
(January 2015) by Isabelle Joumard and Ankit Kumar

1183. *Challenges and opportunities of India's manufacturing sector*
(January 2015) by Isabelle Joumard, Urban Sila and Hermes Morgavi

1182. *The heterogeneity of product market regulations*
(December 2014) by Jean-Marc Fournier

1181. *Implicit regulatory barriers in the EU single market: new empirical evidence from gravity models*
(December 2014) by Jean-Marc Fournier, Aurore Domps, Yaëlle Gorin, Xavier Guillet and Délia Morchoisne

1180. *Can pro-growth policies lift all boats? An analysis based on household disposable income*
(December 2014) by Orsetta Causa, Alain de Serres and Nicolas Ruiz

1179. *Empirical evidence on the effects of environmental policy stringency on productivity growth*
(December 2014) by Silvia Albrizio, Tomasz Koźluk and Vera Zipperer

1178. *The Indicators of the Economic Burdens of Environmental Policy Design – Results from the OECD Questionnaire*
(December 2014) by Tomasz Koźluk

1177. *Measuring Environmental Policy Stringency in OECD Countries-A Composite Index Approach*
(December 2014) by Enrico Botta and Tomasz Koźluk

1176. *Do Environmental Policies Matter for Productivity Growth? Insights from new Cross-Country Measures of Environmental Policies*
(December 2014) by Silvia Albrizio, Enrico Botta, Tomasz Koźluk and Vera Zipperer

1175. *Making economic growth more socially inclusive*
(December 2014) by Andrés Fuentes Hutfilter and Andreas Kappeler