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Tax Policy and Tax Reform in the People's Republic of China

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ABSTRACT

Tax policy and tax reform in the People's Republic of China

This paper compares the tax system in China with the tax system in OECD countries and the tax reforms China and OECD countries have implemented in the past. The analysis focuses on those taxes and tax issues which are currently on China's reform agenda, including the consumption taxes (especially the integration of the "business tax" into the VAT), environmentally-related taxes, the personal income tax, fiscal relations between the central and sub-central levels of government and property taxes. The paper provides a (preliminary) analysis of the tax-to-GDP ratio and the tax mix in China as well as the average and marginal tax wedge on labour income, by applying the OECD's Revenue Statistics and Taxing Wages methodology. Although a country's culture, traditions and legal system play an important part in shaping its tax regime and how it can be reformed, the paper also reviews the general design issues on how to make the tax system in China more growth-friendly, simple and transparent, less distortive and fairer. The paper contains a detailed discussion and evaluation of each tax and considers possible directions for future tax reform in China.

JEL classification: H2, H7.

Keywords: tax policy, tax reform, China.

RÉSUMÉ

Politique et réformes fiscales en République Populaire de Chine

Ce document compare le système fiscal en Chine avec celui des pays de l'OCDE en tenant compte des réformes que ces pays ont mis en œuvre par le passé. L'analyse se concentre sur les impôts et les questions fiscales pour lesquels la Chine envisage une réforme, y compris les impôts sur la consommation (notamment l'intégration de « la taxe d'affaires » dans la TVA), les taxes liées à l'environnement, l'impôt sur le revenu des personnes physiques, les relations budgétaires entre l'administration centrale et les administrations infranationales, ainsi que les impôts fonciers. Ce document présente une analyse (préliminaire) du ratio impôts/PIB et de la structure fiscale en Chine, ainsi que du coin fiscal moyen et marginal sur les revenus du travail, en appliquant la méthodologie utilisée dans les publications de l'OCDE *Statistiques des recettes publiques* et *Les impôts sur les salaires*. Bien que la culture, les traditions et le système juridique d'un pays jouent un rôle important pour façonner son régime fiscal et influent sur les possibilités de réforme, ce document aborde également des questions générales de conception en vue de déterminer comment faire en sorte que le système fiscal en Chine soit plus favorable à la croissance, simple, transparent et équitable, et induise moins de distorsions. Ce document examine et évalue chaque impôt en détail et réfléchit aux orientations possibles de la future réforme fiscale en Chine.

Classification JEL: H2, H7.

Mots-clés : politique fiscale, réforme fiscale, Chine.

FOREWORD

This paper has been written for the Ministry of Finance in China and aims at providing input to China's ongoing tax reforms. The paper includes information which was available and updated up to April 2013. This paper has benefited from comments provided by Mr. Jianfan Wang, Deputy Director General of the Tax Policy Department of the Ministry of Finance in China and from Xuebing Lin and Hanning Hu and other Ministry of Finance staff members. The authors are grateful to Wei Cui for his valuable comments. The authors are also thankful to Pascal Saint-Amans, Pierre Leblanc, Vincent Koen, Alastair Thomas, Piet Battiau, Maurice Nettley, James Greene and Robert Ford from the OECD for useful feedback, and Michael Sharratt for his excellent statistical assistance. The authors remain responsible for any remaining errors.

TAX POLICY AND TAX REFORM

IN THE PEOPLE'S REPUBLIC OF CHINA

Bert Brys, Stephen Matthews, Richard Herd and Xiao Wang [1]

Introduction

China's tax regime has raised an increasing amount of tax revenues in relation to GDP over the past 20 years to finance public expenditure and support development while at the same time maintaining sound public finances. However, China's economy has been evolving extremely rapidly and the tax regime needs to evolve as well to ensure that it contributes to and does not impede the next steps in the country's economic development. It will also be important to ensure that China's tax regime supports other key objectives.

This paper aims at providing input in the ongoing tax reform discussions in China. The analysis focuses on those taxes which are currently on China's reform agenda, including consumption taxes (e.g., the Value-Added Tax and the Business Tax), the environmentally related taxes, the personal income tax, the fiscal relations between the central and sub-central level of government and the taxes on immovable property. Other taxes such as the corporate income tax, international taxation issues and strategies that allow making tax reform happen, while certainly important, are not discussed in the paper.

This paper compares the tax system in China with tax systems and trends in OECD countries. The analysis provides detailed, although preliminary, information on the tax-to-GDP ratio and tax mixes in China and the OECD in Chapter 1, by applying the OECD's Revenue Statistics methodology and tax classification. Information on tax rates and tax rules for specific taxes in China and the OECD is provided throughout the paper.

Although a country's culture, traditions and legal system play an important part in shaping its tax regime and how it can be reformed, important lessons can be learned from international tax experience on how to make the tax system more growth-friendly, simple and transparent, less distortive and fairer. These general design issues are reviewed in Chapter 2.

Chapter 3 contains a detailed discussion and evaluation of each tax and considers possible directions for future reform. In a number of cases, the paper considers how the reform of specific taxes involves tradeoffs between different objectives (e.g., growth and equity), and recognizes that the Chinese government is best placed to decide how best to manage these tradeoffs.

The concluding Chapter 4 summarizes the main recommendations for tax reform in China.

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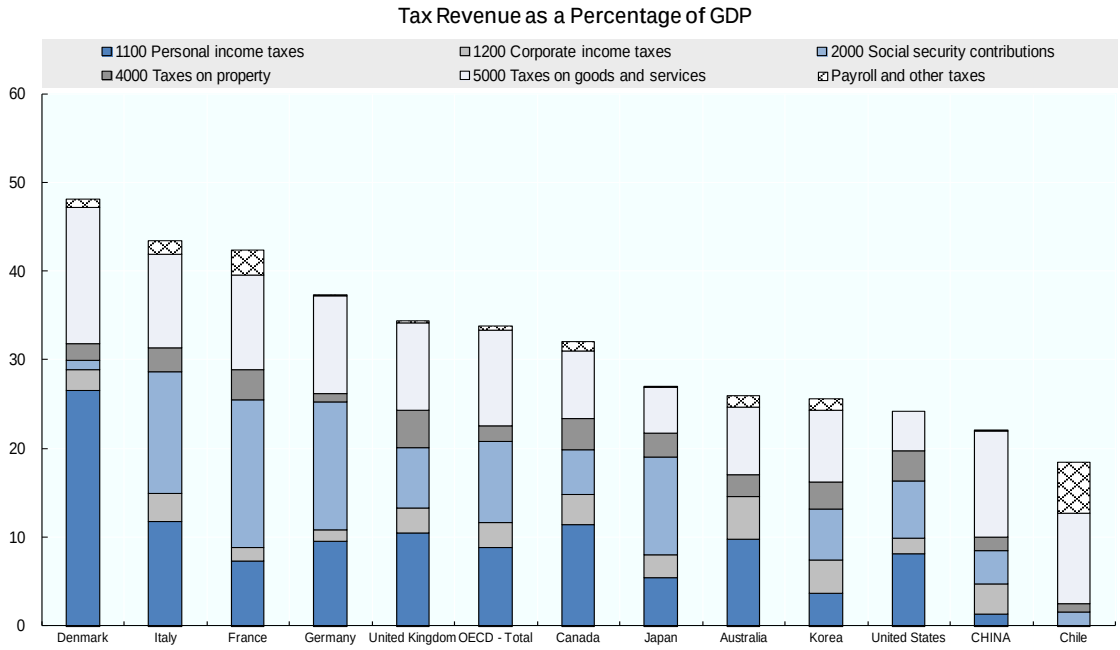
CHAPTER 1

TAX REVENUES AND THE TAX MIX IN CHINA COMPARED TO OECD COUNTRIES

1.1 Tax-to-GDP ratio

Compared to OECD countries, the tax burden in the People's Republic of China (PRC) remains relatively low (see Figure 1). Including social security contributions[2], the tax-to-GDP ratio in China in 2010 was 21.9% (China Statistics Yearbook, 2011)[3] while the tax burden was 34% on average across the OECD. Overall tax burdens vary across the OECD from below 20% in Mexico and Chile to above 45% in Sweden and Denmark. Differences in tax-to-GDP ratios reflect a range of factors such as the size of the benefit system and the way that a society decides to provide pensions, education and health care, with some countries financing those through government budgets and others relying more on the private sector.

Figure 1: Tax-to-GDP ratio in China and a selection of OECD countries in 2010



Source: OECD Revenue Statistics 1965-2011 (2012e) and China Statistics Yearbook 2011.

[2] Taxes are defined as "compulsory unrequited payments to general government", following the definition and methodology of the OECD's annual Revenue Statistics publication. Social security contributions (SSCs) are compulsory payments made to general government. SSCs are typically also unrequited in the sense that the benefits that are received are not a perfect reflection of the contributions that have been made. Only in case there is a perfect link between contributions paid and benefits received, SSCs are not considered to be taxes – and therefore not included in the tax data – but are defined as "non-tax compulsory payments" instead. This approach is usually not followed in China, which explains why the tax-to-GDP ratio as well as the tax mix ratios in this paper may differ from the figures in non-OECD reports.

[3] This analysis is based on data which was available early 2012 and does not take into account any possible revision of the 2010 figures published by Statistics China since then.

There are also differences across countries in the level of non-tax government revenues and/ or non-tax compulsory payments basically made to privately-managed social insurance funds. China in particular raises more non-tax revenues (e.g. government funds, administrative fees, fines and income from the ownership of state-owned enterprises) than OECD countries. There were 34 types of government funds, 236 types of administrative fees as well as local government charges levied in 2009 in addition to tax and social security contributions (Bin Yang and Eva Huang, 2011), although their number is decreasing over time. Many of these levies paid to government are similar to taxes, as they are compulsory, unrequited and exceed the amount which would allow them to be considered as a fee – we therefore decided to add these levies, in the case of China, to the official tax revenue figures. The non-tax revenues raise funds of about 2.5% of GDP in 2010 (China Statistics Yearbook 2011). About 80% of these revenues were raised by sub-central levels of government, mainly because sub-central tax revenues and transfers received from central government are insufficient to finance sub-central expenditure including spending on education, health, pensions, social welfare and urban maintenance.

The tax-to-GDP for China in Figure 1 does not include the revenues that are raised through land transfer fees (i.e. land sales revenues). Although part of the revenue from selling land is used to compensate the owners of collective and agricultural land as well as to prepare the land for development (i.e. costs of installing roads, water, drainage, electricity, etc.), sub-central levels of government in particular use land sales to increase their revenues. Although exact figures are not available, revenues from land sales may well exceed 1.5% of GDP. The ratio of tax revenues, augmented by non-tax revenues and revenues from land sales, as a percentage of GDP in China in 2010 was therefore in the order of 26% of GDP, which is similar to the tax-to-GDP ratio in the United States, Japan, Korea and Australia.[4]

1.2 Growth in nominal tax revenues in China

Since the mid-1990s, growth of tax revenues has consistently exceeded or at least matched nominal GDP growth, as shown in Figure 2. The strong increase in tax revenues is very much the result of strong real economic growth and the relatively high inflation rate, resulting in nominal growth in GDP of over 17% in 2010 and 2011, for instance.

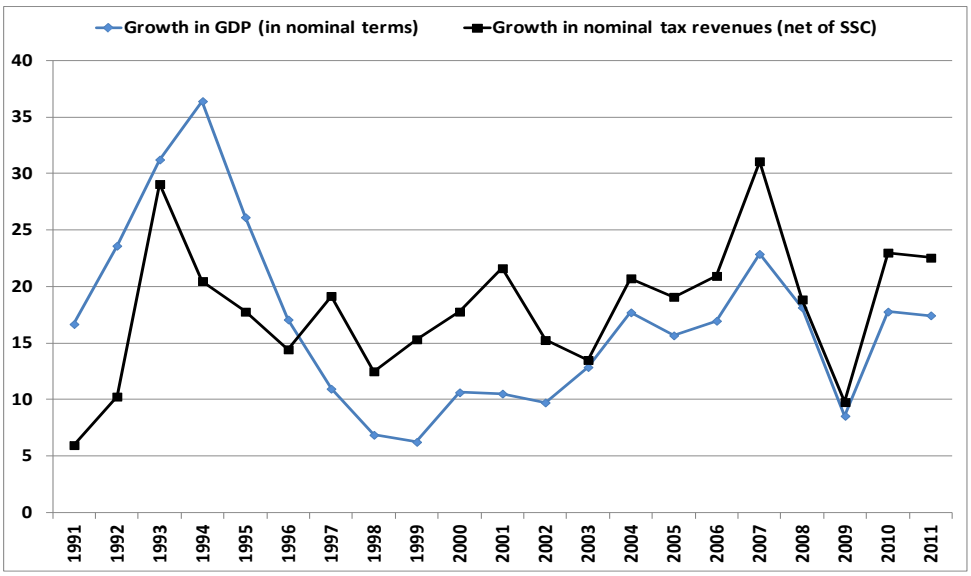
The increase in tax revenues above nominal growth in GDP reflects the impact of tax reforms (e.g. the 2008 corporate tax reform), as well as changes in the shares of the agricultural, industrial (including construction) and service industry in GDP, the specific design of the tax system in China and an improved tax collection.

In China, the industrial, construction and the service industries have grown rapidly, leading to a reduction in the share of the agricultural sector in GDP. Because the agricultural sector pays considerably less tax than the other sectors – especially after the agricultural tax has been abolished – the changes in the shares of the different economic sectors in GDP have contributed to an increase in tax revenues exceeding economic growth.

Progressive tax rate schedules (in the personal income tax, the land appreciation tax, etc.) have also contributed to increases in tax revenues above GDP growth as households and businesses pay higher taxes, not only in absolute amounts but also as a percentage of income or wealth, when they move into higher tax brackets.

[4] According to Wang and Herd (2013), the non-tax revenues of sub-central governments accounted for 4.4% of GDP and revenues from land sales equalled 2.1% of GDP in 2009. The overall "tax and non-tax" to GDP ratio for 2010 as reported in this paper might therefore be an understatement.

Figure 2: GDP and tax revenue growth in China over the past two decades



Source: China Statistics Yearbook 2011.

A significant feature of the tax system in China is that it leads to extra tax revenues when the economy – and in particular the property market – is booming (this is the case in some OECD countries as well). China levies many taxes on transactions especially in relation to residential property. These transactions lead to extra tax revenue, especially when the economy is growing at high rates and investors and households buy and sell property, but these transactions do not necessarily show up in GDP. China also levies taxes on international trade so its growth relative to GDP has tended also to boost revenues relative to GDP. Strong economic growth in the export sector has led to higher VAT revenues as, in China, not all of the VAT paid on inputs can be recovered when goods are exported, as is the practice in OECD countries. Also, an increase in the level of imports further strengthens the growth in tax revenues as a result of higher import duties.

Finally, China has also strengthened its tax administration not only with respect to the VAT but also the corporate income tax leading to, for instance, a very high increase (+31.8%) in tax revenues raised from non-resident businesses in 2011 (Tax Notes International, April 23, 2012), which may also reflect the continuing positive impact of the 2008 corporate (enterprise) income tax reform.

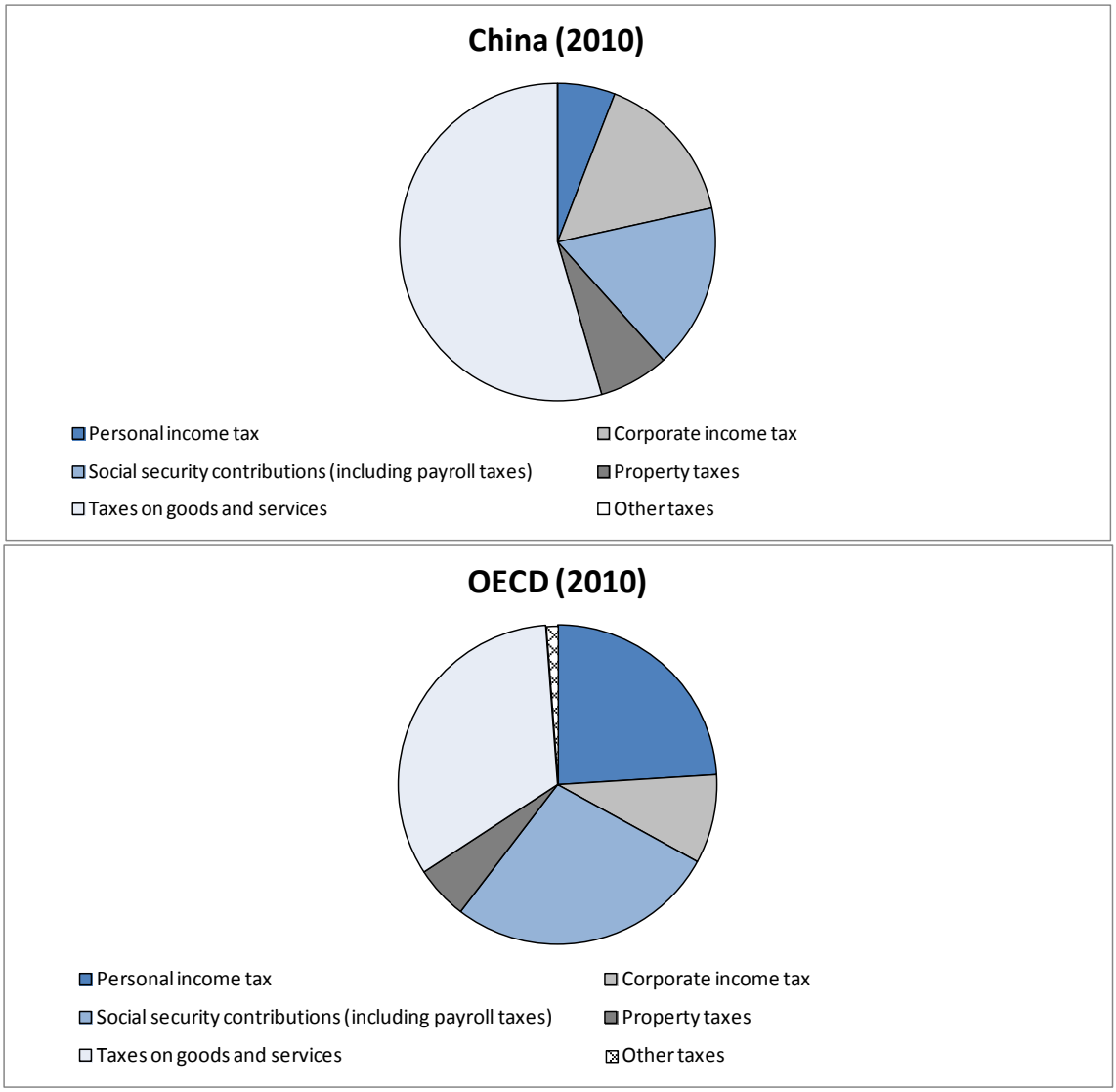
1.3 Taxes levied and the tax mix in China and on average in the OECD

The mix of taxes that are levied in China differs considerably from the tax mix on average across the OECD (see Figure 3). China raises more indirect taxes (taxes on goods and consumption and property taxes) and less direct taxes (personal and corporate income tax, payroll taxes and social security contributions) than countries on average in the OECD. Information on the share of each tax in total tax revenue (including SSCs) in 2010 is also included in Table 1. Non-tax revenues in China are also considerably higher than in the OECD on average but are not included in Figure 3 and Table 1.

China raises more than half of its revenue from taxes on goods and services, including both "general taxes on goods and services" – including the VAT, the business tax (which is a sales tax levied on services)[5] and

[5] The BT is levied also on the transfer of real property. The corresponding BT revenue (as well as the revenue from the city and rural area maintenance and construction tax insofar this surtax is raised on the BT levied on the transfer of real property) might have to be classified as property transaction tax revenue (but not necessarily if the BT is levied

Figure 3: The tax mix in China and in the OECD on average in 2010
Tax revenue (including SSCs) as a percentage of total tax revenue



Source: OECD Revenue Statistics 1965-2011 (2012e) and China Statistics Yearbook 2011.
Note: the land appreciation tax in China is partly assigned to the corporate income tax and partly to the personal income tax (using the shares of respectively the PIT and CIT as a percentage of the total PIT and CIT revenues).

the city and rural area maintenance and construction tax (which is a surtax levied on the VAT, business tax and consumption tax) insofar as this surtax is levied on the VAT and the business tax – and "taxes on specific goods and services" – the consumption tax (which is an excise duty on specific tax items as alcohol, tobacco and luxury products), the city and rural area maintenance and construction tax insofar as this surtax is levied on the consumption tax, as well as the resource tax[6], the tobacco (leaf) tax[7], the vehicle

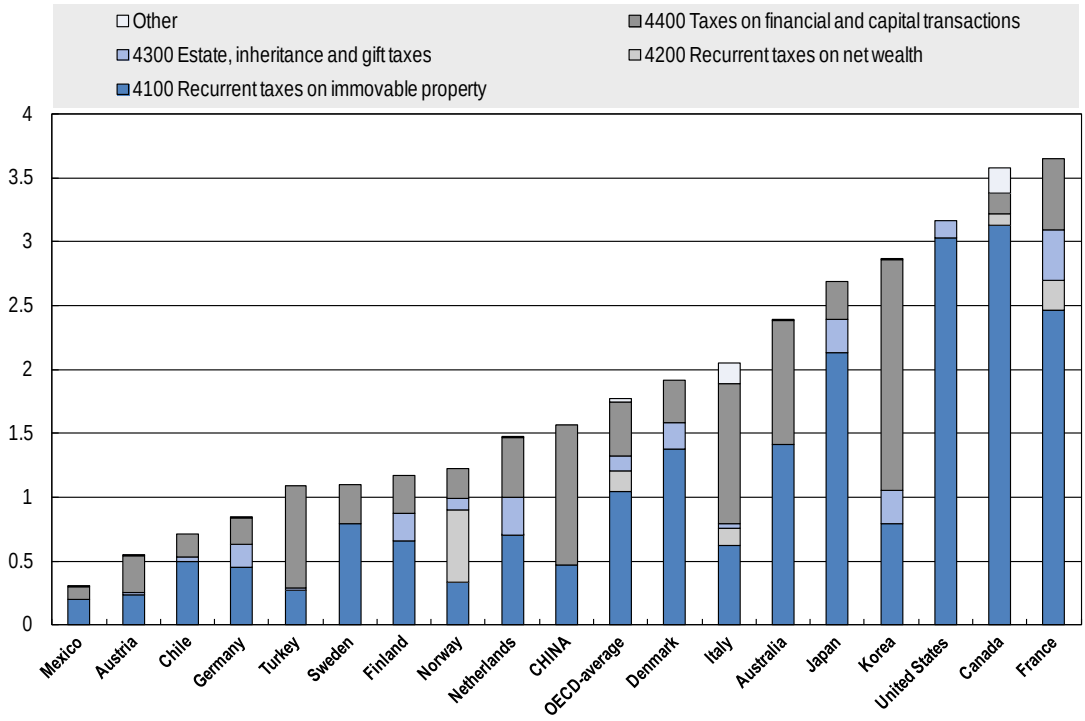
on newly constructed property, see section 3.5 for a more detailed discussion) instead of revenue from "general taxes on goods and services", but such a detailed decomposition of the BT (and the city and rural area maintenance and construction tax) revenue was not available to the authors.

[6] The "resource tax" is an ad-valorem or ad-quantum excise duty which levied with respect to oil, natural gas, coal, other non-medal ores, ferrous ores, non-ferrous ores and salt.

purchase tax[8], the vehicle and vessel (shipping) tax[9] and the custom duties. Taxes on goods and services account for less than one-third of total tax revenues in the OECD on average.

On average, OECD countries raise more than 60% of their revenues from direct taxes, while this is only 38% in China. Employer and employee social security contributions, including payroll taxes, account for about 28% of tax revenues in the OECD. The corresponding revenues in China account for less than 17% of revenues. Corporate income taxes raise about 8% of tax revenues in the OECD; these revenues are significantly higher in China which raises more than 15% of revenues from the enterprise income tax. OECD countries raise a large share of revenue from personal income tax (about 25% of tax revenues); this is not the case in China where the personal income tax accounts for less than 6% of total tax revenues.

Figure 4. Revenues from property taxes as a percentage of GDP (2010) [1,2]



Source: OECD Revenue Statistics (2012), China Statistics Yearbook 2011 and own calculations.

[1] Revenue of recurrent taxes on immovable property (category 4100) in China includes the revenue of the "house property tax" and the "urban and township land use tax". Revenue of taxes on financial and capital transactions (category 4400) in China includes the revenue of the "stamp tax on securities and real estate" and the "tax on deeds" as well as the "arable (farming) land occupancy tax". However, according to the OECD's Revenue Statistics methodology, it would be more correct to classify the "arable (farming) land occupancy tax as an "other non-recurrent tax on property" (category 4500), as this category covers taxes levied to take account of increases in land value due to permission given to develop.

[2] The 'vehicle purchase tax' and the 'vehicle and vessel (shipping) tax' are classified as taxes on goods and services (category 5000 of the Revenue Statistics methodology).

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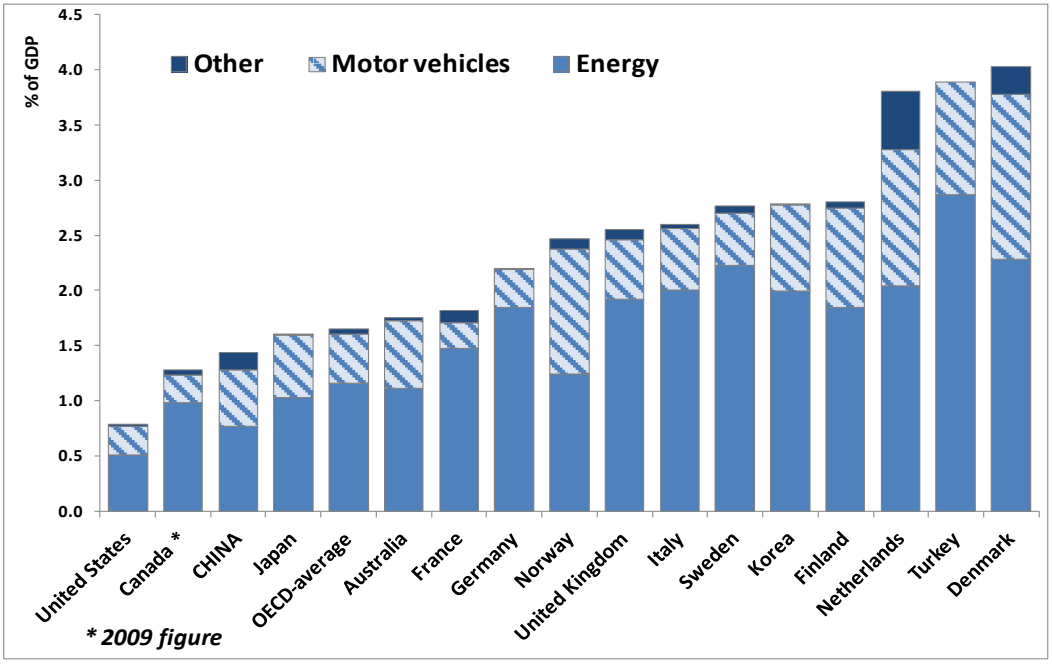
[7] The "tobacco leaf tax" is imposed on the entity that engages in the purchase of tobacco leaves (including aired tobacco leaves and baked tobacco leaves) within China.

[8] The "vehicle purchase tax" is imposed on the entities and individuals who purchase cars, motorcycles, trams, trailers and agricultural transport vehicles and is levied on the price of the vehicle.

[9] The "vehicle and vessel tax", sometimes classified as a property tax, is an annual tax which is imposed on vehicles and vessels; different amounts of tax have to be paid for passenger vehicles, commercial vehicles, ships depending on their net tonnage, and yachts depending on their length.

Property taxes account for about 5% of tax revenues on average across the OECD, while the house property tax[10], the urban and township land use tax[11], the arable (farming) land occupancy tax, the deed tax[12] and the stamp duty[13] raise more than 7% of tax revenues in China (Figure 3). In 2010, the revenue raised from property taxes in China equalled 1.6% of GDP (see Figure 4), which was only slightly below the average revenue raised in the OECD (about 1.8% of GDP). However, China raises more revenue from taxes on property transactions (about 1.1% of GDP) and less from recurrent taxes on immovable property (about 0.5% of GDP) than on average in the OECD (respectively 0.4% and 1% of GDP). In contrast to China, some OECD countries raise revenue from recurrent taxes on net wealth and/ or estate, inheritance and gift taxes, but in most countries the revenue raised from these taxes is relatively low.

Figure 5. Revenues from environmentally-related taxes as a percentage of GDP (2010) [1, 2, 3]



Source: OECD-EEA (2012), OECD/EEA Database on Instruments Used for Environmental Policy and Natural Resources Management.

[1] Royalties and tax revenues from oil and gas extraction are not included.

[2] The motor vehicles tax revenue represents the tax revenue from the 'vehicle purchase tax' and the 'vehicle and vessel tax'. The other tax revenue represents the revenue from the 'resource tax' and 'pollutant charge'; the revenue from the latter is small.

[3] The OECD average included here is a weighted average, while the OECD averages included in the rest of the paper are unweighted OECD averages.

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[10] The "house property tax" is a recurrent tax on immovable property, mostly levied on the original purchase price or construction value net of 10%-30% of the value (provinces can choose the specific "depreciation" rate); the tax is not levied in rural areas.

[11] Currently, China levies 2 land taxes. The "urban and township land use tax" is a recurrent (yearly) tax imposed on the land in cities, county towns, administrative towns and industrial and mining districts. The "arable (farming) land occupancy tax" is an area-based property transaction tax which has to be paid by the entities and individuals who build residential property on the arable land or who use the land for other non-agricultural purposes.

[12] The "deed tax" is a property transaction tax which is levied on the (transaction) price of land and/or residential property and has to be paid by the transferee.

[13] The "stamp tax" is a property transaction tax typically levied on securities and immovable property.

In some OECD countries, VAT is levied on the first purchase of a residential property (e.g. Belgium and France). A similar approach is followed in China, where property developers have to pay the business tax on the value of their sales. This tax, which is considered to be a tax on goods and services (category 5000) and not on property (category 4000), is estimated to raise about 0.5% of GDP in revenue (Wang and Herd, 2013). As a measure to curb speculation, households who sell an apartment within 2 years of purchase also have to pay the business tax since 2011.

China raises relatively little revenue from environmentally-related taxes, as is the case in most OECD countries. Compared to OECD countries, China raises especially little revenue from taxes on energy including fossil fuels. The revenues raised in China from the ownership or use of motor vehicles is slightly above the revenues raised on average across the OECD. Figure 5 shows that environmental taxes account for about 1.4% of GDP in 2010, which is only slightly below the revenues raised on average across the OECD (about 1.6% of GDP), but there are large differences amongst OECD countries with countries like the United States and Canada raising little revenues and the Netherlands, Turkey and Denmark raising a lot of revenues from environmentally-related taxes.

Table 1. Shares of tax revenue and revenue assignments for central and sub-central governments (2010)

	Tax revenue as a % of total tax and SSC revenue	**Legal sharing rate**	
		Central	**Sub-central**
Central taxes			
Consumption tax	6.9	100	0
Tariffs	2.3	100	0
International trade-related VAT & consumption tax	11.9	100	0
Refunds of VAT & consumption tax on exports	-8.3	100	0
Vehicle purchase tax	2	100	0
Cargo tax	0.03	100	0
Shared taxes			
(Domestic transaction-related) VAT	24	75	25
Corporate income tax	14.6	60	40
Personal income tax	5.5	60	40
Stamp tax on securities	0.6	97	3
Sub-national taxes			
Business tax	12.7	1	99
Resource tax	0.5	0	100
City & rural area maintenance and construction tax	2.1	0	100
House property tax	1	0	100
Real estate (stamp) tax	0.6	0	100
Urban and township land use tax	1.1	0	100
Land appreciation tax	1.5	0	100
Vehicles and vessel (shipping) tax	0.3	0	100
Arable (farming) land occupancy tax	1	0	100
Tobacco (leaf) tax	0.1	0	100
Tax on deeds	2.8	0	100
All taxes (net of social security contributions)	**83.2**	**54**	**46**
Social security contributions	**16.8**	**0**	**100**
All taxes (including social security contributions)	**100**	**45**	**55**

Source: Statistical Yearbook of China; Wang and Herd (2013); and authors' own calculations.
Note: In Figure 3, the land appreciation tax is partly assigned to the personal income tax and partly to the corporate income tax (by using the shares of respectively the PIT and the CIT revenue as a percentage of the total PIT and CIT revenues). As a result, the shares of the PIT and CIT in total tax revenues which are referred to in the main text slightly differ from the shares included in this table.

1.4 Tax assignment to central and sub-central levels of government

Sub-central levels of government in China do not have their own taxing powers. The revenues of the taxes which are levied either finance expenditure of the central level of government (central taxes), is assigned exclusively to the sub-national government level (sub-national taxes) or is shared between central and sub-central governments (shared taxes). The legal sharing rate for each tax is included in Table 1.

Pure central government taxes relate to foreign trade taxes – basically custom duties/ tariffs and VAT levied on imports net of VAT refunds on exported goods – as well as excise duties on tobacco, alcohol, cosmetics and jewellery (the consumption tax) and the vehicle purchase tax. Shared tax revenue consists of the PIT, the CIT, the domestic transaction-related VAT and the stamp tax on securities, although the central government receives more revenue from these taxes than the sub-central levels of government. The revenue from the other taxes, which consists primarily of the business tax, the city and rural area maintenance and construction tax and the different types of property taxes, are assigned to the sub-central levels of government. For more information on how the taxes are shared between the different levels of sub-national government, see Wang and Herd (2013).

Overall, central government receives about 54% of total tax revenues net of SSCs. When SSCs are also included, central government receives 45% of total taxes levied while the other 55% of the revenue finances sub-central levels of government. As sub-central levels of government account for about two-thirds of total government expenditure (see section 3.4), the tax revenues received by sub-central government are insufficient to finance sub-central expenditure; sub-central tax revenues are therefore supplemented by transfers from central to sub-central government. Even then, tax and transfer revenues remain insufficient. As sub-central levels of government cannot run a budget deficit, they have to turn to land transfer fees and non-tax revenues such as government funds and administrative fees (and possibly borrow through public corporations) to balance their budgets.

Sub-central governments' tax revenues will decrease over time as the business tax is scheduled to be integrated within the VAT (see section 3.1). This loss of tax revenues will have to be compensated for by increased transfers from central government, and/ or changes in the legal sharing rates of the other taxes, and/ or by giving sub-central levels of government their own taxing powers (see also section 3.4).

CHAPTER 2

DESIRABLE CHARACTERISTICS OF A TAX REGIME AND TAX DESIGN ISSUES

Taxes are the principal means used by governments to transfer resources from private to public use. Such transfers cannot be achieved without some costs. The essence of good tax policy design is to minimise these costs, including not only the costs to government of administering the tax regime and to the private sector of complying with tax legislation, but also wider economic efficiency costs.

Such economic efficiency costs arise from the changes that taxes produce in the relative costs and prices of labour, capital, raw materials, intermediate and finished goods and services and their consequent effects on the incentives, risks and rewards of economic activity; and hence on economic efficiency and welfare. Economic efficiency costs can be hard to measure as they arise from the investment, employment, production and consumption that do *not* take place as a result of taxes changing relative prices. They are sometimes referred to as the 'excess burden' or 'deadweight cost' of taxation.

Appropriate structural tax policies, i.e. choices about the composition of tax revenues and the design of individual taxes can significantly reduce these costs and also make the tax regime more growth friendly. However, the determinants of economic growth are complex and the tax regime is only one among many contributing factors. Even so, it is possible to set down a number of principles on how best to minimise the economic costs of taxation; and this is one of the objectives of this chapter.

Standard public finance theory considers three main motivations for government intervention in the economy: to influence the allocation of resources; to redistribute income; and to maintain macro-economic stability. These interventions generally require the use of public expenditure and regulatory policies (which are outside the scope of this paper) but there are important tax aspects to all three. This chapter first discusses taxation and resource allocation, then considers taxation, equity and redistribution and finally briefly discusses the role of taxation in macroeconomic policy. It is intended to provide an overview of the main issues to set the scene for the rest of the paper, rather than to be a comprehensive analysis.

2.1 Economic efficiency and the costs of taxation

The level and composition of tax revenues in a country inevitably reflect the economic and social context. For the most part, developing and emerging countries rely more heavily on taxes that are relatively easy to collect, including taxes on property transactions or output/ sales. The collectability of taxes is always important, but economic development should put governments in a position also to take account of the wider economic effects of taxation and to modify the composition of revenues and design of taxes accordingly.

The rapid growth of China's economy and the development of the infrastructure of a modern economy should provide the opportunity for an evolution of its tax system – an evolution that is already under way, as the significant reforms made in recent years and those currently being rolled out testify. Where, for instance, more of GDP is generated and traded in the formal market economy, where payments are increasingly made through the banking system and firms keep financial accounts to help them manage their businesses, it becomes much more practicable to levy broad-based and less distortionary taxes on incomes and consumption.

Against this background, this section discusses the costs of taxation and how these can in principle best be minimised. Of course, in practice a country's culture, traditions and legal system play an important part in shaping its existing tax regime and will continue to influence what is regarded as politically and socially acceptable in the future. In the case of China, moreover, there are wide economic disparities between the large cities of the east (which are increasingly similar to the developed countries of the OECD) and the relatively poor agricultural areas of the centre and west and a 'one size fits all' approach may not be appropriate. Discussion of the extent to which taxation should be differentiated by region or of the extent to which there should be regional autonomy is, though, left to a later section.

The desirability of a tax regime that is transparent and predictable, with administrative and compliance costs that are as low as possible and which minimises the negative effects of taxation on economic activity and welfare have long been recognised in the economic literature, including the taxation principles set out by Adam Smith in 1776 in the "Wealth of Nations".

Certainty and predictability

Decisions about setting up a business, investing, saving, type of employment, how many hours to work, migration etc. all involve businesses and households making decisions about whether the activity in question will be economically worthwhile. Alongside their assessment of future returns, they will also want to take account of the taxation of these returns to assess whether activities that are worthwhile before-tax are also likely to be worthwhile after-tax. To do this the tax consequences of their actions needs to be predictable.

This is more likely to be the case if tax bases and rates are set out in legislation and tax administration processes are designed to enforce this legislation. This avoids the arbitrariness that is likely to result where, for instance, tax officials are given targets for the amount of revenue to collect from a given tax or group of taxpayers; and vary the rigour of their enforcement activity – and perhaps even the tax rate – accordingly. Similarly, if taxpayers know that the amount of tax to be paid is not up for negotiation and cannot be reduced by, say, the payment of a bribe, they will spend less time on rent seeking activities that divert resources from the production of goods and services and undermine the market signals that ensure fair competition, and encourage efficiency and innovation.

Administrative and compliance costs

Resources devoted to administering the tax regime and to complying with it necessarily reduce the time and effort available to undertake more productive activities. It is thus desirable to keep such costs as low as possible, consistent with achieving high levels of taxpayer compliance. This applies not only to the administrative costs borne by the state but equally to the costs for taxpayers of the additional record keeping needed for tax purposes, preparing timely tax returns, audit processes, etc. In developing countries where business record keeping may be non-existent or fairly basic, it may be appropriate not to levy more complex taxes such as VAT on smaller businesses or (at any rate) to devise simplified regimes for them. However, where businesses already keep more systematic accounts in order to run their businesses efficiently, then taxes like CIT and VAT may (once initial set-up costs are complete) may have relatively low ongoing compliance costs and substantial wider economic efficiency benefits.

Countries that are able to achieve high rates of voluntary compliance by taxpayers (as a result of respect for the law, processes that make it easy for taxpayers to comply, etc.) are generally able to achieve lower (total) administrative and compliance costs.

Minimizing tax-induced distortions (efficiency)

Except where there are significant 'externalities' (see below), taxation should not distort production techniques (away from what the underlying costs of different inputs would suggest is most efficient). Taxing intermediate production inputs (and transactions) is always more distortionary than taxing final output directly. In this respect, one of the great advantages of a VAT is that it can be designed so that taxes on value added in the early stages of the production chain do not 'cascade', i.e. businesses get relief for the VAT that has been paid on their inputs; and all the tax gets passed forward to the final consumer. Businesses thus procure their inputs and organise their operations on the basis of underlying costs, with tax playing no role. This 'production neutrality' property is a key advantage of a modern VAT/GST.

The distorting effect of taxes is minimized if taxes are levied on goods and services that are inelastic in demand and/ or complementary to leisure. Because their demand does not change considerably when their tax-adjusted price increases (and because the tax internalizes the costs which smoking and excessive alcohol consumption causes), many countries levy high taxes on cigarettes and alcohol. A similar argument applies to the supply side; taxes on production factors that are inelastic in supply, as for instance land, are not distortive but are merely capitalized in the price of land.

The tax system will also be less distortionary if different goods and services, different sources of finance (debt, internal and external equity), different savings and investment opportunities (direct household savings, pension savings, residential property), etc. which are (close) substitutes receive a similar tax treatment. A broad tax base with few exceptions is in many cases the most efficient tax system. A broad tax base also allows implementing lower tax rates; this further strengthens the efficiency of the tax system as dead weight losses are increasing in the level of the tax rates.

Developing the formal economy

It is generally only possible to tax money income earned in and consumption purchased through a formal market. Goods and services produced by and consumed within a household thus escape taxation. Taxation thus always tends to discourage activity in the formal market economy, but the gains in productivity and economic welfare from increased specialisation and division of labour, increased capital intensity, use of new technology etc. (all of which are likely to involve activity in the formal economy) are generally such in developed countries that the informal sector is relatively small. Even so, there are often small scale activities that continue to be undertaken in the informal sector to evade taxes and other regulations. Informality is generally even more significant in developing and emerging economies; and it is important to ensure that tax bases and rates do not discourage economic development, that the tax and benefit system is designed such that there are direct benefits for entering the formal economy while the tax administration should pursue compliance strategies that tackle evasion.

Internalizing positive and negative externalities

While, as already noted, it is desirable to avoid taxes on inputs and intermediate outputs because of the resulting distortion of production techniques and business organisation (and to tax final consumption and income instead), there are exceptions to such a general rule where there are 'negative externalities'. That is when there are costs that are, other things being equal, not taken into account in production (or consumption) decisions because they are not directly borne by those generating these costs, e.g. a business would not have to bear the costs of its polluting emissions (such as the damage to the health of people who live in the affected area). Taxes can, though, be designed to ensure that negative externalities are not ignored. For instance, a tax on emissions that is calibrated to reflect the costs of the damage generated per unit of emissions can provide a way of ensuring that these costs are taken into account in production decisions. The same principle applies to 'positive externalities' when households or businesses do not get

paid the full reward of their activities. For instance, the social return of a new innovation may exceed the private return received by the innovating business when it uses the innovation to develop new products. This may the case, for instance, when the innovation eventually leads to the creation of a new market (e.g. the apps industry). In order to prevent that businesses will under-invest and innovate, the tax system can correct for this positive externality by providing research and development (R&D) tax credits, for instance.

"Good" sub-central government taxes

Some taxes are better suited to be levied (partly) at the sub-central level of government than other taxes. As a basic principle, sub-central governments should rely on benefit taxation, i.e. taxes that provide, for households or firms, a link between taxes paid and public services received (Oates and Schwab, 1988). Of course, "sub-central" may stand for different levels of government, especially in larger countries. In this case, taxes should not only be assigned efficiently to either the central or sub-central level of government, but taxes should also be assigned efficiently to the different levels of sub-central government. The criteria derived from the "benefit taxation" principle include: sub-central government taxes should be on non-mobile bases and non-redistributive (to avoid tax erosion), non-cyclical (to avoid sub-central governments running stabilization policy through debt and deficits), should not be 'exported' to other jurisdictions implying that the 'incidence' of the tax lies on the residents of the sub-central jurisdiction, and that the tax base should be evenly distributed across jurisdictions (to avoid strong disparities and/ or the need for large fiscal equalisation systems).

Based on these criteria, the property tax is the most ideal tax to be levied at the sub-central government level. Sub-central personal income taxes are not as attractive because of their redistributive properties and sub-central consumption taxes may raise concerns because they divert taxes among jurisdictions (as a result of cross-border shopping). However, personal income taxes and consumption taxes, if well designed, could be shared between central and sub-central government levels. Sub-central corporate income taxes come last, as corporate tax revenue is mobile, highly cyclical, geographically concentrated and tends to shift the tax burden to non-residents (Blöchlinger and Petzold, 2009).

Main pro-efficiency tax policy design recommendations

To conclude this section, the main policy conclusions for minimising the costs of taxation are thus:

- To make tax bases as broad as possible and to tax at a uniform rate so that the tax regime is as neutral as possible, in that it does not change relative prices and incentives.
- To keep tax rates as low as possible.
- There is in principle an exception to this broad-base-low-rate rule in the case of a goods, services and production factors which are inelastic in demand or supply. There might be also an exception in the case of taxing economic rents as a higher tax rate would not affect relative prices, though it may be difficult in practice to design an operational tax that achieves this.
- Higher tax rates may also correct for negative externalities, while tax relief may be justified in the presence of positive externalities.
- To levy higher rates on immobile (especially immovable) property and lower rates on mobile items and factors of production.
- Taxes should be transparent and predictable.
- Administrative feasibility is critical to ensuring high levels of compliance, and low administrative and compliance costs.

2.2 Fairness and ability to pay

The principle of 'horizontal equity' means treating individuals who are the same in all relevant respects equally; the principle of 'vertical equity' prescribes that taxpayers with better circumstances should bear a larger part of the tax burden as a proportion of their income. In practice, it may be hard to establish what 'same in all relevant aspects' and 'better circumstances' means, e.g. the same aggregate income or the same level of a particular type of income? Similarly, the same level of actual year-to-year income or the same level of life-time income or the same level of innate talent (and hence capacity to earn income)?

'Ability to pay' has considerable intuitive appeal as a principle, but it is not one that can readily be turned into any specific guidance about tax design or tax rates. This is in part because 'fairness' needs to be considered in the context of the impact of public expenditure and taxation as a whole and the extent to which they redistribute income from richer to poorer households. It does not necessarily matter therefore whether any particular tax is progressive or not. A second consideration is that opinions vary about what is the 'right' amount of redistribution. Nevertheless, it is desirable that the tax regime has the capability to redistribute income so that political choices can be implemented.

'Ability to pay' is generally taken to mean that individuals with higher incomes should pay proportionately more tax on their incomes. However, in principle it might be preferable to base assessments of 'ability to pay' on an individual's intrinsic earning capacity rather than actual income. If the former principle could be adopted, there would be fewer disincentives for individuals to use their talents to earn income. By contrast, taxing actual income may discourage effort, with individuals preferring leisure or non-pecuniary rewards. In practice, of course, it is impracticable to try to establish intrinsic earnings capacity objectively (i.e. it cannot be observed), so 'ability to pay' has to be determined on the basis of actual income and wealth.

In principle, an individual's lifetime income is likely to be reflected in his total expenditure on consuming goods and services. However, income taxation will almost certainly be more effective than consumption taxes in imposing higher tax burdens on richer people. This can be achieved by giving everyone a tax free allowance and then taxing only income above that amount, with higher marginal tax rates perhaps (in addition) being applied to successive slices of income. A progressive income tax (i.e. one in which average tax rates rise with income) is widely considered to be a more effective way of taking account of ability to pay than, say, imposing high tax rates on the purchase of 'luxury' goods where tax is only collected if an individual happens to purchase those goods (and can perhaps be avoided through purchasing on overseas trips goods that are highly taxed at home). In principle, it is possible to devise progressive expenditure taxes (which would have the advantage of not discouraging or distorting the saving and investment necessary for economic growth) but there are no successful examples of comprehensive expenditure taxes in practice.[14]

A progressive personal income tax is generally the main tax instrument available to governments to change the distribution of (post- compared to pre-tax) income and (indirectly) to redistribute income from high to low income households (i.e., if the taxes on higher incomes finance transfers and public consumption that favour especially lower incomes). The amount of redistribution that can be brought about will depend not only on the rate structure of the PIT but also on how much revenue it raises – more redistribution can be achieved (if so desired) through a progressive personal income tax that raises the equivalent of 10% of GDP than one that raises 1% of GDP.

[14] In practice many countries operate a hybrid personal income/ expenditure tax regime in that they often (either partially or fully) exempt the return on two of the largest types of saving – pension saving and owner occupied housing – from taxation.

In the Chinese context, raising more revenues from progressive personal income taxes and less from taxes on consumption could also provide a way of reducing tax burdens on the poorer parts of the country and taking advantage of the higher income of the more developed East.

Ensuring that taxation reflects ability to pay means ensuring that taxpayers do indeed pay what they owe. This can be facilitated by systems of withholding at source for employment income, interest, dividends etc. and the use of (published) financial accounts as a basis for the taxation of business income, but such arrangements are less practicable for professional incomes, small business profits, rental income etc. One of the major challenges for any tax administration is how to create a climate (through a mix of incentives and disincentives) where taxpayers do indeed pay what they owe; and that the tax system thus meets basic principles of 'horizontal' equity, i.e. the regime treats taxpayers with similar incomes equally.

The 'ability to pay' principle might also point to taxing wealth and immovable residential property, rather than just the income and profits that they yield. However, it is difficult to assess accurately the value of wealth for tax purposes (in particular for certain types of assets), so administrative costs tend to be high. So too are the risks of creating additional economic distortions and encouraging evasion. Therefore, it is generally better to ensure that the income from property and wealth is appropriately taxed (instead of taxing income as well as wealth or only wealth). Housing services from residential property in particular are often under-taxed relative to the return on other assets, notwithstanding the economic arguments for taxing less mobile capital and ensuring that scarce and immobile resources like land are appropriately taxed. Taxes on the estate left when an individual dies may, though, have fewer economically damaging effects than recurrent taxes on wealth per se.

2.3 Taxation and macroeconomic stability

Taxes affect both relative prices and real incomes.[15] The former is critical for analysis of how to minimise the costs of taxation, the latter of course matters for living standards (i.e. how much real post-tax income households have), but it is also potentially important in aggregate for macroeconomic policy. A cut in the overall tax burden tends to increase aggregate demand as households and businesses have more money available to spend, while an increase in the tax burden should (other things being equal) reduce aggregate demand.

Public expenditure measures can in principle also be used to try to manage aggregate demand, but it tends to be harder to increase/ reduce public expenditure quickly and attempts to do so often involve significant disruption and incur additional costs. Tax measures can often be introduced more quickly (e.g. changes to VAT rates) and may be easier to reverse. However, this approach goes against the principle of making the tax regime as stable and predictable as possible. On the other hand, there may be difficulties in implementing discretionary tax changes quickly and a risk that tax cuts may not be reversed when the economy picks up, leading over time to larger budget deficits and perhaps higher inflation.

These concerns about the effects of discretionary tax policy apply less forcibly to what are known as the automatic or built-in stabilisers. That is the fact that when economic activity varies and the rate of GDP growth picks up or slows down, tax revenues will vary correspondingly; and perhaps to an even greater degree. If personal income growth slows for instance then the amount of tax that has to be paid on that income will also slow and, if the PIT system is progressive, the fall might be larger than that in pre-tax income growth. Real disposable income and therefore demand would thus tend to be supported. Some pro-cyclical volatility in tax receipts over the business cycle may thus be desirable because of its counter-cyclical effect on aggregate demand. This automatic stabilising effect will tend to be greater the greater the ratio of tax revenues to GDP.

[15] In economic analysis the former generates what is known as the substitution effect and the latter the income effect.

However, volatility of receipts is not necessarily desirable. Receipts of corporate income tax, securities and other property transaction taxes, for instance, tend to vary over the cycle because both profits and security/property prices tend to vary more than GDP (and in the case of corporate income tax because firms can typically carry forward, and sometimes carry back, losses), but the increased receipts in a boom tend not to deflate the economy much (and vice versa in a recession). This points to a need to ensure a diversified structure of taxation that is not too dependent on corporate income tax and property transactions taxes.

CHAPTER 3

TAX REFORM IN CHINA

This section reviews the tax reforms undertaken by China and considers the direction for future reforms. The analysis will focus on VAT reform in Section 3.1 and on environmentally related taxes in Section 3.2. Section 3.3 discusses personal income tax reform. Sections 3.4 and 3.5 focus on fiscal relations between different levels of government and recurrent taxes on immovable property, respectively.

3.1 Developing a comprehensive and neutral VAT regime

China levies several taxes on consumption including a Value Added Tax (VAT) and the Business Tax (BT). The VAT is levied on the supply of goods, imports and the provision of repair, processing and replacement services related to these goods. The standard VAT rate is 17%, which is lower than the VAT rate on average in the OECD (see Table 2). China has more reduced VAT rates than most OECD countries. The BT, which is a turnover tax, is levied on the provision of services that are not taxed under the VAT and the transfer of intangibles and real property, typically at rates of 3% or 5%, with a maximum rate of 20% applying to the entertainment industry. The Consumption Tax, which is levied on 14 specific tax items including alcoholic drinks, tobacco, cosmetics and jewelry, is basically an "ad quantum" or "ad valorem" excise duty. Moreover, China levies also the City and Rural Area Maintenance and Construction Tax, which is a surtax on the VAT, BT and Consumption Tax; it is levied at a rate of 7% in urban areas, 5% in county towns and towns and 1% in other areas. When the 7% surtax is added to the standard VAT rate, the overall rate is similar to the average rate in the OECD (18.2% in China versus 18.7% in the OECD) in 2012.

Table 2 shows that, on average across the OECD, standard VAT rates have been relatively constant – although there is a slight upward trend, especially in recent years – over time. Many countries typically increase their reduced rates when they increase their statutory VAT rate, but this has not been the case in all countries.

Small businesses in China are submitted to a simplified VAT scheme where they pay a reduced rate of 3% on outputs, but without right to deduction of input tax. The VAT is collected by the State Tax Bureau – 75% of the revenue is attributed to the central government, the remaining 25% goes to the sub-central governments – while the BT is collected and retained mainly by the Local Tax Bureau.

General VAT design

While there are many variations in the structure of the VAT and how it is implemented in countries across the world, there is a wide agreement that the base of the tax should be final consumption of goods and services. The essence of a VAT is that it is charged on a wide range of transactions, with a mechanism for offsetting tax paid on inputs against tax paid on outputs, such that at each stage (until the final consumer) the net amount of tax paid relates only to the value that the taxpaying business has added. Such a VAT, which requires that tax on capital goods is credited, does not distort the prices that producers face in buying and selling from one another. Relative prices are thus the same as if there were no tax on goods and services and, accordingly, there is no loss of production efficiency (Diamond and Mirrlees, 1971). Given that it is levied at each stage of production, ensuring that the VAT bears only on final consumption and

does not distort production decisions requires both full crediting of the tax paid on inputs and the absence of breaks in the VAT chain. The exemption of inputs causes such breaks as the seller will not charge VAT on its sales but will not be entitled to reclaim VAT paid on inputs to his production.

Also, in order to minimize economic distortions, the most efficient approach would be to levy VAT at a uniform rate (or as few rates as possible) on the broadest possible tax base (International Tax Dialogue, 2005).

Table 2. Standard and reduced VAT rates

	Standard rate						Reduced rates[2]
	1980	1990	2000	2005	2010	2012	
Australia	-	-	10.0	10.0	10.0	10.0	0
Austria	18.0	20.0	20.0	20.0	20.0	20.0	10.0/12.0
Belgium	16.0	19.0	21.0	21.0	21.0	21.0	0/6.0/12.0
Canada	-	-	7.0	7.0	5.0	5.0	0
Chile	20.0	16.0	18.0	19.0	19.0	19.0	-
Czech Republic	-	-	22.0	19.0	20.0	20.0	14.0
Denmark	22.0	22.0	25.0	25.0	25.0	25.0	0
Estonia	-	-	18.0	18.0	20.0	20.0	9.0
Finland	-	-	22.0	22.0	22.0	23.0	0/9.0/13.0
France	17.6	18.6	20.6	19.6	19.6	19.6	2.1/5.5/7.0
Germany	13.0	14.0	16.0	16.0	19.0	19.0	7.0
Greece	-	18	18.0	18.0	19.0	23.0	6.5/13.0
Hungary	-	25.0	25.0	25.0	25.0	27.0	5.0/18.0
Iceland	-	22.0	24.5	24.5	25.5	25.5	0/7.0
Ireland	25.0	23.0	21.0	21.0	21.0	23.0	0/4.8/9.0/13.5
Israel	12.0	15.0	17.0	17.0	16.0	16.0	-
Italy	15.0	19.0	20.0	20.0	20.0	21.0	4.0/10.0
Japan	-	3.0	5.0	5.0	5.0	5.0	-
Korea	10.0	10.0	10.0	10.0	10.0	10.0	0
Luxembourg	10.0	12.0	15.0	15.0	15.0	15.0	3.0/6.0/12.0
Mexico	10.0	15.0	15.0	15.0	16.0	16.0	0
Netherlands	18.0	18.5	17.5	19.0	19.0	19.0	6.0
New Zealand	-	12.5	12.5	12.5	12.5	15.0	0
Norway	20.0	20.0	23.0	25.0	25.0	25.0	0/8.0/15.0
Poland	-	-	22.0	22.0	22.0	23.0	5.0/8.0
Portugal	-	17.0	17.0	19.0	20.0	23.0	6.0/13.0
Slovak Republic	-	-	23.0	19.0	19.0	20.0	10.0
Slovenia	-	-	19.0	20.0	20.0	20.0	8.5
Spain	-	12.0	16.0	16.0	16.0	18.0	4.0/8.0
Sweden	23.5	23.5	25.0	25.0	25.0	25.0	0/6.0/12.0
Switzerland	-	-	7.5	7.6	7.6	8.0	0/2.5/3.8
Turkey	-	10.0	17.0	18.0	18.0	18.0	1.0/8.0
United Kingdom	15.0	15.0	17.5	17.5	17.5	20.0	0/5.0
Unweighted OECD average	16.6	16.7	17.8	17.8	18.0	18.7	
CHINA[3]	-	n.a.	n.a.	n.a.	n.a.	17.0	0/6.0/11.0/13.0

1 Yearly data: the rates shown in the table are rates applicable on 1 January of each year.
2 Reduced rates: reduced rates include zero-rates applicable to domestic supplies (i.e. an exemption with right to deduct input tax). This does not include zero-rated exports.
3 Rates do not include the city and rural area maintenace and construction tax, which is a surtax levied on the value added tax, consumption tax and business tax paid. The rate is 7% in urban areas, 5% in county towns and towns and 1% in other areas. The overall standard VAT rate then becomes 18.19% (1.07 * 17%).
Source: Consumption tax trends, OECD (2012f).

The VAT has economic advantages over a turnover tax as, for instance, the "Business Tax". Since a turnover tax is levied on turnover irrespective of value added, the tax collected on a given commodity will reflect the number of taxable stages in the chain of its production, resulting in a "cascading" tax burden. This gives producers an incentive to substitute away from taxed inputs, resulting in less efficient production methods. As a result, and as a further distortion, there is an incentive for industries to integrate vertically solely to reduce tax liabilities (International Tax Dialogue, 2005).

Following international best practices, the Chinese VAT system has been designed such that it is based on a staged collection process based on the invoice credit method.[16] This method explicitly links the tax credit on the purchaser's inputs to the tax remitted by the supplier of those inputs and therefore discourages fraudulent undervaluation of intermediate sales. Moreover, the international norm for indirect taxes is that they are levied on a destination basis where exports are zero-rated and imports are taxed on the same basis and at the same rate as local production and not on an origin basis. Being levied on a destination basis, the VAT preserves also production efficiency in an international setting since foreign and domestic producers face the same VAT tax treatment within each country, implying that the VAT does not distort international competition for either resident or non-resident businesses within each country.

Such a VAT is equivalent to an income tax on total household income net of household savings (levied on a residence basis or, in indirect tax terminology, a destination basis as opposed to a source basis, or origin basis in indirect tax terminology). Being a consumption tax, the VAT does not have a negative effect on savings or investment as they are excluded from the consumption VAT base. The tax however does distort labour supply decisions, for instance, in a similar way as an income tax by reducing real take-home pay and the amount of additional consumption that can be achieved by working harder or longer.

Past and current consumption tax reforms in China

China introduced a VAT in 1984 by applying it to 24 specified taxable items. China started levying the VAT on most goods and the importation of goods as well as to supplies of services directly related to these goods in 1994. The Chinese VAT differed from the VAT as it is typically implemented in other countries that have a VAT because:

> *i)* China adopted a production-type of VAT, whereas most other countries apply a consumption-type of VAT. Under a production-type of VAT, VAT related to business assets is not deductible whereas under a consumption-type of VAT, input tax relating to all goods and services used for taxable business purposes is deductible.
>
> *ii)* The VAT in China was narrowly based in that it applied only to the supply of goods, the importation of goods and to the supply of services consisting of the processing, repair and replacement of movable goods. Most supplies of services and immovable property, including construction, remain(ed) outside the scope of VAT and are subject to the BT. In addition to services and the supply of immovable property, BT is also imposed on the transfer of intangible property.
>
> *iii)* The VAT in China does not refund excess input VAT incurred in connection with domestic supplies, adopts a wide range of simplified collection techniques which turn the VAT into a turnover tax (even for regular VAT payers), imposes systematic cross-matching and offers incomplete export refunds.

The combination of a production-type of VAT, with its limited right to deduction, and the BT, which does not allow any input tax recovery, led to several forms of cascading. This gave rise (largely unintentionally) to potentially very high effective tax rates on items of consumption, depending on (and increasing in), for instance, the number of stages in the production process. A production-type of VAT creates production inefficiencies, both for businesses that sell on the domestic market in China as well as businesses located within China that want to export to the international market, discouraged domestic consumption while at

[16] Under this method, each trader charges output tax at the specified rate on each sale and gives the purchaser an invoice showing the amount of tax thus charged. Traders can then credit such payment of input tax on their own purchases against the output tax charged on their sales, remitting the balance to the authorities or, if the net balance is negative, claiming a refund.

the same time stimulated cross-border shopping and it penalizes capital-intensive production techniques and technological innovation and therefore economic growth. Of course, the actual tax incidence becomes an empirical question, as the unrecoverable VAT might be borne and shared by consumers through higher prices, labour through lower wages and/ or capital through lower profits. In light of these distortions, the Chinese government started to gradually turn the VAT into a consumption-type of VAT as of 2004. On 1 January 2009, all registered businesses became entitled to recover VAT on the purchase of capital assets other than immovable property, but this process has not been finalized yet, as will be discussed below.

In fact, China's accession to the World Trade Organization ("WTO") in December 2001 had increased the urgency for indirect tax reform. WTO membership obliged China to dismantle its tariff and non-tariff barriers to imports in order for the country to become more accessible for non-resident competitors. These reforms have now successfully been finalized (Yang Xiao, 2012). Also, the liberalization of trade put Chinese manufacturers, traders and service providers at a competitive disadvantage since, under China's system of indirect taxation, goods exported from China carried (and partly still carry) an effective cost of VAT and BT.

More recently, the VAT started being extended to services and other transactions that are currently subject to BT. On 1 January 2012, a pilot program was launched in Shanghai in relation to the transportation (except railway transport) and modern service industries (R&D, IT, logistics, leasing, advertisement, consultation). Two new VAT rates of 6% and 11% were introduced and added to the existing rates of 13% and 17%. The 17% rate is levied on the leasing of movable and tangible goods; the 11% rate is levied on transportation services and the 6% rate is levied on R&D, technological, cultural, logistical and consultative services. Under a recent (but not yet implemented) proposal of the pilot project, financial and insurance services as well as services provided to consumers for their daily needs would be taxed on the basis of a simplified calculation method. Under this method, tax due would be calculated by multiplying the amount of sales by the applicable VAT rate, but input VAT would not be recoverable. Regarding cross-border trade, services provided from overseas and received in China are subject to VAT while services from Chinese businesses to overseas customers are exempt or zero rated (the latter applies to international transportation and design services, for instance), depending on the capacity of the tax authorities to control the reality of the export, which is more difficult for intangible services. Starting from 1 September 2012, the VAT pilot program was extended to eight other provinces and municipalities, including Guangdong, Beijing and Tianjin, which adopted the same tax rules as Shanghai. As of 1 August 2013, the VAT pilot program will be implemented nationwide and will be extended to film, radio and television services. The VAT-BT integration will be extended to railway transport, postal and telecommunications services at the end of 2013 or beginning of 2014. The aim is to fully integrate and abolish the BT by the end of 2015.

However, the VAT inefficiencies which were summarized in point iii) continue to be valid today. They will be discussed in more detail in the paragraphs below.

The gradual but incomplete implementation of the destination principle

China's system of a VAT and the BT for services is only partially levied on a destination basis where exports are zero-rated and imports are taxed under the same basis and with the same rate as local production, although the system has been gradually moving towards the destination principle. China applies in practice, however, an export refund mechanism (referred to as the "Exempt, Credit, Refund" mechanism) under which it does not refund 100% of the input tax on certain exports. The State Council determines the refund rates, which vary from 17% (i.e. full refund) to 5% or even 0% for certain items. The economic effect of this refund limitation is that in many cases the exporter must bear a certain amount of the VAT cost.

Over the past several years, the Chinese government has made major adjustments to the VAT refund rates. Certain adjustments have been made to reflect environmental concerns and to address illegitimate refund claims. VAT refund policy has been used as part of a plan to promote high technology and other particular industries (for which the rate has been increased from 13% to 17%) while the refunds were decreased (down to 0% on certain items) on energy consuming, resource intensive and high polluting products. These adjustments have further limited VAT refunds and often have been very significant in amount, making Chinese exports more expensive and basically turning the VAT refunds as an instrument of trade policy (Yan, 2010). Since August 2010, China has not adjusted its VAT refund rates.

The BT in China was originally fully levied on an origin basis as service imports were not taxed and service exports were (and typically are) not exempt from the BT. Services that were outside the scope of VAT were initially as a rule subject to BT in China only "if the labour was performed in China". This principle has been overturned in November 2008 when the Chinese government decided that all services received by Chinese entities were subject to BT even if the services (consumed in China) were physically performed outside China. This indicates that the BT was gradually (but partially) transformed into a destination-based consumption tax and that China was moving towards fully implementing the destination principle for cross-border services (Cui, 2009a). Although the revised BT regulation did not generally exempt service exports, such exemptions were gradually being granted in the guise of tax preferences for some (but not all) services, notably to promote the service-outsourcing industry (Cui, 2009b).

As a consequence of the incomplete implementation of the destination principle, producers in China continue to incur some irrecoverable VAT and BT, which induces distortions in the value chain by favouring certain activities and inputs over others and reduces competitiveness with foreign competitors. The current system of reduced and selective VAT (and BT) refunds has increasingly placed domestic producers at a disadvantage as the country complies with the WTO requirements and has dismantled tariff barriers on competing goods. The lack of and uncertainty about the VAT refunds is expected to have also a negative effect on foreign direct investment and the attractiveness of China as a location for production for foreign investors.

In fact as a result of the partial application of the destination principle, the VAT authorities are under constant pressure to redefine goods as intermediate rather than investment goods, to reclassify exports into products that are eligible for a full tax rebate and finally to move services within the scope of the business tax or out of its scope depending on relative tax rates. The value added tax also produces disincentives to use capital rather than other inputs in the production process if VAT on capital goods cannot entirely be reclaimed (OECD, 2005).

Using consumption tax refunds as a policy tool to stimulate certain activities and discourage other types of production does not constitute best (i.e. the most efficient) tax policy. Governments have other tools available to correct for negative (e.g. environmentally-related taxes) and positive (e.g. R&D tax credits) external effects related to production (irrespective of whether goods are produced for consumption in China or abroad) and consumption that would not otherwise be reflected in the prices that businesses and households face.

The integration of the Business Tax within the VAT

Moving services from the BT to the VAT resolves many inefficiencies of the current consumption tax system. As pointed out before, businesses whose services are subject to BT cannot recover any BT nor the VAT paid on their inputs used for the production of such services. Any VAT or BT which cannot be recovered will be included in the price without business customers being able to recover the taxes that implicitly have been paid, resulting in lower profits, output and wages. Price increases as a result of the cascading effect will reduce demand, distort production decisions as well as domestic and international

competition and reduces the competitiveness of Chinese resident businesses. A dual VAT-BT system also implies that businesses that are VAT liable are discouraged from engaging with businesses that have to pay BT as they cannot recover the BT paid. The reverse might also be true because the unrecoverable VAT rate paid by businesses that are BT liable is higher than the BT rate (possibly also depending on the amount of unrecoverable BT that is included in the price).

Moreover, the dividing line between VAT and BT is not always clear, which may lead to double taxation and high compliance costs especially in relation to mixed transactions (involving the sale of goods and services). The current system also raises administrative costs as the tax administration has to assign input VAT to goods that are taxed under the VAT and services that are VAT-exempt (but are taxed under the BT) (Xiaoqiang Yang, 2009). This also implies that businesses that produce goods do not have an incentive to provide services linked to these goods, as they may lose the deductibility of some of the VAT (Wei Cui, 2009). This further strengthens the impediment to the development of a service industry in China. Moreover, businesses face an incentive to provide services themselves instead of outsourcing such activities. Finally, the current system also provides businesses with a tax-induced incentive to restructure their business operation to minimize the overall VAT and BT burden.

The VAT-BT reform might have a considerable economic impact. It may have an impact on prices and on the types of goods and services that are purchased and from which type of supplier. It may also have an impact on how businesses are structured. In order to move towards a situation where the consumption tax system distorts business operations as little as possible, and to reduce transitionary distortions as much as possible, there are many advantages of levying VAT nationwide on as many goods and services as possible and implement these reforms as quickly as will be feasible from a tax administrative perspective.

In order to avoid tax distortions within the country, China aims at expanding the BT reform to the entire country as of August 2013. In fact before the nationwide integration of the BT within the VAT, businesses that operate in a number of regions in China are induced to adjust their business operations in the most optimal way. Evidence shows that, for instance, 12 MNEs have changed their headquarters to Shanghai in the first months of 2012 in order to be able to benefit from the BT/ VAT reform (Tax Notes International, June 4, 2012). A rapid implementation of the VAT on services reform in the entire country, as is currently scheduled, might prevent such tax-induced shifts in business location (and restructurings).

The revenues from the Business Tax are attributed to sub-central government while the VAT revenue goes to central government. The BT reform therefore puts sub-central revenues further under pressure. Central government has therefore decided that VAT revenue from services will be fully paid to sub-central governments (instead of applying the 75-25% revenue sharing rule). This seems to imply that there will be double VAT sharing rules depending on the types of goods and services that have been taxed with VAT. This will create unnecessary complexity. A better solution would be to fully revise the tax sharing agreements and to give sub-central levels of government more tax raising powers, as will be discussed in the fiscal relations section of this chapter.

Levying VAT on newly constructed immovable property instead of BT may also have an effect on house prices. This type of tax reform would therefore have to be planned and evaluated carefully and should be part of a broader property tax reform. The timing of such a type of reform seems crucial.

Finally, the BT is also levied on financial services which in many countries are not taxed under the VAT. China may therefore wish to carefully evaluate whether it could retain the BT on financial services, at least in the short and medium term, instead of either exempting or taxing financial services under the VAT.

The integration of the City and Rural Area Maintenance and Construction Tax into the VAT

In addition to the VAT, BT and Consumption Tax (see below), China also levies the "City and Rural Area Maintenance and Construction Tax", which is a surtax levied on the VAT, BT and Consumption Tax rate. The rates vary with the location where consumption tax place; the rate is 7% in urban areas, 5% in county towns and towns and 1% in the rest of the country.

The City and rural area maintenance and construction tax allows government to levy higher consumption taxes in cities and also towns than in rural areas. However, the surtax increases compliance and administrative costs. Moreover, it is a cascading, non-recoverable tax just like the BT. Consideration should therefore be given to integrate the tax in the VAT and perhaps allow cities, towns and rural areas to levy a VAT surtax within minimum and maximum bands as part of a broader fiscal federalism reform.

The "Consumption Tax" and selective excise duties

The "Consumption Tax" is levied on 14 goods such as tobacco, alcoholic drinks and alcohol, cosmetics and jewelry and basically is an ad-valorem or ad-quantum excise duty.

The Consumption Tax does create a considerable tax burden on luxury goods, thereby creating an incentive for cross-border shopping. Special tax rates on luxury goods may contribute to making the tax regime reflect ability to pay but only insofar as richer households decide to buy those goods in China. A progressive personal income tax is likely to be a much more effective tool to redistribute income. In addition, the demand for luxury goods may be price as well as income elastic so that high tax rates may not raise much revenue. Using information on demand elasticities, the Chinese government might want to evaluate whether tax revenues could be maximized by lowering the tax rate for certain luxury items. Since 2008/9, China has started levying higher targeted excise duties on goods like alcohol and cigarettes for which demand is relatively price inelastic. This type of reform might be continued, following the example of many OECD countries which are continuing to raise such rates.

Strengthening the VAT administration

Some studies have estimated that about 55% of VAT revenue is not collected because of poor administration, tax evasion and fraud (Yan, 2010). Further efforts of the tax administration to improve the VAT administration are therefore crucial and should continue to receive much attention from the Chinese authorities.

In fact, further strengthening the administration of the VAT would allow Chinese authorities to continue increasing the efficiency of the VAT. As pointed out before, businesses in China are required to carry forward any excess input VAT into subsequent periods as any excess input VAT, in contrast to common practice in OECD countries, is not paid back to businesses. Moreover, China does not allow groups of businesses to consolidate their VAT payments, although the pilot program in Shanghai has started exploring VAT group taxation. Such reforms could be implemented gradually over time so that the VAT revenue losses as a result of weak administration become less of a concern.

How to finance the consumption tax reform?

Integrating the BT and the City and rural area maintenance and construction tax into the VAT and fully implementing the destination principle might reduce tax revenues. Ideally, the revenue impact of such a reform should be evaluated in advance. In order for the tax reform to be revenue neutral, accompanying tax measures might have to be taken.

One measure could be to limit the scope of the reduced VAT rates and strongly reduce (or even abolish) the number of reduced VAT rates by taxing all or most goods and services at the standard VAT rate. In many OECD countries, reduced VAT rates are targeted at goods and services that are consumed by poorer households. Although the poorer households may spend a larger proportion of their income on such goods, the richer will typically spend a larger absolute amount, so that a reduced VAT rate on that item actually transfers more money to the richer than it does to the poor (ITD, 2005 and The Mirrlees Review, 2010a/b). The increase in administration and compliance costs as well as the increased likelihood of evasion and disputes must be added to this. Overall, the arguments in favour of reduced VAT rates, either targeted at poorer households or implemented for other reasons, are weak. China has also used the possibility to levy reduced rates to offset strong increases in the prices of agricultural products, for instance (Yang Xiao, 2012). It seems however more efficient to tackle the causes of such price inflation at source instead of using the VAT system for these purposes. Instead of implementing reduced VAT rates, a better policy would be to tax all goods and services at a single rate and use the enhanced tax revenues to finance direct spending which is better targeted at the poor while overall tax progressivity could be ensured by, for instance, levying progressive personal income taxes as well selective excise duties on particular items that are especially consumed by the richer (ITD, 2005).

There seems also room for further increasing the standard VAT rate, especially if the City and Rural Area Maintenance and Construction Tax would be integrated within the VAT. Extra revenues could also be raised through selective excise duties whose rates could be higher the more inelastic is the demand for these goods and services.

3.2 Continuing environmental tax reform

Environmental challenges are increasing the pressure on governments, both in China as in the rest of the world, to find ways to reduce environmental damage while minimizing harm to economic growth. There is a wide range of tools at the disposal of government, including regulations and standards, information programmes, innovation policies, environmental subsidies and environmental taxes.

General environmental tax design issues

Most regulatory approaches involve the government specifying how to reduce emissions or who should do the reduction. Similarly, subsidies and (tax and other) incentives for environmentally preferable goods or practices involve the government steering the economy in favour of certain environmental solutions over others. Both approaches involve the government trying to “pick winners”, which carries significant risk of making suboptimal choices especially in an environment of rapidly changing conditions and technologies. Regulations generally result in higher costs than taxes, since they force particular types of abatement, even if cheaper alternatives are available.

Taxes in particular are a key part of the environmental toolkit because i) they can directly address the failure of markets to take environmental impacts into account by incorporating these impacts into prices and ii) environmental pricing through taxation gives consumers and businesses the flexibility to determine how best to change their polluting behavior and reduce the harmful activity (i.e. to reduce their environmental “footprint”). This enables improving environmental quality at the lowest economic and welfare cost, and minimizes the need for government to attempt to “pick winners”. Levying environmentally related taxes also provides government with revenues which can be used to offset the negative impacts of pollution and, if desirable, can be used to directly compensate loosers.

By increasing the cost to a polluter of generating pollution, taxes also create a strong incentive for firms to develop new innovations and for businesses and consumers to adopt existing ones. This is especially the case for market-ready innovations. However, the breakthrough technologies that will lead to fundamental

environmental improvements are less likely to be developed under a tax-only regime than under a regime that includes particular incentives for research and development. The long-term and more fundamental nature of such projects creates uncertainty for investors as these projects entail a high probability of failure. In such cases, environmental taxes may need to be supplemented by targeted direct subsidies, and possibly tax incentives, for R&D.

Effective implementation of "green" taxes requires a careful consideration of a number of design factors. An environmental tax generally should be levied as directly as possible on the pollutant or action causing the environmental damage. The scope of the environmental tax should ideally be as broad as the scope of the environmental damage. Environmental taxes should also apply uniformly with few (if any) exceptions in order to encourage abatement at the lowest-cost for consumers and businesses. A tax applied on a uniform basis also minimizes the costs of compliance for taxpayers and the costs of administration for government, and reduces the opportunities for tax evasion. Moreover, the tax rate should be commensurate with the environmental damage. Distributional concerns generally should be addressed through policies outside the tax. Finally, competitiveness concerns need to be carefully assessed, and timing issues are crucial as well. In light of this, government may want to announce the tax before it is actually introduced such that consumers and especially businesses can adjust their investment decisions to the new tax environment. Environmental taxes must also be credible and the rates transparent and predictable in order to motivate environmental improvements.

Environmental tax reform in China

In recent years, China has been actively working on the research and design of environmental tax policy, which is one of the most effective economic measures against pollution and in favour of ecological protection. Required explicitly by the 12th Five Year Plan and the State Council, the reform of environmental taxation and fees should be carried forward. Currently, the Chinese government is actively conducting legislative work on environmental taxation, and continuing to improve its environmentally-related tax and fee scheme.

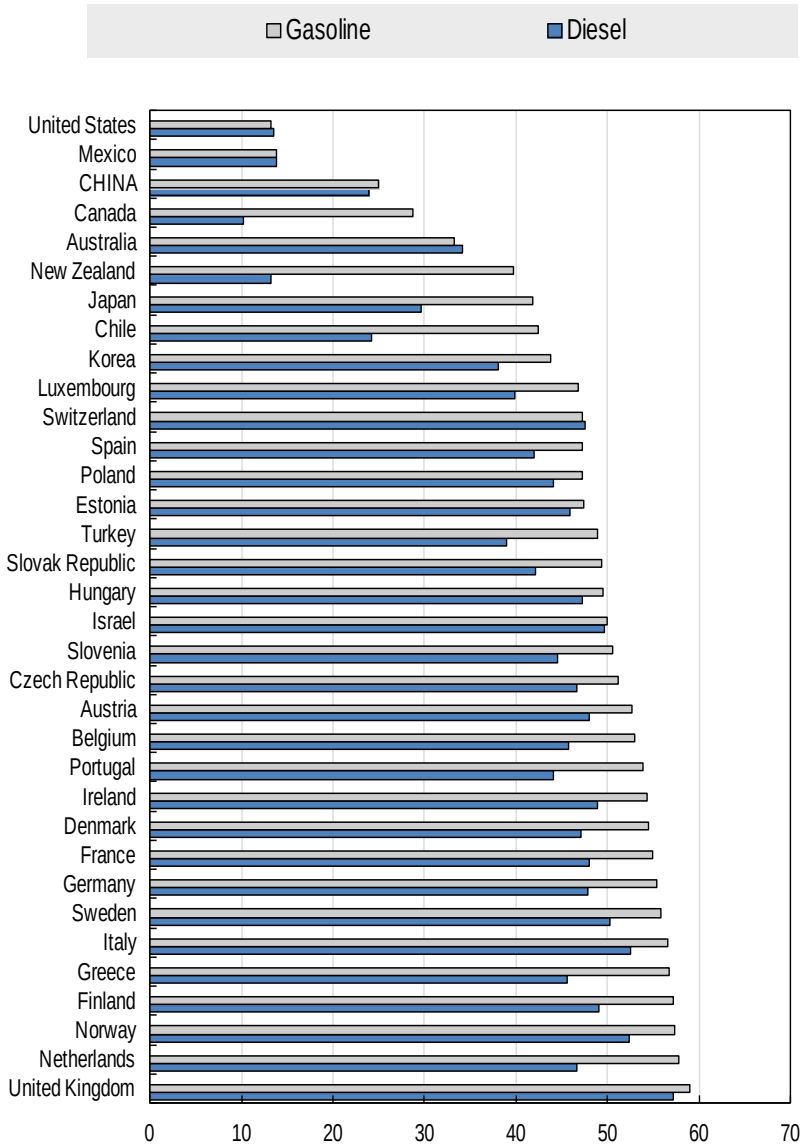
China has a long history of applying pollution levies as well as experimenting with emissions trading schemes (ETS), especially for SO_2. Pollution discharge reduction and greenhouse gas emission control in particular are also envisaged in the 12th Five Year Plan. Market-based approaches such as emissions taxes and trading schemes can offer significant advantages and are becoming more popular in OECD countries, particularly to help meet climate change related objectives. Thus far the experience in China has been mixed, with some schemes not achieving the desired goals. In many cases failures can be linked to poor implementation which has led to weak incentives to curb pollution. Pollution levies have sometimes been set too low and have been plagued by problems with collection and poor enforcement. Trading schemes have suffered from a weak institutional basis, inadequate scale and inappropriate government interventions (OECD, 2013).

Central and sub-national governments are establishing pilot CO_2 emission trading schemes in several Chinese cities and provinces. To be effective, they need to set clear emissions caps on a rolling basis, have a well defined (and ideally broad) coverage, strong monitoring, reporting and verification systems and effective sanctions for firms exceeding their permit allocation. Depending on the experience with these regional trading schemes, they should either be merged and expanded nationally or a national carbon tax on CO_2 emissions should be introduced – a carbon tax is likely to offer some practical advantages over a trading scheme (OECD, 2013) – and appropriately integrated with existing fuel taxes.

Going forward, more emphasis is needed on better implementation of pollution pricing. Pollution levies ought to be moved to a system of explicit taxes to provide a stronger institutional basis, with collection responsibility given to the fiscal authorities. Environment-related taxation can be used in areas where

ambitious pollution control and prevention goals have been set, complementing mature technical regulations which may set basic common standards. The scope of environmental levies should be expanded gradually to additional substances and sectors. Applicable rates also need to be adjusted to ensure adequate incentives for pollution mitigation in line with policy objectives, including indexation so that their effectiveness is not eroded over time.

Figure 6. Tax share of retail diesel and gasoline prices (2010)



Source: OECD environmental database.

The fuel tax reforms and greater liberalization of retail fuel prices introduced by China in recent years have been an important positive step on the path to green growth. There is scope to further adjust fuel taxes, and excise duties on gasoline and diesel in particular, as they are relatively low by international standards (see Figure 6). Higher fuel taxes would ensure that retail fuel prices reflect the full cost of the environmental damage associated with fossil fuel use – including GHG emissions and local air pollution. Road fuel taxes provide an important incentive for car producers to develop more fuel-efficient cars, for consumers not only to buy smaller and more fuel-efficient cars but also to drive less, use more public transport and change

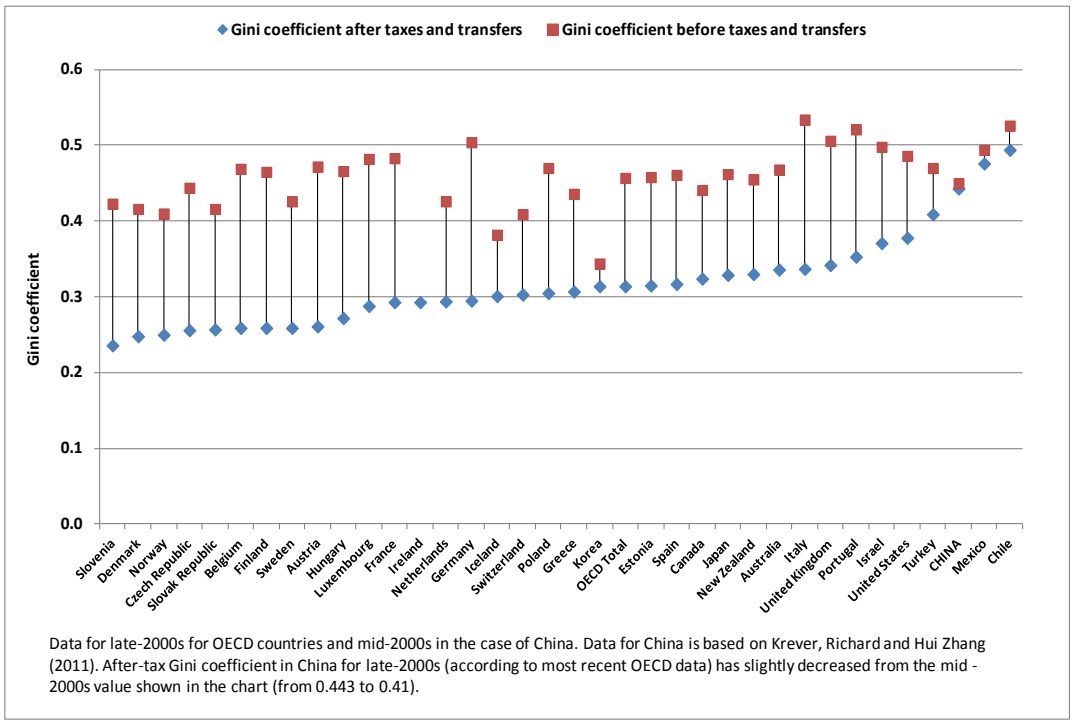
travel habits. Fuel taxes thus provide a wider range of incentives for abatement than other instruments, including regulation requiring a minimum fuel efficiency level for vehicles. A purchase tax or a recurrent tax linked to the fuel efficiency of vehicles may help reinforce the taxes that are levied more directly on road fuel but they can never replace them as they provide an incentive to purchase a fuel-efficient car but not to drive less once a fuel-inefficient car has been bought.

China is encouraged to also look at the potential of environmental taxes in other areas like sulphur content in fuels, NO_x emissions, waste disposal and toxic substances.

3.3 Personal income tax reform

China's personal income tax regime is currently characterized by relatively high marginal tax rates at the very top end of the income distribution, especially for employment income with a top PIT rate of 45%, but also by a high basic allowance (which means that the great majority of employees do not pay PIT) and broad tax brackets. As a result, tax revenues are relatively low. This picture is significantly different from global trends. In most OECD countries, the PIT is a major revenue raiser and the main instrument to redistribute income. Although low-income taxpayers do not have to pay PIT because of the high basic allowance and despite the high personal income tax rates, the personal income tax system is not playing a major role in reducing income inequality in China (see Figure 7).

Figure 7: Redistributive impact of taxes in China and OECD member countries



Source: OECD database on inequality.

Figure 6 shows the effects of the tax and benefit systems in OECD countries and in China in reducing income inequality, which is measured by the Gini coefficient based on equivalized household market income before and after taxes and benefits. The before-tax Gini-coefficient in China is high, but it is even higher in many OECD countries. However, the tax and benefit system considerably reduces income inequality in the OECD. This is not the case in China, where the tax (and benefit) system has hardly any effect on the income distribution and in reducing income inequality.

Personal income tax rates and schedules of labour income in China compared to OECD countries

Individuals domiciled in the People's Republic of China are subject to personal income tax (PIT) on their worldwide income.[17] In contrast to China, where taxes are computed and levied on a monthly basis (although income averaging is allowed), personal income tax in OECD countries is assessed on an annual basis.

In 2010, employment income – wages, salaries, bonuses, subsidies or other employment related income – was subject to a progressive rate schedule consisting of nine tax brackets with rates ranging from 5% to 45%. The top rate was levied on monthly taxable income exceeding RMB 100,000. As from 1 September 2011, the number of tax brackets was reduced from 9 to 7 with rates ranging from 3% to 45%. In 2011, the top PIT rate in China was higher than the OECD average top statutory PIT rate of 41.5%. However, the top PIT rate on average across the OECD is levied on gross wage earnings of about 3.2 times the average wage. The top PIT rate in China is levied on monthly taxable income exceeding RMB 80,000, which is about 32 times the average wage.

The reduction in the number of tax brackets in China follows a trend which is also observed in OECD countries (OECD, 2012a). At the beginning of the 1980's, it was common for OECD countries to have ten or more tax brackets. The number of brackets decreased most significantly during the 1980's. On average across OECD countries, there were 14 PIT brackets in 1981, falling to 6 by 1990. The average number of tax brackets in OECD countries has remained fairly stable throughout the 1990's and 2000's. Over the last decade, reductions in the number of tax brackets have been generally accompanied by reductions in the top statutory PIT rate; in 2010, the average number of brackets was 5. In the OECD as well as in China, it appears that changes in the numbers of tax brackets have been, with exceptions, not a policy goal in itself but rather a tool to reduce (or increase) tax burdens, particularly at high income levels in OECD countries and at low income levels in China. Recently, some countries have introduced new tax brackets (as part of fiscal consolidation efforts), which generally resulted in an increase in the top statutory PIT rate.

All OECD countries exempt an initial portion of earnings from personal income tax through provisions such as basic personal tax allowances or basic personal tax credits or zero-rate tax brackets. China has a standard tax allowance whose value of RMB 2,000 in 2010 was increased to RMB 3,500 per month for Chinese taxpayers. This basic allowance is RMB 4,800 for expatriates. The value of this basic allowance, as a portion of average wage earnings, is considerably higher in China than in OECD countries (although OECD countries typically have other tax deductions which cannot be claimed in China).

China does not provide family-based standard tax reliefs (e.g. for a dependent spouse and/ or children) (OECD, 2012c) in contrast to many OECD countries. However, China does provide non-standard tax allowances, which can be claimed if certain expenses have been made, including for employee housing costs, home leave fares of 2 trips per annum and moving costs, but only for foreign individuals who have supporting invoices. Note that many OECD countries have moved away from tax allowances, whose value increases with the taxpayer's marginal tax rate, towards tax credits whose value is income independent. Interestingly, foreign employees in China can also benefit from tax allowances for language and training costs and children's education expenses (with supporting invoices). Allowances for language training and children's education provided as benefits in kind by the employer are not included in taxable income either. These types of relief, although not broadly implemented in OECD countries, have been recommended in recent OECD work as a tool to stimulate skills formation (OECD, 2012b).

[17] Remuneration from foreign employers to individuals working in the People's Republic of China is exempt from tax if the individual resides in China for less than 183 days (if stipulated under a relevant tax treaty), which is also common practice in OECD countries.

In contrast to China, thirteen (out of the 34) OECD member countries levy central as well as sub-central personal income taxes, including Canada, Italy, Japan, Korea, Norway, Spain, Sweden, Switzerland and the United States. In most of these countries, sub-central personal income taxes are levied at flat rates or as a surtax on the central government tax liability, although Canada, Spain and Switzerland levy sub-central personal income taxes at progressive rates.

In contrast to common practice in OECD countries, income earned by individuals from privately-owned unincorporated businesses, sole proprietorships or from the operation of a business on a contract or lease basis is subject in China to a separate PIT schedule with progressive rates from 5% to 35%. Also the remuneration which authors receive for their work is taxed separately at a flat rate of 20%, applied to 70% of taxable income. Moreover, remuneration for personal services[18] is taxed separately from other sources of employment income as well. Such income is taxed at a 20% rate if taxable income from a single payment does not exceed RMB 20,000; 30% for the portion over RMB 20,000 but not exceeding RMB 50,000 and 40% for the portion exceeding RMB 50,000 (PWC, 2012).

Strengthening the actual progressivity of the personal income tax system

Despite of the high statutory PIT rates on employment income, the very limited redistributional impact of the personal income tax system in China reflects the fact that it raises relatively little revenue and therefore does not actually produce much transfer of resources from richer to poorer households.

Most people in China do not earn high incomes and therefore do not pay PIT, also because the basic allowance in the personal income tax is set at a relatively high level. Moreover, the basic allowance does not depend on specific family circumstances (e.g. whether there is a dependent spouse, children, etc.) and the value of allowances are increasing in the taxpayer's marginal PIT rate, implying that the value of the basic allowance is higher for richer workers than for poorer households, thereby further reducing the progressivity of the tax system. Moreover, different types of income are taxed under separate rate schedules and capital income is taxed at lower and proportional rates. Moreover, workers may receive non-cash benefits from their employer which, because of challenges faced by SAT to administer this type of remuneration, remain untaxed. Weaknesses in the tax administration may also mean that some income escapes taxation. All of these factors imply that there is essentially no redistributive impact of the PIT at low income levels and that middle and higher incomes might be taxed effectively at lower rates in spite of the high statutory PIT rates on employment income.

Social security contributions

In China, as in all OECD countries except Australia and New Zealand (OECD, 2012d), employees and employers are obliged to pay social security contributions to social security schemes which are part of general government – contributions to privately-managed funds are not taxes and are therefore not considered here – although only urban employees are covered in China. In OECD countries, employee and/ or employer contributions typically have to be made for programs in relation to i) old age, disability and survivors, ii) sickness and maternity, iii) work injury, iv) unemployment, and v) family allowances (e.g. child benefits). In OECD countries, the contribution rates that have to be paid are typically the same for the entire country and do not differ across states, provinces or other sub-central levels of government. In many OECD countries as well as in China, these contributions are typically deductible from taxable personal income.

[18] '*Remuneration for personal services*' refers to remuneration received for providing designing, decorating, installation, drafting, testing, medical treatment, law practice, accounting, consulting, lecturing, news reporting, broadcasting, interpretation, editing, calligraphy and painting, sculpture, cinema, audio recording, video recording, performance, advertising, exhibitions, technical services, intermediary services, agency, brokerage and other services (Shi Qi Ma - IBFD, 2012).

China requires employee and employer social security contributions for pensions, medical insurance and unemployment insurance. Employers generally also have to make contributions for workplace injury and maternity insurance, but typically at a very low rate. There are no contributions for disability and family allowance programs in China. The applicable rates and thresholds vary between cities, and in some cases between districts within cities. While employee pension contributions are 8% in all major cities, employer pension contributions range from 10% in Zhongshan to 22% in Shanghai. Employee medical insurance contributions are generally 2% in major cities, but employer contributions range from 2% to 12%. Employee and employer unemployment insurance contributions range from 0.1% to 1%, and from 0.2% to 2%, respectively, which is low compared to the rates which are generally levied in OECD countries. Employer injury insurance contributions range from 0.25% to 2%, while employer maternity insurance contributions range from 0% to 1%.

Social security contributions, as is the case in China, are typically levied at flat rates, often from the first currency unit of income earned. Some OECD countries impose contributions up to a fixed income threshold, in which case the benefits that will be paid out will typically have an upper ceiling as well. A number of OECD countries set no upper contribution limit for some or all contributions; in this case, the benefits may be increasing with income and the contributions that have been made, although in some countries the benefits are capped so that the additional 'contributions' are in effect a payroll tax. China applies a maximum income limit above which income is not subject to contributions. China also sets a minimum amount of social security contributions that have to be paid, calculated on the basis of a minimum income level irrespective of actual income earned. This approach is not followed in OECD countries. On the contrary, some OECD countries set reduced (especially employee) contribution rates in relation to low-income workers in order to reduce the labour cost of employers of hiring these workers and/ or to increase workers' incentives to participate in the labour market. In contrast to common practice in the OECD, the minimum and maximum thresholds may vary between cities in China.

Average and marginal tax burden on employment income[19]

The relatively high employee and employer social security contributions in China lead to relatively high average and marginal tax wedges for income levels below the maximum SSC threshold, as can be seen from Figures 8, 9 and 10. Employers in China also have to pay a housing contribution; the housing contribution and other non-tax compulsory payments are not included in the calculations that lie underneath the data shown in Figures 8, 9 and 10 as these payments are not considered to be taxes, but they further increase the cost of hiring workers.

Figures 8 and 9 show the *average* tax wedge on employment income in China, and more specifically in Shanghai, calculated at different earnings levels which are expressed as a multiple of the "average wage" of a private sector worker in China in 2010 – the "average private sector worker" earns an estimated gross income of RMB 29,924 on an annual basis.[20,21] Figure 7 shows the average tax wedge for gross earnings between 0% and 200% of the average wage, while Figure 8 focuses on earnings from 0% up to 30 times the average wage (i.e. 3,000%). The tax wedge measures the difference between labour costs to the employer and the corresponding net take-home pay of the employee; the tax wedge is measured as the sum of personal income taxes, employee and employer social security contributions as a percentage of the labour costs of employing that worker, which in itself is the sum of the employee's gross wage earnings plus employer SSCs. For instance, a private sector worker in Shanghai who earns 4 times the average

[19] The analysis builds on the Taxing Wages calculation models prepared by Gandullia, Iacobone and Thomas (2012).
[20] The calculations model the taxes on labour income as they apply in Shanghai, based on an Average Wage figure for the entire country, as no average wage information for Shanghai was available.
[21] Information on the Average Wage in China is based on the figures from the Statistical Yearbook of China, 1991-2008 (2011 edition) published by the National Bureau of Statistics of the Peoples' Republic of China.

Chinese wage (shown as 400% in Figure 8) faces a tax wedge of about 42%; it means that the worker takes home about 58% of what that worker costs to his or her employer.

Figures 8 and 9 show also the parts of the wedges that are due to personal income taxes, employee and employer social security contributions. In Shanghai, workers have to pay a minimum amount of employee social security contributions, calculated as the contribution rates times the minimum income threshold of about 44% of the average wage, irrespective of the actual income earned. This minimum employee SSC results in very high average tax wedges for low-income workers, as can be seen from Figure 8 and leads to employee social security contributions which are regressive for workers with earnings below the minimum SSC threshold.

The minimum employee social security contribution basically functions as a lump-sum tax for workers with an income below the minimum SSC threshold. This explains why the contribution does not show up in the marginal tax wedges in Figure 10. The minimum contribution does however lead to very high average tax wedges for low-income workers, thereby strongly reducing the incentives for workers to enter the formal labour market as either part-time or full-time workers.

Figure 9 shows that the part of the SSC starts decreasing at 430% of the average wage as a result of the maximum SSC limit above which no further employee and employer social security contributions have to be made in Shanghai. The share of personal income taxes is increasing as a result of the progressive personal income tax schedule. The effects of the top PIT rates, however, are not shown in Figure 9 as these rates start being levied at earnings higher than 30 times the average wage.

When compared to OECD countries, average tax wedges on employment income in China – represented by the tax burden in Shanghai – are similar in size to those of many OECD countries, although not necessarily levied at similar income levels as a result of the low average wage in China. For instance, the average tax wedge at 100% of the average wage in 2010 on average across the OECD was 35.0% (it was 41% on average in the 21 European OECD member countries); it was 35.4% in Shanghai as a result of relatively high employee and employer SSCs. There are substantial differences between countries, with an average tax wedge at average earnings of 20% in Korea, 27% in Australia, about 30% in Japan and the United States and 49% in France and Germany. The average tax wedge on average across the OECD was about 31% for low-income workers earning 67% of the average wage compared to a wedge of 35% in Shanghai. The average tax wedge across the OECD is about 40% for high-income workers earning 167% of the average wage while it was 37.6% in Shanghai. The average tax wedge in Shanghai equaled 40.6%, 42.4% and 30% for gross employment income of 3, 4 and 30 times the AW in China, respectively.

Figure 10 shows the *marginal* tax wedge on employment income at different gross earnings levels. Assuming a marginal increase in labour costs, the marginal tax wedges show how much of the increase in labour costs is paid in personal income tax, employee and employer SSCs. For instance in 2010, an increase in labour costs of RMB 100 for employing a worker who earned 4 times the average wage resulted in an increase in net-take home-pay for that worker of only RMB 52 as the corresponding marginal tax wedge equaled 48%. The marginal tax wedge decreased at slightly higher income levels as a result of the maximum SSC threshold. The marginal tax wedge started increasing again at higher income levels as a result of the progressive PIT rate schedule. The impact of the top PIT rates in 2010 is also included in the graph. For instance, in 2010, the top PIT rate of 45% only had to be paid by workers with earnings exceeding about 41 times the average wage. These marginal tax wedges are similar to the rates that can be observed on average across the OECD, although they have to be paid at higher income levels compared to common practice in the OECD.

In China, single taxpayers with children and one-earner married couples with or without children face the same tax burden as single taxpayers without children (see Figures 8, 9 and 10). This is typically not the

case in OECD countries as a result of dependent spouse and/ or child allowances and cash benefits for children. In OECD countries, these additional provisions typically reduce the tax burden for workers with a spouse who does not work and/ or children considerably.

Figure 8: The average tax wedge on employment income of single workers (with or without children) at low earnings in China in 2010

by level of gross earnings, expressed as a % of the average wage

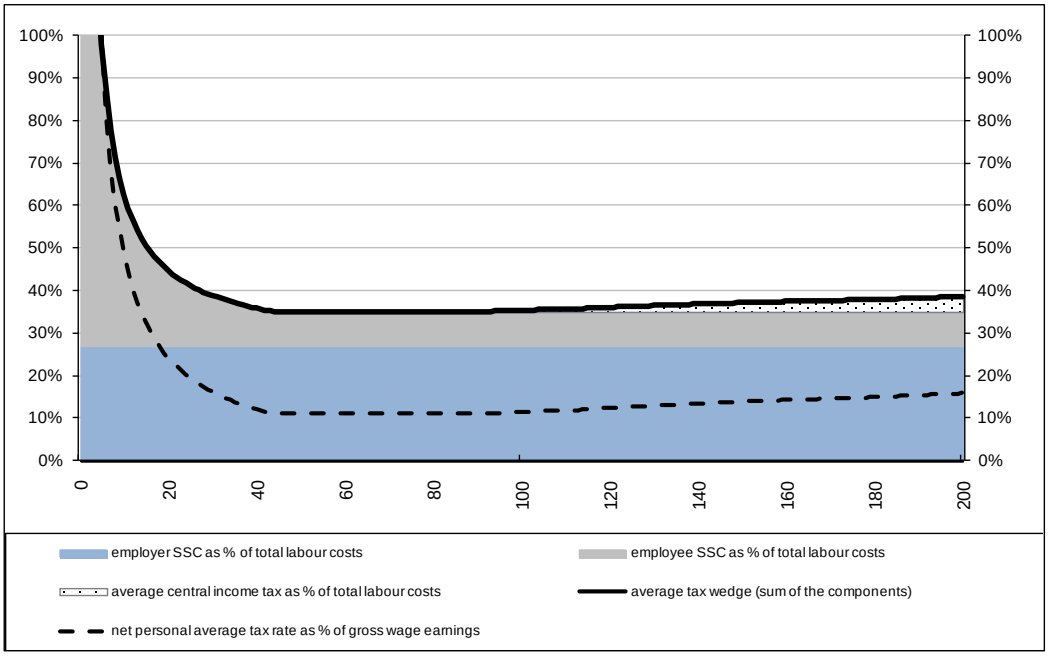
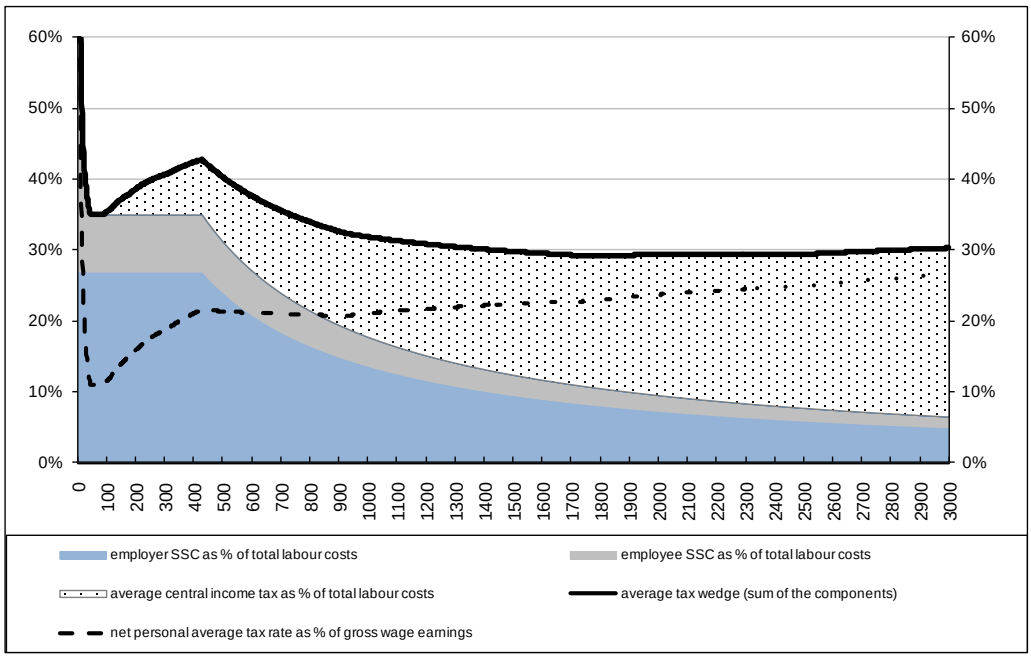


Figure 9: The average tax wedge on employment income of single workers (with or without children) at low and high earnings in China in 2010

by level of gross earnings expressed as a % of the AW

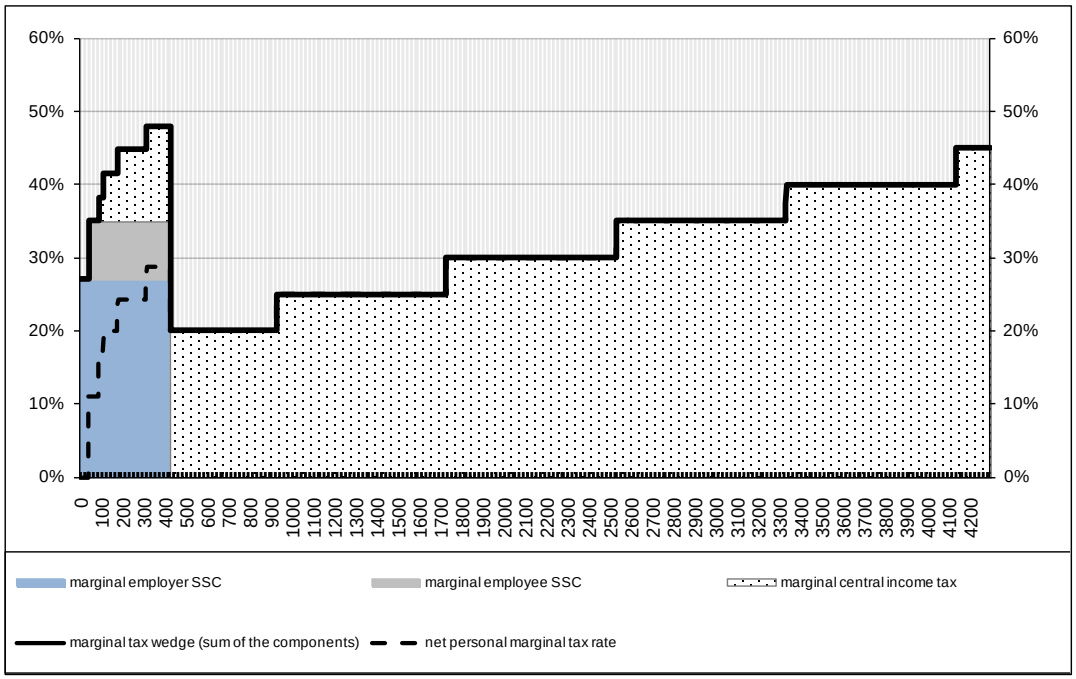


Without data showing the actual employment income distribution in China, it is hard to gauge how pervasive the employment disincentives are from the taxation of labour income. However, it does seem that middle income groups already face a relatively high tax burden, mainly consisting of SSCs. Further increasing social security contributions without altering the maximum SSC threshold and ensuring that workers can be sure that their additional payments will be 'buying' them higher benefits would therefore raise concerns.

The high SSCs are especially distortionary for low-income workers who earn income below the minimum SSC threshold. Although it could be argued that workers have to pay a minimum contribution because government also foresees a minimum social security benefit, this minimum contribution is potentially quite distortionary. Levying SSC only on actual income earned might strengthen work incentives and increase incentives to work in the formal instead of the informal sector. It would also increase the progressivity of the tax-benefit system as low-income workers would have to contribute less for the benefits they might receive.

Figure 10: The marginal tax wedge on employment income of single workers (with or without children) at low and high earnings in China in 2010

by level of gross earnings expressed as a % of the AW



Schedular versus comprehensive personal income tax system

China has a schedular tax treatment of labour income which taxes employment income separately from the self-employed's business/ labour income, and also income from personal labour services is taxed at a separate rate schedule. This is typically not the case in OECD countries where all types of labour income, including the self-employed's income, are taxed jointly under the same PIT rate schedule.

The schedular personal income tax approach followed by China entails a number of advantages. First, losses of one type of labour activity cannot be used to offset other types of labour income. This may act as an anti-abuse provision to protect the tax base and therefore tax revenues. It prevents, for instance, an

employee who is also self-employed in secondary activity from being able to get relief for what may be consumption expenditure. Moreover, in many OECD countries, a salary or wage earner who also earns labour income as a self-employed in secondary activity – especially when the employee starts a business and works on a part-time basis in order to see whether the business is viable – is taxed on that self-employed labour income at the marginal PIT rate at which the salary is taxed. This implies a higher tax burden on the self-employed's labour income and may therefore create a disincentive to start an own business (to the extent that individuals start their own business while continuing to hold another job).

However, this schedular approach also has a number of disadvantages. First, by taxing different types of labour income differently, the tax system distorts choices by favouring particular types of labour activity. Second, it creates an incentive to restructure work arrangements such that they are treated in the most tax-favoured way (e.g. partly as self-employed business income and partly as a remuneration for personal services). Moreover, the fact that losses are not deductible will reduce risk-taking and therefore the incentive to become self-employed and start an own business. It also implies high administrative costs as taxpayers could have an incentive to declare regular business income as remuneration for personal services, or the other way around, and SAT will need to verify information and to audit intensively in order to prevent abuse. Finally, this approach also undermines the actual progressivity of the tax system.

The disadvantages of the Chinese schedular labour income approach very likely outweigh the advantages. As a result, China might want to consider taxing all personal labour income jointly under the same progressive rate schedule. A special tax allowance or credit could be introduced that is targeted at wage earners that become self-employed in secondary activity in order to prevent some of the distortions discussed above. As the self-employed may face higher costs, another additional tax allowance (or allowing the deduction of appropriate costs) could offset some of their labour income.

A fully comprehensive personal income tax system would not only tax labour but also capital income under the same progressive rate schedule. Many OECD countries, however, have moved away from such a comprehensive approach over the last decades and have started taxing capital income at separate proportional rates (OECD, 2006). The advantages of such a "dual income" tax approach are further discussed below.

Monthly versus annual taxation of personal income

Personal income taxes in China are assessed on a monthly instead of on an annual basis as is the case in OECD countries. The tax is withheld at source by employers (in case of employment income). Taxpayers whose total taxable income exceeds RMB 120,000 a year have to file a tax return; for the other taxpayers, the tax withheld by the employer or paid on a monthly basis is final (Shi Qi Ma – IBFD, 2012). Income averaging is permitted in order for monthly taxable income to be distributed evenly during the tax year and to take into consideration the payment of bonuses. This avoids that employees with variable incomes are taxed more heavily than taxpayers who earn a more constant stream of income over the year.

The current monthly approach entails high compliance costs for taxpayers and would be difficult to maintain if the tax system were to evolve over time towards a system with more targeted provisions as, for instance, allowances that depend on family characteristics. China may therefore want to consider determining personal income tax liability on an annual basis. However, employers may be asked to withhold some of the tax at source on a monthly basis, thereby avoiding a situation where all personal income taxes have to be paid by the employee at the end of the year. Also the self-employed should make advance payments on account on a monthly or quarterly basis, with reconciliation with actual income when a tax return has been filed after the year has ended.

Individual or family as the tax unit

Each individual is considered to be a separate taxable person in China; the individual is also the personal income tax unit in most OECD countries. A few OECD countries, including France, Portugal and Switzerland, continue to use pure joint taxation of earnings. In some countries taxpayers may choose themselves whether their income is taxed separately from or jointly with the income from their partner; this is for instance the case in Germany.

Many OECD countries have moved away from family-based taxation towards individually-based personal income tax systems (OECD, 2006). China is currently considering moving in the opposite direction. However, there are advantages of continuing with the current individually-based personal income tax system while the shortcomings of the current system can be resolved in an indirect way.

Countries that have family-based taxation aim at strengthening the fairness of the tax system by taxing households with a different composition (but the same total amount) of income in the same way. Family-based tax systems typically impose the same tax burden on families where only one partner works or where both partners contribute to that income level. However, family-based taxation can also influence the decision to get married as the average tax rate increases with income in progressive income tax systems, and so individual taxation is often advantageous for households where both partners earn similar amounts of income. Under family-based taxation, partners who earn similar amounts of income may therefore face a "marriage penalty" (i.e. not marrying and being taxed separately may reduce the tax liability). Family-based taxation is often favourable when the partners' earnings are very dissimilar, as marriage then implies that the partner with the higher income moves into a lower marginal income tax bracket ("marriage subsidy").

The main disadvantage from family-based taxation is that it reduces incentives for secondary earners in the couple (i.e. the spouse with the lowest income) to participate in the paid labour market and/ or to increase hours worked. The reason is that the initial marginal tax rate of the secondary earner will typically be equal to the highest marginal tax rate paid by the primary earner in the household, implying that the secondary earner faces higher average and marginal tax rates on labour income than in a situation where both partners were taxed individually. Moreover, in OECD countries, the disincentive effects on labour supply of secondary earners are generally stronger for low-income than for high-income families – empirical studies have found that these families respond more strongly to higher tax rates – implying that family-based taxation may, to some extent, contribute to keeping poorer families poor. In light of its ageing population, these types of labour supply disincentives are growing in importance in China as well.

Individual-based taxation is not without its problems either, as non-labour income has to be attributed between the spouses. (Currently, China does not yet have assignment of income rules). Non-labour income might be attributed partly or fully to the spouse with the highest income. However, this might imply that the spouse is taxed on income over which he or she does not have control. On the other hand, if couples could freely choose, the non-labour income will obviously be shifted to the spouse with the lowest taxable income, which would reduce tax revenues.

Under individual-based taxation, countries typically attempt to equalize the tax burden on couples who have the same total income but who have a different distribution of earnings between spouses through the use of special tax allowances and credits. Many of the countries with individual-based taxation have a "dependent spouse" tax allowance or credit and/ or determine the level of the cash (e.g. child) benefits based on family income. Countries may also implement income splitting systems, which divide the income of a sole or the primary earner of the family into two components so as to attribute a portion of it to the non-earning spouse or the spouse with the lowest income. These provisions may have some of the same effects on incentives as joint taxation. Instead of moving from individually-based towards family-based

personal income taxation, China may consider introducing these types of tax provisions. In order to prevent abuse, government could consider limiting the dependent allowances to spouses, children and the spouses' parents who live in the same residence as the taxpayer and who have income less than a certain minimum threshold.

Making the personal income tax liability dependent on the taxpayer's family characteristics (independent of whether the family or the individual is the tax unit) may strengthen the fairness of the personal income tax system but poses considerable administrative challenges. SAT would have to start collecting and verifying information about the family circumstances of the taxpayer (e.g. the number of dependents in the family, possibly their age, the income of the dependent spouse and other dependents, etc.). Under the current system, the income tax withheld by the employer is a final tax. This approach would be difficult to maintain when tax liabilities become family-dependent. Moreover, such a reform also implies that it would become more difficult to levy personal income taxes on a monthly instead of a yearly basis. The personal income tax should continue to be withheld at source by the employer on a monthly basis, but the final tax liability should be determined at the end of the fiscal year.

Pension and health tax allowances

The basic allowance in the PIT in China is set at a high level in order to ensure that many households do not have to pay income tax. Pressures exist to introduce additional PIT allowances for pension savings and health expenses, for instance. In fact, China has started exploring how to treat third pillar private pension savings from a tax perspective. Such additional allowances are worth more to higher income taxpayers than to poorer households as the value of allowances is increasing in the taxpayer's marginal tax rate. They would therefore further undermine the progressivity of the PIT system in China. Also, because the basic allowance is already generous, the government may want to evaluate whether it would want to provide more tax allowances without reducing the general basic allowance.

Incentives for skills formation

Interestingly, foreign employees in China can benefit from tax allowances for language and training costs as well as children's education expenses if they can provide supporting invoices. China may want to evaluate whether these type of allowances could be made available to all taxpayers, so not only to foreigners, in order to stimulate investment in education and skills and to offset some of the discouraging effects of progressive personal income taxes on incentives for skills formation. If such type of tax allowance would be introduced, the current tax exemption for education savings accounts could be abolished.

Central versus sub-central taxes on personal income

As part of a broader reform of the fiscal relations between different levels of government, sub-central levels of government might want to evaluate whether sub-central government could be allowed to levy sub-central PIT rates. If so, the central government might want to set a minimum and maximum band within which the sub-central PIT rates have to lie. If provinces are allowed to set sub-central PIT rates, central government might want to lower their PIT rates in order to prevent an increase in the tax burden.

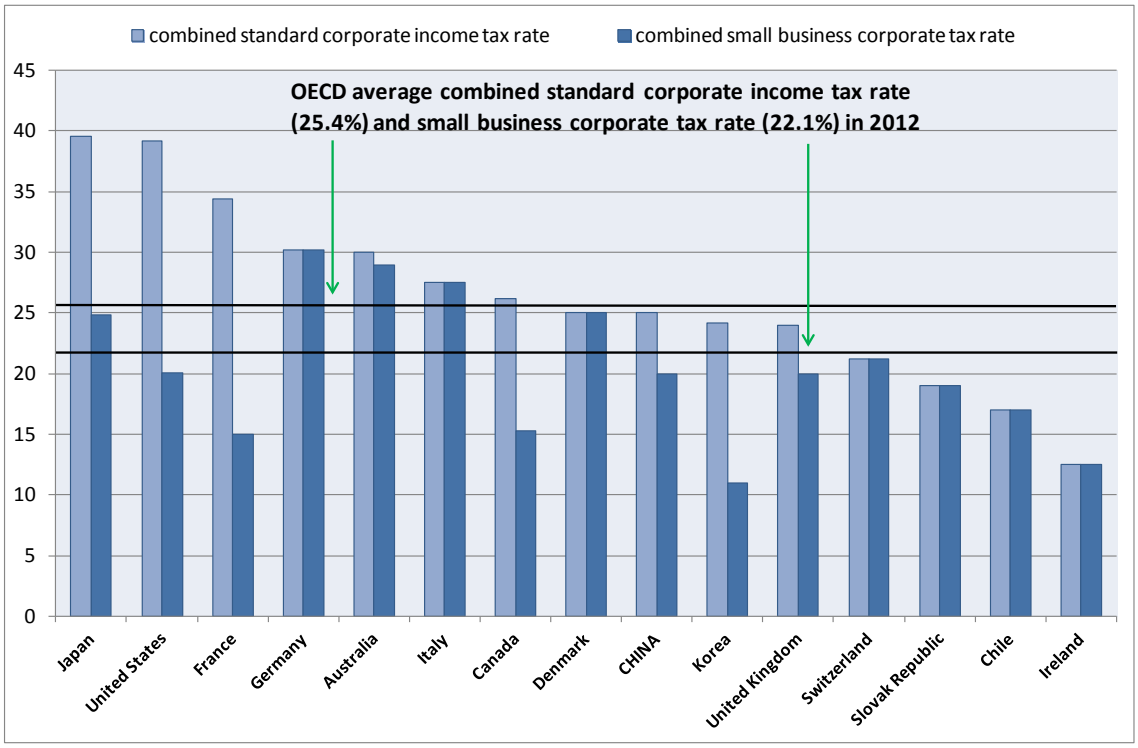
The government might want to ensure that sub-central PIT rates are levied on the central government's PIT base (as a separate rate schedule) or PIT liability (as a surtax). Letting the tax base vary across provinces, for instance by having a provincial-specific basic PIT allowance, could compensate for purchasing power differences across provinces but might lead in the longer run to an overly complex personal income tax system and to the under-supply of public services.

Overall tax burden on capital income

The overall tax burden on capital income is determined by the level of the corporate income tax (CIT) rate as well as the capital income taxes that are levied at the personal level. In order to compare the overall tax burden on capital income in OECD countries and China, the analysis in this section starts by comparing the statutory CIT rates.

Figure 11 shows that, in 2012, the combined central and sub-central standard statutory corporate income tax rate in China is 25%, which is slightly below the average CIT rate in the OECD which equals 25.4%. The corporate tax rate in China for qualified small and thin-profit enterprises is 20% while qualified new/ high tech enterprises are eligible for a reduced CIT rate of 15% and key software production enterprises are eligible for a reduced CIT rate of 10%; the reduced CIT rate is 22.1% on average across the OECD; only 12 out of 34 countries in the OECD have a reduced CIT rate for SMEs.

Figure 11: Combined (central and sub-central) standard statutory corporate tax rate and reduced rate for small businesses in OECD countries and China[1], 2012[2]



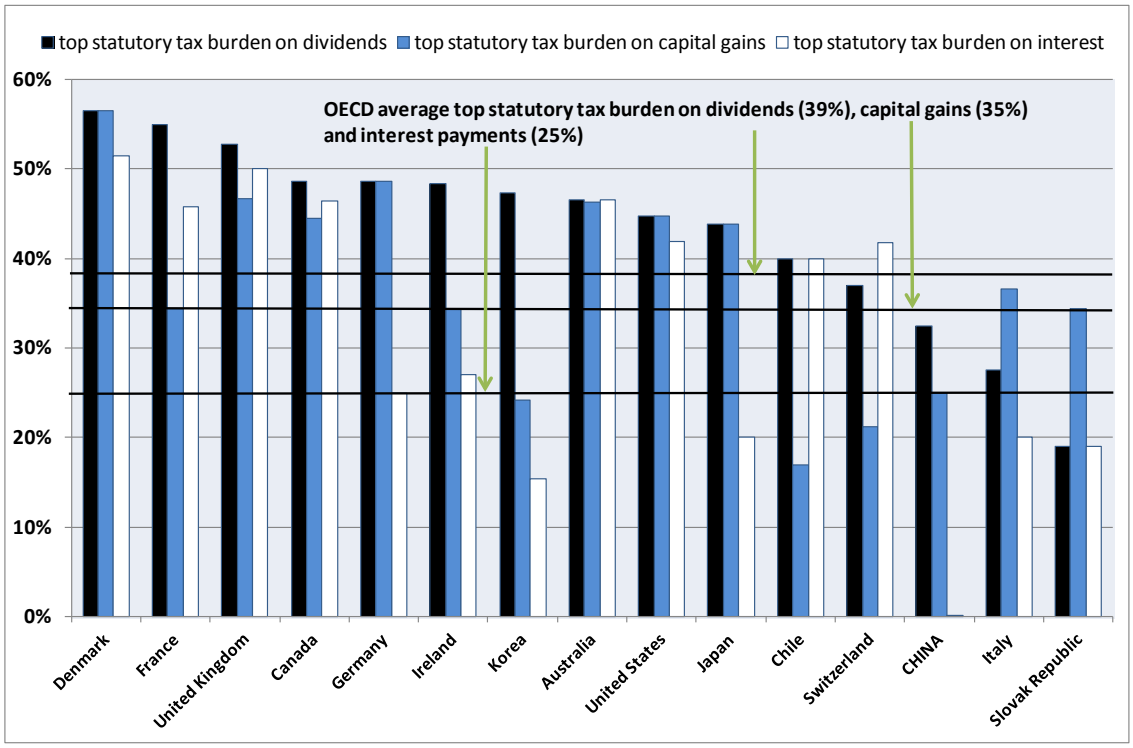
1. The basic combined central and sub-central (statutory) corporate income tax rate given by the adjusted central government rate plus the sub-central rate.
2. Rates as they applied on 1 January 2012.
Source: Table II.1 and II.2, OECD Tax Database www.oecd.org/ctp/taxdatabase.

In China, distributed dividends received from resident or non-resident companies are, in principle, taxed at the personal shareholder level at a rate of 20%. No relief is provided for the corporate income tax that has been paid. However, the rate for dividends distributed by companies including investment funds which are listed on a Chinese stock exchange is currently reduced to 10% (or 5% if the share has been held for more than one year). Also interest is generally taxed at a proportional rate of 20%, but interest on savings in a deposit account with a Chinese bank, interest from educational savings accounts (up to a certain limit), and interest on government bonds are tax-exempt. Capital gains on the sale of shares of Chinese listed

businesses are tax-exempt, with the exception of restricted shares[22] which are taxed at a rate of 20%. Also capital gains of the sale of an owner-occupied property which has been owned for at least 5 years are tax-exempt. Rental income (net of a 20% reduction) is taxed at a rate of 10%.

Figure 12 compares the top statutory combined (i.e. both corporate level and personal shareholder level) tax rates on dividends, capital gains and interest income in OECD countries and China. In China, the top statutory combined tax rate on dividends is 32.5% (i.e. the 25% corporate tax rate and a 10% dividend tax on the 75% left after corporate tax; a 5% dividend tax rate would imply a top statutory combined tax rate of 28.75%); it is 25% on capital gains (25% corporate income tax) and 0% on interest income earned on bank accounts and government bonds while it is 20% on corporate bonds. These rates are respectively 39% on dividends, 35% on capital gains and 25% on bank deposits on average across the OECD, although large differences exist between OECD countries.

Figure 12: Top statutory combined tax rate on dividends, capital gains and interest in OECD countries and China (2012 preliminary data) [1,2,3,4]



1. The tax rates on dividend income (first bar) and capital gains (second bar) are the combined standard statutory corporate and top statutory personal income tax rates on dividends and capital gains paid by resident corporations to resident shareholders. The tax rates on interest income (third bar) are the top statutory tax rates on interest from ordinary bank deposits.
2. Countries are ranked in decreasing order of the top statutory combined tax rate on dividends.
3. Dividend tax rate calculations for China have used a 10% dividend tax rate. A 5% dividend tax rate would lower the top statutory combined tax burden on dividends to 28.75%.
4. Unweighted OECD averages.

The differences in the tax rates on employment and capital income in China implies that the personal income tax system in China can be categorized as a semi-dual income tax system, which is also the

[22] Restricted shares are shares that were non-tradable at the time when a state-owned enterprise was transformed to a limited liability company (Shi Qi Ma - IBFD, 2012).

approach followed in about half of the OECD countries, although some OECD countries rather implement a semi-comprehensive income tax system. Semi-dual income tax systems use different nominal tax rates on different types of income, typically by taxing some forms of capital income at low and often proportional rates and remaining forms of (especially labour, pension and other replacement) income at higher and progressive rates. Semi-comprehensive tax systems tax most (including capital and labour) income according to the same (typically progressive) rate schedule (OECD, 2006). In many countries, personal income tax systems also have characteristics of an expenditure tax as they exempt certain types of savings, for instance by allowing a deduction for private pension savings from taxable income; this is not the case in China.

The 'semi-dual' personal income tax system implemented in China deviates from a 'pure' dual income tax system as it was introduced in the 1990s in especially Norway but also Sweden and Finland and to a lesser extent in Denmark. Dual income tax systems, in their purest form, levy a proportional tax rate on all net income (capital, wage and pension income less deductions) combined with progressive rates on gross labour and pension income. Labour income is therefore taxed at higher rates than capital income, and the value of the tax allowances is independent of the income level; this is not the case in China where the value of the basic allowance is increasing in the taxpayer's income and corresponding marginal tax rate. As the return on equity is already taxed at the corporate income tax rate, but interest and royalty payments are deductible from taxable corporate profits and are therefore taxed only at the personal level, pure dual income tax systems also prevent double taxation of distributed dividends and realized capital gains through a full imputation system. Shareholders are permitted a tax credit against the personal income tax on dividends for the corporate tax that can be imputed to the dividends which they receive. Double taxation of retained profits is prevented in a pure dual income tax system as well (OECD, 2006). The debt-equity distortion at the corporate level can be mitigated also in other ways, for instance by taxing dividends and capital gains at the personal level at a lower rate than interest and royalty payments.

(Semi-) dual income tax systems combine fairly neutral and (possibly) low taxation of capital income, which enhances efficiency, with income redistribution through the progressive taxation of labour income. A lower tax rate on capital income can be justified also in the presence of high inflation. Personal income tax systems usually tax the nominal return to capital, even though the inflation premium just compensates for the erosion of the real value of the assets. A lower personal capital income tax rate might then offset the higher tax burden as a result of the taxation of the nominal return on savings. An international tax perspective offers additional reasons for introducing a low tax rate on capital income. As it is difficult for tax administrations to monitor the foreign source income of their residents, implementing a high tax rate on capital income increases the incentives for capital exports, which will lead to lower tax revenues and might reduce the available funds for domestic investment, although this argument is perhaps less of an issue in China at the moment. However, a lower proportional tax rate on capital income might undermine the fairness of the tax system, especially because income from capital tends to be concentrated amongst the high-income individuals; this is true for many OECD countries but probably even more in the case of China.

One of the main characteristics of pure dual income tax systems is that they impose the same overall effective tax burden on distributed dividends, capital gains, interest and royalty payments. This is not the case in China for a number of reasons, as will be analyzed below, although the differences in effective tax rates remain relatively small.

First, the return on equity is taxed at the corporate tax rate of 25% and dividends are afterwards taxed at the personal shareholder level without that consideration is given for the underlying CIT that has been paid. Dividends are taxed at a higher effective tax rate than capital gains (but only with respect to shares of companies listed in China) because of the 10% dividend tax rate while capital gains are not taxed again when they are realized by the personal shareholder. This creates a small tax-induced preference for internal

instead of external equity finance; i.e. Chinese listed businesses that maximize the after-tax return for their Chinese resident shareholders will prefer to retain and reinvest their earnings instead of distributing them as dividends.

Second, Chinese businesses face a small tax-induced incentive to finance investment with debt rather than with equity because interest payments are deductible from the corporate income tax base but the return on equity is taxed both with the corporate tax and the shareholder dividend tax, although capital gains are not taxed again, while interest payments on corporate bonds are taxed at a rate of 20% (implying a statutory effective tax rate on dividends of 33%, on capital gains of 25% and on interest on corporate bonds of 20%). This may make companies more prone to insolvency and discriminates against small companies and start-ups, which have reduced access to and less favourable terms on debt financing and thus often depend more on equity. Also corporate firms that own firm-specific assets against which it is difficult to borrow suffer a tax-induced competitive disadvantage (OECD, 2007).

In practice, however, the debt-equity distortion in China should not be exaggerated mainly because the effective corporate tax rate paid by business will be lower than the statutory CIT rate of 25% (e.g. because of accelerated depreciation allowances, etc.). Moreover, the debt-equity distortion is already mitigated by the fact that currently distributed dividends are taxed at a reduced rate of 10% compared to the rate of 20% which is levied on interest and royalty payments.

However, Chinese households do face a strong tax-induced incentive to buy government bonds or to put their money on a deposit account of a Chinese bank – the return of which is not taxed at all – instead of buying corporate bonds or shares. (Although the government-regulated, below-market interest rates for deposited funds can be seen as an implicit tax). This tax-induced distortion will make it more difficult (and expensive) for Chinese businesses to attract external financing. This might especially be the case for small and medium-sized firms and young businesses.

In many OECD countries, third pillar private pension savings are taxed under a favourable EET (exempt-exempt-taxation) system. I.e., private pension contributions are deductible from taxable personal income, although many countries impose limits, pension funds are not taxed or only at a low rate on the return they realize, and pensions are taxed at the progressive personal income tax rates when they taxpayer retires. This EET treatment implies a 0% effective tax rate if the tax rate at which the pension savings are deductible equals the tax rate at which the pension is eventually taxed. In many cases, however, the tax rate at which the pension savings can be deducted will be higher than the tax rate at which the pension is taxed (mainly because taxable income is expected to be higher when the taxpayer works than when (s)he is retired), implying a negative effective tax rate on pension savings. The 'expenditure' type of tax treatment, which aims at stimulating households to save for an additional pension, is costly in terms of tax revenue foregone while the effects on overall savings are not that clear. Empirical studies seem to indicate that the favourable tax treatment results in a shift in the savings portfolio – away from direct household savings towards tax-favoured pension savings – without increasing overall household savings. China currently does not implement such type of favourable tax regime for private pension savings. Given the fact that only rich households have to pay personal income tax in China, introducing such a tax regime seems not the immediate way forward, especially because only the richer households would be able to benefit from the deductibility of the pension savings.

3.4 Towards more fiscal autonomy for sub-central levels of government

In China, a very high proportion of public services are provided by sub-national governments. There are four sub-national levels of government in China: provinces, prefectures, counties/districts and townships. These sub-national governments are responsible for the provision of key public services such as health, education, pensions, unemployment insurance and minimum income support. They also account for a large

share of investment in urban infrastructure, such as transportation and environmental improvements (World Bank, 2012).

Sub-national governments have very limited local tax bases and almost no freedom to vary tax rates, but they do receive a fixed proportion of a number of national taxes (see Table 1). They also receive transfers from the central government as they are not generally allowed to borrow. The reliance on transfers is particularly marked at the level of the county in the countryside and the district in urban areas (see Table 3). Sub-national governments also get revenue from the sale of land leases – this revenue is necessary to balance their budgets and which is maximized by local officials through large investments in infrastructure (Wu, 2013) – and from other government funds and administrative fees.

Table 3. Revenue and expenditure across levels of government

Excludes social security and local government financing platforms

	National consolidated	Central	Sub-national levels				
			Consolidated total	Province	Prefecture	County/ District	Tow nship
	% of national GDP						
Own revenue	27.6	11.4	16.3	3.6	6.1	5.4	1.2
Tax revenue	17.5	9.8	7.7	1.8	2.5	2.4	1.0
Gross land lease revenue	4.4	0.1	4.3	0.4	2.1	1.7	0.1
Other revenue	5.8	1.5	4.3	1.3	1.4	1.4	0.2
Own expenditure	29.4	5.3	24.1	5.1	7.4	10.3	1.3
Land compensation and improvement[1]	2.3	0.0	2.3	0.1	1.1	1.0	0.1
Balance on own account	-1.8	6.1	-7.8	-1.5	-1.3	-4.9	-0.1
Transfers from higher levels of government		0.0	8.4	8.4	6.1	5.5	0.0
Transfers to lower levels of government[2]		8.4		7.2	4.4	0.0	0.0
Net received transfers		-8.4	8.4	1.2	1.7	5.5	0.0
Balance of above = net acquisition of financial assets	-1.8	-2.3	0.5	-0.3	0.3	0.6	-0.1
Use of cash balances (negative means an increase)	-0.8	0.3	-1.1	0.0	-0.5	-0.7	0.1
Net borrowing[3]	2.6	2.0	0.6	0.3	0.2	0.1	0.0
	Net received transfers as percentage % of ow n expenditure						
Transfer dependency			34.8	23.4	22.5	53.7	n.a.

n.a. Data not available.

1. This line measures the costs that local authorities incur before land rights are sold. The costs are *i)* the compensation paid to farmers and home-owners when land is acquired for development; and ii) the expenses incurred by local governments when they improve the land by installing roads and utilities on a site before it is sold. The values for individual levels of sub-national government are based on the average proportions for all levels of sub-national government.
2. Transfers to prefectures exclude those prefectures whose provinces make transfers directly to counties and districts.
3. The central government borrows on behalf of provincial governments which then lend to lower levels of government.

Source: OECD calculations based on Ministry of Finance (2010), *Finance Yearbook 2009;* Ministry of Finance (2011a), *2009 Fiscal Statistics of Prefectures, Cities and Counties;* Ministry of Finance (2011b), *Local Fiscal Statistical Yearbook* , 2009.

The transfers from the central government are governed by the rules set out at the time of the 1994 fiscal reform. The transfer system has three parts:

- General grants, which aim to reduce differences in per capita public spending across the country, can be used freely (47% of total transfers in 2012);
- Earmarked grants, which can be used only for specified goals (42% of total transfers);

- Compensation payments made to provinces that lost revenue as a result of the 1994 reform (11% of total transfers in 2012) and which have still not been completely phased out.

Transfers have grown rapidly since 1994, from 4.7% of GDP in 1995 to 8.7% by 2012. Within the total, the share of compensation payments has declined substantially, as intended at the inception of the system.

The transfers only partly alleviate fiscal disparities: there is substantial equalisation across provinces but disparities within provinces remain high. County-level governments are particularly dependent on transfers and many have inadequate revenue to meet central government mandates, even after significant transfers (Shen *et al.*, 2012). The degree of fiscal equalisation within a province does not appear to be linked to the income level of the province but to local policies. For instance, amongst high-income provinces, Zhejiang achieves a much higher level of equalisation than Guangdong whilst amongst lower-income provinces equalisation is much higher in Guizhou than in Liaoning.

The share of transfers whose use is unrestricted lies well within the (very wide) ranges observed across OECD countries. Such unrestricted transfers are more efficient insofar as they empower the levels of government that have superior information about local needs (OECD/KIPF, 2012). Simulations show that raising general transfers and reducing compensation payments would help low-income areas raise their level of spending on basic public services towards the national average (Wang and Herd, 2013). However, going further and reducing earmarked transfers may be difficult, as the higher-level government wishes to ensure that its priorities are followed. Efforts are therefore required to improve the effectiveness of earmarked transfers and ensure that they do not work against equalisation.

To date, the need for transfers has been assessed based on registered rather than actual population in a province. This has had the perhaps unintended effect of increasing the extent of fiscal equalization as actual population is generally lower than registered population in low-income provinces, as migrants remain registered in their home province regardless of where they live. The government is now moving to alter the formula by including 15% of the difference between actual and registered population in the formula for determining transfers. This will partly take into account the cost of migrants to a province. However, as a rule it will also reduce the extent of equalization. As compensation payments generally accrue to high-income provinces, the adverse impact on lower-income provinces of the change in population base could be offset by reducing compensation payments more rapidly.

The need for fiscal transfers may well increase in the future for a number of reasons. The total tax revenues for the different provinces are generally a fairly similar proportion of local GDP. Because GDP differs considerably across provinces, the distribution of tax revenues varies considerably as well. If central government would want to continue to strengthen the equalisation of services across provinces, it would require a sizable increase in transfer payments to lower-income areas. In addition, continued rapid urbanisation also in poorer regions requires major local investment in infrastructure. Social spending is also likely to increase over time and much of this type of outlays is made at the local level.

The pressure for increased transfers could also be mitigated by giving sub-central levels of government more taxing powers. In fact, central government might consider making the taxing powers dependent on the degree of economic development. Richer areas could be given more taxing powers than poorer regions. This might possibly free up more central government resources for transfers towards poorer regions. In order to incentivize sub-central levels of government to raise their own taxes, they might be given more discretionary spending power. This would make the sub-central governments and their government officials more accountable for decisions made, and help prevent that spending is biased towards infrastructure instead of environmental improvements, for instance (see Wu *et al.*, 2013).

The immovable (residential) property tax could be assigned to sub-central levels of government (Blöchlinger and Petzold, 2009), but sub-central levels of government could also be allowed to set, to some extent, the rates of the PIT.

The reform of the tax system in 1994 left some local governments with inadequate revenue to meet their expenditure needs. The gap has been met by a rapid increase of transfers from the central government and by a reliance on government funds and administrative fees as well as land transfer fees. If the objective is to devolve expenditure decisions to the greatest extent possible, then the decisions made in 1994 about the share of each national tax attributed to local government needs to be revisited. The integration of the BT within the VAT makes such a reform even more urgent and might require that the share of the value-added tax that is attributed to sub-central levels of government has to be raised substantially.

3.5 Immovable property tax reform

Investment in immovable property is a key driver of economic growth in China. Because of high economic growth rates in the past decades, the number of people that can afford a better-quality home has strongly increased, and is expected to continue to increase, over time. A considerable part of investment in immovable property is also undertaken by richer households that buy a second or even third home. High demand for immovable property has fuelled price increases, alongside immovable property transaction taxes and land transfer fees. The absence of a land and property value register, the fact that many properties were government owned and that land ownership only applies for 70 years as well as the low quality of many properties in the past explains why so little revenue is raised from recurrent taxes on immovable property.

A high proportion of public services is provided by sub-national governments. The revenues from transaction taxes levied on immovable property as well as the fees that are levied when land is transferred from farmers to developers and building companies have been used by sub-central levels of government to bridge the gap between the cost of local public expenditure and the lack of own tax revenues and fiscal transfers from central government. The need to raise revenues from the transfer of land has also led to an inefficient use of land and abuse of government power in land acquisition (World Bank, 2012). However, as land is becoming increasingly scarce especially in those cities that have increased in size the most, this source of revenue is drying up in more and more towns, thereby increasing the need for sub-central levels of government to raise revenues from other sources of finance. Despite major challenges, which include building and maintaining a nation-wide property value register, the analysis in this section explains why levying more recurrent taxes on immovable property might be a good way forward in the short to medium run for the largest cities in China and in the longer run for the entire country.

Immovable property general tax design issues

Income from residential property consists of the return on the equity that a taxpayer has in the property; i.e. the gross return from rent plus any capital gain, less the costs of earning that income – i.e. maintenance and repairs, mortgage interest, etc. Most of these costs and the returns can be measured relatively straightforwardly in the case of property let to tenants, which explains why some OECD countries tax the net return of let property under the income tax.

In the case of an owner-occupier there is of course no market rent, but the owner benefits from living in the property and in effect saves the cost of renting a similar property. However, especially in view of the heterogeneity of residential property, it may be difficult to establish accurately the value for tax purposes of such ‘imputed’ income or rent. Similarly, it may be difficult to measure some of the costs of earning income from residential property such as the cost of repairs and maintenance, especially where some of this work may be undertaken by the owner and it may be difficult to distinguish between maintenance and

improvement. Most OECD countries therefore do not tax the imputed rent of owner-occupied or second-owned properties under the income tax but levy a recurrent immovable property tax instead.

Recurrent taxes levied on the underlying value of the immovable property have their place in a well-designed tax mix because they are generally seen to be more efficient than other types of taxes in that their impact on the allocation of resources in the economy is less adverse. This is because these taxes do not affect the decisions of economic agents to supply labour, to invest in human capital, and to produce, invest and innovate to the same extent as some other taxes.

Indeed, the OECD's Taxation and Economic Growth study has found that recurrent taxes on immovable property are the least harmful tax for economic growth in OECD countries (before, respectively, consumption taxes and personal income taxes; the corporate income tax is the most harmful tax for economic growth) (OECD, 2010). The explanation and intuition behind this empirical result is presented in the following paragraphs.

First, recurrent taxes on immovable property are often seen as a tax that pays for the benefits of the locally provided public goods and services. This makes the tax less distortionary as owners of property may want to pay, to some extent, for the benefits (e.g. waste disposal, police and fire brigade, library and other cultural services, local parks, etc.) they receive; in fact this makes the tax more like a user charge or a fee which has to be paid for the public services provided by government. The link between the recurrent tax liability and the benefits, is, however not perfect and transparent. An increase in the value of the property, for instance, might imply an increase in the taxes that have to be paid without necessarily an (immediate) increase in the benefits that are received.

At the same time, recurrent taxes on immovable property are a tax on capital income – see the "new view" of property taxation literature (Zodrow and Mieszkowski, 1986) – which discourages savings and investment. However, in most OECD countries, the return on investment in housing is under-taxed compared to other saving and investment opportunities. This tax differential has resulted in too much investment in housing, contributing to the creation of housing price bubbles in some countries, and has distracted too much funds away from investment opportunities that yield a higher return pre- but not post-tax, like direct investments in corporations.

Finally, as real estate and land are highly visible and immobile, these taxes are more difficult to evade, and the immovable nature of the property tax base may be particularly appealing at a time when the bases of other taxes become increasingly internationally mobile.

Another advantage of recurrent taxes on immovable property is that the tax base, in normal circumstances, is more stable and the tax revenue generated from this tax is therefore more predictable than for revenues obtained from labour and corporate taxes. This makes the tax appealing as a sub-central government source of revenue. Property taxes also encourage greater accountability on the part of the government, although this would not necessarily apply automatically to all countries including China, particularly where they are used to finance sub-central levels of government.

Recurrent taxes on immovable property can also be used as an instrument to affect land development and land use patterns. For instance, low taxes on vacant property and undeveloped land can encourage the under-utilization of land. This also applies to towns in China where officials now face an incentive to continue bringing new land on the market instead of using available land more efficiently.

Taxes on immovable property are not only relatively efficient but can also be designed such that they strengthen equity. To a large degree the private beneficiaries from higher land prices and rents will have done little to achieve this; they are the fortunate beneficiaries of windfall gains. Governments generally

want to ensure that the public as a whole benefit from such increases and taxation provides one means of doing so.

Recurrent taxes on immovable property, in contrast to common practice in most OECD countries, can be levied at mildly progressive rates. Progressivity can also be achieved by having a basic tax-free allowance corresponding to the basic shelter quality of the property. As price levels of immovable property vary widely in China across provinces, the tax-free basic allowance could vary across provinces and cities in China. This basic allowance, which would exempt small and low-quality properties, could be made dependent on particular family characteristics as the number of dependents or children that live in the property. In practice, however, this would make the system too complicated and too difficult to administer. Instead of exempting low quality properties from tax, an alternative would be to tax all properties but to provide a tax reduction to low-income occupiers.

A myriad of taxes levied on immovable property in China

China levies a myriad of taxes on immovable property, including property transaction taxes and land transfer fees whose impact on property prices is not always cristal clear. In fact, the BT, because it is levied also on the transfer of real property, is not only a tax on consumption but partly also a tax on property. Note that some OECD countries levy VAT on the value of the newly constructed house when it is brought on the market for the first time (only) (e.g. Belgium, France). In this case, the VAT levied on the purchase price can be seen, to some extent, as a pre-payment of the VAT levied on the value of the housing services which the occupier(s) of the property will consume over time. To some extent, the BT on immovable property in China can therefore be seen as – but only insofar it is levied on newly constructed property – an (inefficient) substitute for the VAT on newly constructed immovable property. The BT which is levied on second-hand property is a property transaction tax.

In addition to the impact on the financing of sub-central levels of government, the BT reform has also an impact on the incentives to invest in immovable property. There are therefore good arguments not to look at the property tax reform and the BT-VAT reform in isolation but to evaluate these reforms jointly.

The overall impact on house prices and housing investment incentives in China of recurrent taxes on immovable property, property transaction taxes, land transfer fees and the BT has to be studied more. Also the "incidence" of these taxes has to be analyzed. In general, the agent who actually *pays* the tax is not necessarily the agent who *bears* the tax. In fact, taxes might be capitalized in the pre-tax price of immovable property, implying that a tax decrease will not lower the after-tax price that the buyer will have to be pay but will lead to an increase in the pre-tax price the buyer can ask. The more inelastic is the supply and the more elastic is the demand for immovable property, the larger will be the extent that property taxes are capitalized in prices and that the seller will bear the tax (irrespective of whether the seller or the buyer actually pays the tax). The incidence of a property tax will fall more on the buyers and less on the sellers the more elastic is the supply and the more inelastic is the demand for immovable property.

The recurrent tax on immovable property versus land transfer fee trade-off

Insofar a recurrent tax on immovable property reduces the value of land – because land is rather inelastic in supply, the net present value of the recurrent immovable property tax liabilities will be capitalized in the price of land – governments face a conflict: introducing a generalised property tax would reduce the income that they derive from land transfer fees; i.e. they would forego income today but receive more tax revenue in the future. Although this concern may have played more strongly in the past when large amounts of revenue were raised through land transfer fees – it still is a valid concern in those cities where the government is planning to bring a lot of government-owned land for construction on the market – it has become less of an issue in the cities where land has become more scarce. In the most-developed cities, a

recurrent tax on residential property – preferably following a broad-base and low-rate approach – has already a large revenue potential.

Also the cities which continue to raise a lot of revenues from land transfer fees may want to start valuing immovable property as soon as possible, as it takes time before a proper valuation system and database will be set up. In the short run, however, those cities may want to tax only very large and expensive houses and apartments, as currently is the case under the immovable property tax pilot programs.

In effect, a land transfer policy that stimulates the inefficient use of land and which therefore entails large costs (e.g. in terms of infrastructure, pollution, etc.) is not a tenable policy in the long run. Wu et al. (2013) also argue that the strong correlation between investment in infrastructure, land prices and land sale revenues (and city's top cadres' chances of being promoted) comes at a cost of lower 'green' investment and the provision of other public services. However, green investments (drainage and sewage purification, solid waste treatment, parks, etc.) would also increase (recurrent) property tax revenues – although the revenues would be spread over time – through a positive impact on existing residential property values.

Immovable property tax pilot programs

The introduction of a property tax has been under consideration since 2003 as a means of improving local tax revenue. Pilot schemes have been launched in Chongqing and Shanghai in 2011to tax the possession of a second residential property. In Shanghai, for instance, the tax only applies to newly acquired second properties and only to properties of over 180m^2 for a family of three. Moreover, if newly married children are using the second property, no tax is payable.

The property tax as it is currently implemented in the pilot towns is a type of luxury tax, which is expected to yield little revenue. In fact, it may even turn out that the extra revenue will be below the administrative and valuation costs for government.

Over time, there are many advantages of levying the recurrent tax on immovable property on all property, whether owner-occupied, a second or a third home. A basic tax-free allowance could be used to ensure that older and poor-quality properties would effectively not be taxed. If set appropriately, the basic allowance would allow government to value only the relatively new buildings and possibly property built on land which has a high value as, for instance, in the centre of cities.[23]

Shifting from transaction taxes towards recurrent taxes on immovable property

Taxes on financial and capital transactions are highly distortionary. It is always less distortionary to tax the income and services provided by assets than the transaction involved in acquiring or disposing of them. The lower distortionary effect arises because both transaction taxes and taxes on income and consumption discourage the ownership of the assets, but the transaction taxes have the added distortionary cost of discouraging transactions that would allocate these assets more efficiently. For example, they discourage people from buying and selling houses and so discourage them from moving to areas where their labour is in greater demand. In fact, the distributional effects of transaction costs are probably also less desirable, as the tax falls more heavily on people who trade more frequently, such as people who need to move frequently for their jobs. Nevertheless, governments have found these taxes attractive mainly because they are relatively easy to collect. On the other hand, transaction taxes may help to curb speculation, although the experience from China suggests that over-investment in real property will occur anyway if especially richer households have insufficient alternative investment opportunities.

[23] In an ideal world, all properties would be valued. In light of the high valuation costs of residential property, it might be better to focus first on those properties (i.e. if the property meets certain characteristics) whose value can be expected to exceed the tax-free value.

Raising more revenues from recurrent tax on immovable property will allow government to lower the property transaction taxes. Such a reform might leave the housing price level relatively unaffected, as these measures have the opposite price effects. Transaction taxes can be seen, to some extent, as a prepayment of property taxes that are levied on a recurrent basis, though the amount of tax paid per year would be somewhat arbitrary as it would depend on how long a property was owned. As China levies many transaction taxes on immovable property, introducing a recurrent tax on property implies that current owners of property will pay twice (once when they have purchased the property and afterwards when they will have to start paying the recurrent property tax). At the moment, this issue seems to be less of a concern in China as a result of the high growth rate and the strong increases in property values in the past, implying that new owners already have earned an (although unrealized) capital gain. However, the longer government waits to rebalance the property tax mix, the more difficult it might become to actually do so. In any case, this fairness concern could be alleviated by phasing in any property tax mix reform and by foreseeing a sufficiently high basic tax-free allowance in the recurrent tax on immovable property.

The balance in favour of property taxation will continue to increase over time as China becomes more urbanised. Land sales will become a much less important source of revenue and the balance would change even more if rural people were given the same property rights as urban residents and were able to benefit from the increase in value of land when it changes use from agricultural to residential use. Over the longer term, property taxation would represent a stable source of revenue – albeit one that would accrue more to the governments of richer areas.

Which level(s) of sub-central government should levy the recurrent taxes on immovable property?

In order to design the recurrent taxes on immovable property as efficiently as possible, the link between taxes paid and benefits received will have to be as strong as possible. This implies that recurrent taxes on immovable property are ideally levied by the lower levels of sub-central government in China and not necessarily by provinces.

Fiscal cadastre and property valuation

An efficient property tax system requires a good fiscal cadastre, which contains maps, characteristics of the property (size, location, etc.) and information on ownership, as well as a proper valuation system. Such a system may be very costly. A significant part of these costs is likely to be incurred when the system is set up; the annual costs to keep valuations up to data might be expected to be lower.

Possible strategies that might help minimizing the valuation costs are: 1) value the property on the basis of a number of key characteristics – a mass appraisal rather than an individual property approach may reduce costs, including those associated with taxpayer appeals, and not significantly reduce tax revenues; 2) create a real property valuation department that acquires expertise and has the data to undertake valuations at low cost; 3) use the value of the property for different tax purposes, including tax compliance.

There are good reasons for using market values as the tax base for the property tax even if this is more expensive and time-consuming. Market values can be tested and refuted by the property owners. The market value of the property is influenced by the amount and quality of the locally provided government services and market values represent wealth for their owners.

In the Chinese context, it would be preferable for all cities and/ or provinces to apply a similar valuation methodology in order to prevent valuation methods from differing widely across cities and provinces over time, which would lead to an inefficient and unfair system. This would also allow sub-central property value databases to be linked on a nation-wide basis such that officials can verify whether owners possess

also property in other provinces. The central government may therefore want to issue valuation guidelines, based on experience from the pilot programs and previous valuation experiences of the provinces, which other cities and provinces should follow.

Property tax coordination

China could consider first granting new sources of own revenues to sub-national governments in relatively developed cities. This would free up fiscal resources for more transfers to poorer regions and help bring a larger share of sub-national financing on-budget (World Bank, 2012). However, in order to prevent unfair tax competition, all developed cities should start levying property taxes more or less at the same time.

There are potential efficiencies if sub-central levels of government would be allowed to choose their levels of property taxation independently. However, complete independence does not seem the most optimal solution as it may lead to a race to the bottom type of tax competition and an under-supply of public services. The central government may therefore want to set minimum and maximum tax rates and may also set guidelines, in addition to the property valuation method(s), for the types of tax exemptions that are allowed. This approach would also ensure that sub-central objectives and policies align with broader central government objectives in relation to the housing market.

CHAPTER 4

AVENUES OF FUTURE TAX POLICY REFORM IN CHINA:

CONCLUDING REMARKS

The tax regime in China has been very successful. It has, for instance, raised an increasing amount of tax revenues in relation to GDP over the past 20 years to finance public expenditure and support development while at the same time maintaining sound public finances. However, China's economy has been evolving extremely rapidly and the tax regime needs to evolve also to ensure that it contributes to and does not impede the next steps in the country's economic development. This chapter summarizes some possible avenues for future tax reform.

Compared to OECD countries, the tax burden in the People's Republic of China remains relatively low. Including SSCs, the tax-to-GDP ratio in China was 21.9% in 2010, which is low compared to a tax-to-GDP ratio of 34% on average across the OECD. However, if the government funds, fines and administrative fees as well as the land transfer fees (i.e. land sales revenues) are also taken into account (as they are similar to taxes in China), the ratio of tax revenues, augmented by non-tax revenues and revenues from land sales, as a percentage of GDP in China was in the order of 26% of GDP in 2010, which is similar to the tax-to-GDP ratio in the United States, Japan, Korea and Australia.[24]

The mix of taxes that are levied in China differs considerably from the tax mix that can be found on average across the OECD. China raises more indirect taxes (i.e., taxes on goods and consumption and property taxes) and less direct taxes (i.e., personal and corporate income tax, payroll taxes and social security contributions) than countries on average in the OECD. China raises especially little revenue from personal income taxes. Other significant differences are that China raises a lot more revenues from taxes on property transactions, while OECD countries also raise revenues from recurrent taxes on immovable property and, to a lesser extent, from estate, inheritance and gift taxes. In addition, China raises relatively little revenue from environmentally-related taxes, as is also the case in many OECD countries. Compared to OECD countries, China raises especially little revenue from taxes on energy including fossil fuels.

Revisiting the 1994 tax sharing agreement

A very high proportion of public services in China is provided by sub-national governments. However, the financing of sub-central levels of government is under pressure for a number of reasons.

First, sub-central levels of government have no taxing powers but they do receive revenues from the taxes that are shared between the central and sub-central level (e.g. the PIT, the CIT), and from the taxes whose revenue is assigned (almost) entirely to the sub-central level, as the Business Tax (BT). The incorporation

[24] The revenues from fees and other non-tax revenues are not included in the tax-to-GDP figures of OECD countries (OECD, 2013).

of the BT into the VAT, however, would reduce considerably the tax revenues of sub-central levels of government (as only 25% of the revenue of the domestic transaction-related VAT goes to sub-central levels of government) unless other measures to compensate sub-central governments were taken. In order to compensate for the loss in BT revenues, China allows sub-central levels of government to keep the VAT revenues levied on services (only; in fact, only the VAT levied on services which were previously taxed under the BT). This may not be the best way forward, however, as it will increase complexity because a line will have to be drawn, as currently is the case, among different types of transactions and it will result in an overly complex transfer system. This approach also creates a risk that local tax offices will enforce more strictly the VAT levied on services than they do on VAT levied on goods. The logic of a comprehensive VAT that covers all goods and services is that sharing revenues between levels of government should be on the basis of total revenues.

Second, sub-central governments have raised a lot of revenue in the past from non-tax revenues, notably land transfers fees. Also these revenues are under pressure as land is becoming increasingly scarce especially in those cities that have grown rapidly in the past.

Third, sub-central levels of government are not allowed to borrow themselves; this rule has been circumvented by borrowing through fully-owned state enterprises, leading to high debt levels (and recurrent interest obligations) in some cases. Stricter control from central governments on these borrowing practices, while desirable, means that sub-central governments will need to find other revenue sources.

Finally, sub-central governments have raised considerable other non-tax revenues in the past from ‘government funds’, ‘administrative fees’ and other local government charges. These charges are basically taxes but they are less transparent and are likely more distortionary (because they are levied irrespective of the level of profits (if any) made, for instance). There is an ongoing trend to abolish many of these additional charges, which the central government should continue to support. In fact, the central government may want to ensure that this downward trend is not reversed because of sub-central funding shortages.

There also are great disparities in the revenue sharing practices between sub-central governments. This is mainly because the “central – sub-central” fiscal transfer rules are clearly defined but the transfer sharing rules between higher and lower tiers within sub-central governments are not.

The tax sharing system which was introduced in 1994 has great merit but it could be refined in light of the changed economic circumstances and level of development. Sub-central governments might be given some taxing powers. In fact, the central government might consider making the taxing powers dependent on the degree of economic development. Richer areas could be given more taxing powers than poorer regions. At the same time, the transfer rules might have to be re-adjusted to the changed circumstances and the challenges which sub-central governments currently face. The fact that only richer regions would receive taxing powers (compensated by a decrease in the transfers from central government) would free up more central government resources for transfers towards poorer regions.

A reform of the personal income tax would help ensure that the richer provinces contribute proportionally more to the central government budget than poorer regions. Strengthening the actual progressivity of the personal income tax would therefore not only reduce inequality within the provinces, but it may also free up resources for additional transfers to poorer regions and therefore reduce inter-regional inequality.

If sub-central levels of government were allowed to set (within limits) their own tax rates (e.g. on personal income and/ or immovable property), central government may want to ensure that sub-central government levels do not end up in a situation of under-provision of public services as a result of a race to the bottom type of tax competition. It also might want to ensure that sub-central levels of government actually use

their taxing powers instead of raising more inefficient but less visible sources of funding as land transfer fees. Central government may therefore want to set minimum and maximum bands for the sub-central tax rates. At least in the short and medium run, central government might continue setting the tax base.

The immovable (residential) property tax is the most logical tax which could be assigned to (especially the lower levels of) sub-central levels of government. Sub-central governments may also be allowed to decide, to some extent, on the rates of the PIT.

Consumption tax reform

In order to resolve some of the inefficiencies that are present in the current consumption tax system, China is in the process of integrating the Business Tax levied on services into the VAT. The VAT-BT pilot program, which was first launched in Shanghai at the beginning of 2012 and implemented in eight other provinces and municipalities in September 2012, will be implemented nationwide and extended to more services as of 1 August 2013. This ambituous reform will level the playing field for all provinces and business sectors. The aim is to abolish the BT by the end of 2015.

The VAT and the integration of the BT within the VAT poses many challenges for the tax administration. For instance, the tax administration faces difficulties in administering VAT on cross-border services. In order to prevent that VAT refunds are given for exports that do not actually take place, some services will be exempted instead of zero-rated. In this case, businesses will not receive a refund for the VAT paid on inputs, which will lead to a competitive disadvantage for businesses that produce these VAT-exempted services. Also, businesses in China are required to carry forward any excess input VAT into subsequent periods as any excess VAT is not paid back to businesses, as is common practice in OECD countries. Moreover, China adopts a wide range of simplified collection techniques with turn the VAT into a turnover tax. In order to further increase the efficiency of the VAT system in China, the VAT administration may therefore have to be further strengthened.

China also uses its VAT refunds on exports as a policy tool to stimulate certain activities (which receive a full refund) and discourage other types of activities (which do not get VAT on inputs paid back when these goods or services are exported). Using consumption tax refunds as a policy tool to stimulate certain activities and discourage other types of production is inefficient, especially because governments have other tools available to correct for negative (e.g. environmentally related taxes) and positive (e.g. R&D tax credits) externalities. Therefore, there are many advantages to continue moving the VAT in China towards the destination principle, which taxes all imports and provides full and timely VAT refunds when goods and services are exported.

There are many administrative, compliance and economic efficiency advantages of levying the VAT on a broad base with as few reduced VAT rates as possible. Overall, the arguments in favour of differentiated and/ or reduced VAT rates, either targeted at poorer households or implemented for other reasons, are weak. Therefore, when services are brought within the reach of the VAT, they ideally would be taxed at the standard VAT rate instead of at an existing or a newly introduced reduced VAT rate. Also, efforts should be made to avoid offsetting high price increases for particular products with VAT rate decreases. It would be preferable to address the inflation at source or to consider more direct and effective forms of compensation for low-income households. If a reduced VAT rate would be introduced anyway, consideration could be given to having the rate reduction expire automatically at a preset date.

Ideally, also the City and Rural Area Maintenance and Construction Tax, which is an inefficient cascading tax just like the BT, should be integrated in the VAT. The current urban surtax rate differentiation could be maintained by allowing different types of urban areas to set their own VAT surtax rates within minimum

and maximum bands that are set by central government. This reform could be part of a broader reform that changes the fiscal relations between different levels of government, as discussed above.

Environment related taxes

The fuel tax reforms and greater liberalization of retail fuel prices introduced by China in recent years have been an important positive step on the path to greener growth. There is scope to further adjust fuel taxes, and excise duties on gasoline and diesel in particular as they are low by international standards.

China may also want to strengthen pollution price signals by increasing levies and moving them towards a system of pollution taxes, to complement other legislative initiatives on environmental protection. The CO_2 pilot emissions trading schemes could be moved towards an efficient country-wide system or replaced by a national emissions pricing charge – a carbon tax is likely to offer some practical advantages over a trading scheme (OECD, 2013) – integrated with existing fuel taxes.

Personal income tax and social security contributions

China's personal income tax regime is characterized by a relatively high top PIT rate on employment income, although this rate only applies from incomes that are more than 32 times average income. Top PIT rates on other types of income, which are taxed at separate rate schedules, are considerably lower. The PIT is also characterized by a high basic allowance and broad tax brackets. Workers may also receive non-cash benefits which remain untaxed. These factors explain why the PIT raises relatively little revenue and therefore does not actually produce much transfer of resources from richer to poorer households. In order to increase the redistributive role and impact of the PIT, China might want to consider taxing all personal labour income jointly under the same progressive rate schedule with as few tax expenditures as possible. The basic allowance may also be turned into a basic tax credit, in order to ensure that its value is the same for both lower and higher incomes.

Many OECD countries have moved away from family-based taxation towards individually-based personal income tax systems, as is currently the case in China. This approach has more advantages than disadvantages, so there is no need for a reform of the tax unit in China. However, if there is a strong desire to have more recognition of family circumstances in the PIT system, instead of having one fixed basic allowance for all types of taxpayers, the basic allowance could be designed such that it takes specific family characteristics into account (e.g. a separate or higher basic allowance for a dependant spouse, while retaining the same personal allowance for each spouse to reflect the fact that a dependent spouse is unlikely to be able to take advantage of this allowance).

Under the current system, the income tax withheld by the employer is a final tax. If tax liabilities were to become family-dependent, deduction at source by employers would need to be supplemented by other arrangements to ensure that the right amount of tax was paid. Moreover, such a reform also implies that it would become more difficult to assess personal income tax liabilities on a monthly instead of a yearly basis. The personal income tax should continue to be withheld at source by the employer on a monthly basis, but the final tax liability could be determined at the end of the fiscal year.

Particular income groups already face a relatively high tax burden. Further increasing social security contributions without altering the maximum SSC threshold and ensuring that workers can be sure that their additional payments will be 'buying' them higher benefits would therefore not be the best policy option. The minimum SSC for low-income workers, which is a lump-sum amount and not levied on actual earnings, is potentially quite distortionary (especially with respect to the decision to work in the formal labour market). Levying SSC only on actual income earned might strengthen work incentives and increase

incentives for low-income and part-time workers to work in the formal instead of the informal sector. It would also increase the progressivity of the tax-benefit system.

Sub-central levels of government might be allowed to levy a PIT rate, within minimum and maximum bands set by the central government, as part of a broader reform of the fiscal relations between different levels of government. Ideally, these sub-central rates would be levied on the central government's PIT base. If provinces are allowed to set sub-central PIT rates, the central government might want to lower its PIT rates.

Capital income at the personal level

China implements a semi-dual income tax system, which levies proportional tax rates on capital income at the personal level instead of taxing capital income jointly with employment income at the progressive personal income tax rate schedule. This approach has many advantages and is followed in many OECD countries, although it reduces the overall progressivity of the PIT system.

China could consider taxing government bonds and interest on bank accounts at moderate rates in order to solve the current distortion against business financing (although government-regulated, below-market interest rates can be seen as an implicit tax). If the dividend tax rate were increased back to its original 20% level, accompanying tax rate increases could be implemented for interest income.

To further strengthen neutrality of the tax system (with respect to sources of finance for businesses and household savings), a modest capital gains tax (with a rate of 10%, for instance) could be introduced in the medium run. The advantages of such a type of reform should, however, be carefully weighed with the administrative complexity and corresponding costs.

Immovable property taxation

The introduction of a property tax has been under consideration since 2003 as a means of improving local tax revenue. In 2010, the revenue raised from property taxes in China equalled 1.6% of GDP, which was only slightly below the average revenue raised in the OECD. However, China raises more revenue from taxes on property transactions and less from recurrent taxes on immovable property than on average in the OECD.

Under the property tax pilot programs in Chongqing and Shanghai, the recurrent tax on immovable property is a type of luxury tax levied on the value of very large and expensive houses and apartments, but not on owner-occupied property. The tax will very likely yield little revenue, possibly even less revenue than the administrative and valuation costs for government.

The reform of the BT, which is also levied on the transfer of immovable property, has also an impact on the incentives to invest in immovable property. There are therefore good arguments not to look at the property tax reform and the BT-VAT reform in isolation but to evaluate these reforms jointly.

Insofar as a recurrent tax on immovable property reduces the value of land, governments face a conflict: introducing a generalised recurrent tax on immovable property would reduce the income that they derive from selling government-owned land (i.e. from land transfer fees). This seems especially the case for cities where government is planning to sell a lot of government-owned land in the near future. However, it has become less of a concern in cities where land has become relatively scarce and where there is already a large (potential) immovable property tax base. In those cities, levying a recurrent tax on residential property – preferably following a broad-base and low-rate approach – has already a lot of revenue potential. But also cities who continue to raise a lot of revenues from land transfer fees may want to start

valuing immovable property as soon as possible, as it takes time before a proper valuation system and database will be set up. In the short run, however, they may want to tax only very large and expensive houses and apartments, as currently is the case in Chongqing and Shanghai.

Raising more revenues from recurrent tax on immovable property might allow government to lower property transaction taxes. Such a reform will not affect housing prices too much – although government is encouraged to evaluate in more detail the impact of different property taxes on house and land prices as well as the incidence of the property taxes – as these measures have the opposite price effects. The timing of such a reform is crucial because current owners of a newly-constructed house or apartment will pay twice – they have paid high transaction taxes in the past but they will also pay more recurrent taxes in the future. The corresponding equity implications might be less of a concern because house prices have been increasing rapidly in the past, as it implies that (most) owners already have earned an (although unrealized) capital gain. This fairness concern could also be alleviated by phasing in any property tax mix reform and by foreseeing a sufficiently high basic tax-free allowance in the recurrent tax on immovable property.

Over time, there are many advantages of levying the recurrent tax on immovable property on all residential property, whether owner-occupied or rented, and whether it is a first, a second or a third home. A basic tax-free allowance would ensure that older and poor-quality properties would effectively not be taxed. It would imply that only relatively new buildings and property located in areas of high value (e.g. city centres) would have to be valued. Such a recurrent tax on immovable property levied on the market value of the residential property would give households an incentive to use the available building land more efficiently. It also would incentivize policymakers to invest in the quality of neighbourhoods (e.g. parks, environmental quality, etc.) as the value of these benefits would be capitalized in property prices, which therefore would lead to more revenues from recurrent taxes on immovable property.

Bibliography

Bin Yang (2011), "Extending the VAT to services in China. Special difficulties and choices," *Journal of Chinese Tax & Policy*, Vol. 1, Issue 2, pp. 3-10.

Bin Yang and Eva Huang (2011), "Characteristics of the Chinese tax system and its cultural underpinnings: a comparison with the West," *Journal of Chinese Tax & Policy*, Vol.1, Issue 1, pp. 13-33.

Blöchlinger, H. and O. Petzold (2009), "Taxes or grants," *OECD Economics Department Working Papers*, No. 706.

China Statistics Yearbook, online version.

Cui, W. (2009a), "Business Tax: China's quasi-VAT", *International VAT Monitor*, July/August 2009, IBFD, Amsterdam, pp. 291-295.

Cui, W. (2009b), "Indirect taxation of cross-border services in China: (partial) switch to destination-based taxation", in M. Lang, P. Melz and E. Kristoffersson (eds.), *Value Added Tax and indirect taxation, similarities and differences*, IBFD, Amsterdam, pp. 323-338.

Diamond, P.A. and J.A. Mirrlees (1971), "Optimal taxation and public production," *American Economic Review*, Vol. 61.

Dongsheng Jin, "The reforms of the individual income tax still have a long way to go," *Journal of Chinese Tax & Policy*, Vol. 1, Issue 2, pp. 21-26.

Gandullia, L., N. Iacobone and A. Thomas (2012), "Modelling the tax burden on labour income in Brazil, China, India, Indonesia and South Africa," *OECD Taxation Working Papers*, No. 14.

International Tax Dialogue ITD (2005), "The value added tax, experience and issues," *Background paper prepared for the International Tax Dialogue Conference on the VAT*, Rome, March 15-16, 2005.

Krever, R. and Hui Zhang (2011), "Progressive income taxation and urban individual income inequality," *Asia-Pacific Tax Bulletin*, May/June, pp. 192-199.

Oates, W. And R. Schwab (1988), "Economic competition among jurisdictions: efficiency-enhancing or distortion-inducing?" *Journal of Public Economics*, Vol. 35, Issue 3, pp. 333-354.

OECD (2005), *OECD Economic Surveys China 2005*, OECD Publishing.

OECD (2006), "Fundamental reform of personal income tax," *OECD Tax Policy Studies*, No. 13.

OECD (2007), "Fundamental reform of corporate income tax," *OECD Tax Policy Studies*, No. 16.

OECD (2010), “Tax policy reform and economic growth,” *OECD Tax Policy Studies*, No. 20.

OECD (2011), *Consumption Tax Trends 2010: VAT/GST and excise rates, trends and administration issues*, OECD Publishing.

OECD (2012a), “Special Feature: trends in personal income tax and employee social security contribution schedules,” in: *Taxing Wages 2010-2011*, OECD Publishing.

OECD (2012b), “Taxation and investment in skills,” *OECD Taxation Working Paper Series*, No. 13.

OECD (2012c), “Modelling the tax burden on labour income in Brazil, China, India, Indonesia and South Africa,” *OECD Taxation Working Paper Series*, No. 14.

OECD (2012d), *Taxing Wages, 2010-2011*, OECD Publishing.

OECD (2012e), *Revenue Statistics 1965-2011*, OECD Publishing.

OECD (2012f), *Consumption Tax Trends 2012*, OECD Publishing.

OECD (2013), *OECD Economic Surveys: China*, OECD Publishing.

OECD/KIPF (Korea Institute of Public Finance) (2012), *Institutional and financial relations across levels of government*, OECD Fiscal Federalism Studies, OECD Publishing.

PWC (2012), *The People’s Republic of China, Tax Facts and Figures*, 2012.

Shen, C.L., J. Jin and H.F. Zou (2012), “Fiscal decentralization in China: history, impact, challenges and next steps”, *Annals of Economics and Finance*, 13-1.

Shi Qi Ma - IBFD (2012), “China (People’s Rep.) – individual taxation,” *International Bureau of Fiscal Documentation database*.

The Mirrlees Review (2010a), *Dimensions of Tax Design*, Institute of Fiscal Studies and Oxford University Press.

The Mirrlees Review (2010b), *Tax By Design*, Institute of Fiscal Studies and Oxford University Press.

Wang, X. and R. Herd (2013), “The system of revenue sharing and fiscal transfers in China,” *OECD Economics Department Working Paper*, OECD, Paris, No. 1030.

Wong, C. (2010), “Fiscal reform, paying for the harmonious society,” *China Economic Quarterly*, June, pp. 20-25.

World Bank (2013), China 2030, *Building a modern, harmonious and creative high-income society*, Washington D.C.

Wu, Jing, Yongheng Deng, Jun Huang, R. Morck and B. Yeung (2013), “Incentives and outcomes: China’s environmental policy,” *NBER Working Paper*, No. 18754.

Yan, Xu (2010), “Reforming Value Added Tax in mainland China: a comparison with the EU,” *Revenue Law Journal*, Vol. 20, Issue 1, Article 4.

Yang, Xiaoqiang (2009), “Merger of business tax into VAT in China,” *International VAT Monitor*, March/ April 2009, pp. 120-123.

Yang, Xiao (2012), “Hail for the tax reform. Review and prospects of China’s tax reform over the past five years” (translated document).

Zodrow, G. and P. Mieszkowski (1986), “The new view of the property tax: a reformulation,” *Regional Science and Urban Economics*, Vol. 16, No. 3, pp 309–327.

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