# Economic Analysis of Law in China

*Edited by*

Thomas Eger

*Professor of Law and Economics, University of Hamburg, Germany*

Michael Faure

*Professor of Comparative and International Environmental Law, University of Maastricht, The Netherlands*

Zhang Naigen

*Professor of Law, Fudan University Shanghai, China*

**Edward Elgar**
Cheltenham, UK • Northampton, MA, USA

Published by
Edward Elgar Publishing Limited
Glensanda House
Montpellier Parade
Cheltenham
Glos GL50 1UA
UK

Edward Elgar Publishing, Inc.
William Pratt House
9 Dewey Court
Northampton
Massachusetts 01060
USA

A catalogue record for this book is available from the British Library

**Library of Congress Cataloguing in Publication Data**

Economic analysis of law in China / edited by Thomas Eger, Michael Faure, Zhang Naigen.
p. cm.
Includes bibliographical references and index.
1. Law—Economic aspects—China. I. Eger, Thomas, 1949– II. Faure, Michael (Michael G.) III. Naigen, Zhang, 1955–
KNQ440.E26 2007
343.51´07—dc22
2006102431

ISBN 978 1 84720 036 5

Printed and bound in Great Britain by MPG Books Ltd, Bodmin, Cornwall

# 2. The road to efficient taxation in China

**Pierre Garello**

## 1. INTRODUCTION[1]

The recent economic history of China is simply fascinating. During the past 25 years, China's GDP has grown at an average annual rate of 9 per cent, driving China to the top five world economies with a GDP per capita of 1410US$ in 2005. What accounts for such a rapid development? Institutional changes without a doubt. Indeed, during that period, The People's Republic of China has engaged in profound reforms on almost every front, from property laws (with a large programme of privatization) to competition law, and has opened itself to globalization. Tax laws are no exception to this rapid structural change. China has undertaken major tax reforms in 1978, 1983, 1994 and 2004.

In 2004, total tax revenue in China hit 2.57 trillion Yuan (US$313 billion), up 25.7 per cent on a yearly basis.[2] Still, the share of tax revenue in GDP has remained surprisingly low compared to OECD countries: in 1999, that share was 13 per cent for China, compared to 27.7 per cent for OECD countries and 30.2 per cent for EU countries.[3] This places China at a crossroad. How can growth be further fostered? And what use should be made of the proceeds from growth? Some analysts plead in favour of greater fiscal centralization and higher taxes, while others point in the opposite direction. The purpose of this study is to rely on law and economics to see which elements have to be considered when making these choices.

The design of a fiscal system obviously requires many things, among them the choice of what we could call 'a political vision' – that is, what kind of society we wish to live in – and it is not the purpose of this chapter to discuss alternative visions. Whatever vision one wishes to develop, however, it is essential to remain aware of the incentive dimensions attached to each alternative fiscal system if one does not want that vision to be mere illusion. The goal of this chapter is precisely to describe, relying on well established economic principles, the main incentives associated with various fiscal systems.

Not surprisingly, the literature on fiscal policy is voluminous, and a choice must be made here on how to synthesize, preferably in a useful way, such a tremendous amount of theoretical and empirical research. To guide us in this choice we could use what I would call a 'political' approach, acknowledging from the start that tax policies are designed with two goals in mind: first, to provide financial resources necessary for the production by the state of some specific goods and services, and, second, to serve as a tool for redistributing wealth from one subset of the population to another subset. Following this approach one would then attempt to synthesize the literature in a two-part presentation, starting with a discussion of the efficient financing of a state's production before turning to a study of the design of efficient redistributive policies. Such an approach will however quickly lead to the greatest confusion, and this for two reasons. First, wealth redistribution already occurs via the financing of public goods and services (as, for instance, when governments decide to finance those goods with a progressive income tax), and second, the very necessity to redistribute wealth greatly depends on the dynamics of the economy which itself is dependent upon the set of incentives entailed by the existing fiscal system.

Instead of considering state's production and redistribution as two separate topics, we propose the following, progressive, approach. In section 2 we will deal with what is, according to economic theory, the proper role of the state in financing goods and services (the demand side of public finance if one wishes). This provides a first approximation of how much money (leaving out purely redistributive goals) should be raised through taxation. The next three sections will be organized around the question of how to collect that money and, in particular, of how centralized the fiscal system should be. In section 3 we make the implicit assumption that the fiscal system is fully centralized. In such an environment we run the traditional cost–benefit analysis to compare various modes of financing: progressive v. flat income tax, excise taxes or general consumption taxes, and so on. In section 4 we look at the redistributive dimension of those fiscal policies as well as some specific tools for redistribution. Finally, in section 5 we drop the assumption of a centralized tax authority. This allows us to analyse the merits and shortcomings of fiscal decentralization. As will be seen, decentralization not only tends to improve the quality of the supply of public goods but it also allows for a better adjustment of supply to demand. In section 6, a general description of China's present fiscal system is offered and analysed with the tools previously introduced. This will lead us to the conclusion that, in order to maintain its impressive economic development, China must (i) resist fiscal centralization and instead delegate more fiscal power to lower levels of government, thus bringing more consistency (and competition) into the system, and (ii) favour 'passive' tax policies which do

not use taxation with the hope of fine-tuning economic development or reaching a pre-specified allocation of wealth.

## 2. TAXING FOR WHAT REASONS?

Historically states have used their power to tax for many purposes and with various degrees of success.[4] The constitutional movement starting in the thirteen century stemmed precisely from the desire to limit such power.[5] As philosophers, lawyers, politicians, and indeed citizens were discussing those limits, economists developed their own approach to the question. Hence, the last book of Adam Smith's *magnum opus*, *The Wealth of Nations*, is entirely devoted to a discussion of the principles of 'good taxation'. During the following two centuries, as the ratio of tax revenues to GDP grew steadily, economists slowly reached a broad consensus on what, in theory, taxes should be used for.

It is nowadays largely recognized that most goods and services are better provided by a decentralized system based on private property and contract, that is to say, by the market. It is not the place here to restate the argument, but it is enough to recall that the price system (when prices are the outcome of free trade) provides efficient signals of relative scarcity and, through profit opportunities, invites everyone to look for better solutions to answer the needs of as many as possible. There was however a caveat to that general statement: the market is an efficient provider only of those goods and services which can be privately acquired, by which we mean that their owners can choose, if they wish, to foreclose access to others.[6] For the other goods, known among economists as 'public goods', the prediction is that no entrepreneur will be willing to engage in their production for fear of free-riding. Indeed, by the very nature of those goods, once the good is produced any one can benefit from it, whether or not he accepts to pay a price for that service. The temptation is therefore strong to let others pay for the good, and if every one follows that line of reasoning, no one will be willing to contribute and the entrepreneur foolish enough to engage in its production will soon realize he is losing money. Expecting such an outcome, no reasonable entrepreneur will undertake the production of a public good in the first place.

In order to have such a public good produced a way must be found around the free-riding problem. In small communities, reputation and retaliation may do the job.[7] Sometimes, it is also possible to tie the production of the public good to the production of a private good (hence, advertising companies might be happy to provide and maintain free bus shelters – a mild form of public goods – as long as they can post their

advertising on the shelter's walls). But a clear alternative is of course to force everyone to contribute to the production of the good. This is what taxation does. But, if forcing everyone to contribute can guarantee that the public good will be produced, that solution also presents some obvious shortcomings that need to be quickly recalled, if only to invite us to use that tool with due care.

The first of those shortcomings is that it requires *everyone*, including those who care little for that good, to contribute. This naturally is not efficient in terms of allocation of resources. To remedy this efficiency, some economists, starting with Lindhal, have tried to design a system where each citizen will contribute according to the degree of satisfaction he or she derives from that good. Hence someone to whom the public good is very useful will contribute a lot and someone to whom the good is useless will contribute nothing. This however raises a new problem: will citizens honestly reveal their preferences? Will there be no free-riding via wrong reporting to the central authority? Somehow, we are almost back to where we started.

A second shortcoming of taxation follows logically from the first. If the quantity and quality of public goods to be produced have to be decided through an indirect mechanism (the central authority, or the vote of elected representatives), then, taking into account the fact that those who decide will contribute at best a tiny part to the financing, clearly the chances that the quantity and quality produced will approach the quantity and quality which would have been produced had the citizens' preferences been known are very low (for various reasons easy to imagine, ranging from corruption to mere ignorance).[8]

A last shortcoming associated with the provision of public goods by the state (regardless of its mode of financing) is that the state's employees are not necessarily experts in the production of those goods, so that, even assuming the quantity and quality to be produced are known, the production will not be done at the lower cost. Out-sourcing can, however, greatly help solve that problem. Hence, when a state auctions a contract for the production of a public good it can benefit from the technological and managerial knowledge possessed by private companies. In other words, in those circumstances where it is efficient to raise taxes to provide some public goods for the population, it is preferable to entrust the production to private enterprises (which will be in competition at the auctioning stage).

To sum up, economists have long acknowledged that it could be efficient to rely on taxation to finance the production of some specific goods, while, at the same time, pointing out the various imperfections of that solution. Now the good news, as far as efficiency is concerned, is that there are not so many 'public goods'. Clearly, schools, transportation services, swimming pools and the like are not public goods since it is perfectly possible to

exclude those who do not wish to contribute to their financing. Even roads, bridges and canals do not have the characteristics of a public good. It is relatively easy to impose a toll and, if a well developed capital market exists, such large projects can be privately funded and profitable. Some have objected to the private production and financing of those goods on the ground that poor citizens will not be able to afford them once they are entirely privately managed. The traditional answer of the economist is that, if those goods are really basic, a money transfer or a voucher system (that is, a transfer 'in nature') can be established which, admittedly, will also require taxation, but at a much lower level, since the good is likely to be produced at lower cost and the state will pay only for the needy.

Before turning to the study of the most efficient ways of financing public goods, a final remark is in order to explain what appears first like a paradox. Indeed, if the above analysis is correct, that is, if a vast majority of goods and services are better produced by the market, what then can account for the rapid – some would rather say, exponential – growth in taxation which took place during the last two centuries in most developed countries? This paradox becomes thicker if we are mindful of the fact that, in those countries, wealth per capita has been booming over that period, so much so that the poorest citizens of the twenty-first century are incomparably wealthier than a poor citizen of the beginning of the twentieth century; and that steep increase in a state's spending is even more surprising when we take into account the fact that technological advances have partially transformed some public goods into private ones.[9] Part of the answer to that paradox is provided by Public Choice theory, a branch of economics that aims at understanding the mechanisms through which representatives are selected and decisions are taken by the bureaucrats as well as members of parliament. A presentation, even superficial, of those theories would however lead us too far away from our present topic.[10] Another solution to that paradox lies in what could be called an increasing aversion to wealth inequality. The question is then whether policies aiming at reducing wealth inequalities have achieved their goals and, most importantly, whether the quality of life of the poorest has been improved relatively to what it would have been absent those policies.[11] We come back to those topics in sections 3 and 4 below.

## 3. EFFICIENT TAXATION IN THE CONTEXT OF A UNIQUE FISCAL JURISDICTION

In this section and the following one we assume that there is *a single* fiscal jurisdiction which must find the most efficient way of levying a given amount of tax revenues and allocate those revenues. Before going further

we must attempt to define what economists mean by an 'efficient' tax. As we will soon realize, such a definition can be found only for specific contexts and does not easily translate into policy recommendations. The effort nonetheless conveys important lessons for the design of a 'good' fiscal policy and is, in that sense, worthy.

The path to such a definition lies in the observation that any tax policy introduces a bias in the allocation of resources (in particular, in the allocation of labour time) and that, therefore, tax policies should be designed so as to minimize that bias. To illustrate that principle it might be useful to look more closely at the effects of a simple excise tax.

Let us assume that the $S_0$ and $D_0$ curves below represent the supply and demand for, let us say, cigarettes in the absence of tax. The quantity of cigarettes produced and sold will be $Q_0$ at price $P_0$. Assume now that an excise tax of $t$ is levied per unit sold. If the companies were already producing at the level for which price just covers marginal cost, the effect of taxation is to move the supply curve upward by an amount just equal to $t$ (the distance $E_1A$ on the graph). The after-tax equilibrium is $E_1$, where a quantity $Q_1$ is sold at price $P_1$, the amount left to the companies per unit sold being $(P_1 - t)$.

As we can see, the effects of such a simple tax are extremely rich. Besides providing tax revenues for the government (the shaded rectangle with area $t \times Q_1$), it reduces production, and therefore the corresponding demand for labour and capital. Furthermore, since the new price is higher, it is possible

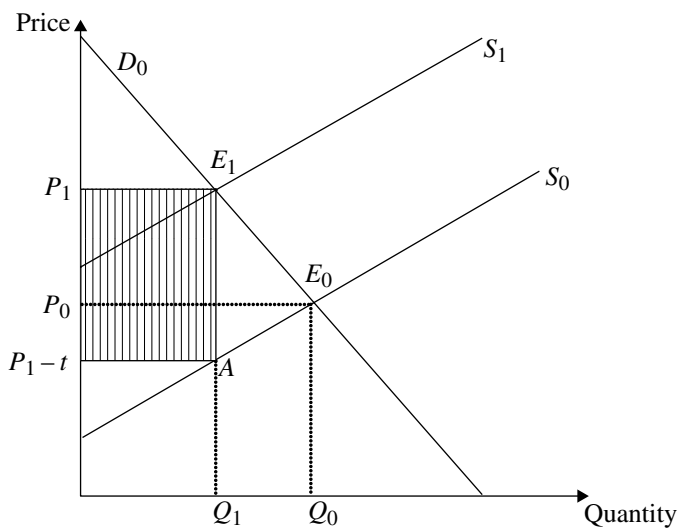



*Figure 2.1 The effect of an excise tax*

that consumers will decide to spend more on that good (and therefore reduce their consumption on other markets), this depending naturally on the degrees of elasticity of the various demand functions. To classify the various consequences attached to an excise tax, it is convenient to make the simplifying assumption that tax revenues represent benefits to society. Using the variations in consumers' surplus and companies' profit and comparing it to tax revenues gives then a first approximation of the net result. Coming back to the figure, we see that consumers' surplus has been reduced by an amount corresponding to the area $P_0E_0E_1P_1$, while producers have lost the equivalent of $P_0E_0A(P_1 - t)$. Since tax revenues correspond to the shaded rectangle $P_1E_1A(P_1 - t)$, clearly the welfare loss supported by consumers and producers of cigarettes *exceeds* the amount of tax receipts by an amount corresponding to the triangle $E_1E_0A$. The excise tax has generated a kind of deadweight loss, also called 'excess burden'.

We are now in a better position to understand what an efficient way of raising tax is, according to economic theory: the efficient tax policy is the one which minimizes the deadweight loss attached to taxation. In Adam Smith's words: 'Every tax ought to be so contrived as both to take out and keep out of the pocket of the people as little as possible, over and above what it brings into the public treasury of the state.'[12]

If we follow that criterion we quickly find out that the most efficient tax is also the simplest one: *a lump sum tax* paid by each citizen. The reasons for the 'superiority' of the lump sum tax are easy to grasp.[13] Because it applies to everyone regardless of their economic activities, there will be no money lost in rent seeking, no choice to be made between legal or illegal work, no distortion in relative prices and therefore in the allocation of scarce resources (in particular the arbitrage between labour and capital would remain unchanged). Also the administrative cost would be extremely low. But there is of course a dark side to the lump sum tax, namely, its political cost. Indeed the lump tax is largely perceived as unfair, violating in particular what is, to many, an undisputable principle of justice: the contributory capacity principle.

Without the lump sum tax we will therefore have to look for a second best. But, in the realm of taxation, even that appears a hard task.[14] Let me, however, briefly summarize some well known results which can guide us towards more efficient tax policies, keeping in mind that each of those theoretical results is derived under a very specific set of assumptions and usually does not hold in a more general context. In particular those results assume zero collecting cost.

1. A unique tax rate for all taxable consumption goods is usually not optimal. If this result may appear counter-intuitive it is because one

usually forgets that a very important good, leisure, is not taxable. The efficient consumption taxes should therefore put more burdens on goods which are complementary to leisure.

2. An approximation of this rule consists in taxing at a higher rate those goods with lower price elasticity. That rule is known as the inverse-elasticity rule, and is based on Ramsey's work. Practically it means that, if you do not tax all goods, then you should tax in priority those goods for which the demand is less elastic (which is why excise taxes bear usually on such things as energy products, or goods related to addiction such as tobacco or alcohol).
3. If you tax personal income, a lump sum tax will have less distortion than a flat rate tax (the latter is equivalent to a decrease in wage and has therefore a revenue effect and a substitution effect, while the former has only a revenue effect), which will itself be preferable to a progressive tax (which has a higher substitution effect). Indeed, it can be shown that, even if one cares about the poorest, it is not necessarily a good idea to impose high marginal tax rates on the rich. To quote Slemrod (1990, p. 165): 'Simple models of optimal income taxation do not generally point to sharply progressive tax structures, even if the objective function puts relatively large weight on the welfare of less well-off individuals.'
4. If you tax a company's income, better use a kind of lump sum tax and avoid exemptions and other tax incentives which introduce bias in resource allocation.
5. Better tax assets than income; this gives incentives to make the best use of those assets.
6. A tax on capital gain is largely unnecessary: better tax consumption or income.

Unfortunately, none of those results easily translates into policy recommendations[15] and the theoretical lack of 'economic efficiency' of a tax policy can sometimes be more than compensated by the fact that this policy can be run at low administrative cost. For, indeed, administrative costs and more specifically collecting costs are likely to be high since taxation rests on coercion and individuals tend to resist coercion.

As a consequence, it might be advisable to give a bonus to those taxes which are more transparent and/or can be collected at low costs. Hence, a powerful argument can be found in favour of a generalized (consumption-type) VAT, or a flat rate income tax. In any case, the advice would be to avoid using taxation as a tool for redistribution (as opposed to using the revenues from taxation to redistribute wealth) and to renounce using taxation as an incentive tool. There would be indeed an inconsistency in, on one hand, relying on the market for resource allocation, while on the other hand, trying

to control resource allocation via fiscal incentives. The last solution, instead of leading the economy closer to the target, is most likely to lead to the adoption of sophisticated strategies by individuals and companies which will attempt to grasp any available 'fiscal gifts' and avoid fiscal burden.

It might be useful at this point to say a few words about externalities. Indeed, as we know, while some economists (following Arthur Pigou) have suggested that inefficiencies due to externalities could be remedied via taxation and subsidizing, others (following Coase) have shown that another remedy can be found in a refinement of existing rights and duties (property law and tort law). In both cases, the idea is to implement an incentive scheme with the objective of 'internalizing the externality'. There exists, however, a major difference between the Pigouvian and the Coasian approaches stemming from the fact that rights are tradable and can therefore 'circulate' as market participants change their views on the economic value of those rights, while the tax rate is based on the knowledge of a few and, by its very nature, is much less flexible. In a dynamic world of changing knowledge, economists tend naturally to favour the Coasian solution instead of the tax solution.

## 4. REDISTRIBUTION AND FISCAL POLICY IN A DYNAMIC PERSPECTIVE

As pointed out in the introduction, taxation can serve as a tool for redistribution in two ways: first, taxation redistributes wealth when, for instance, the wealthiest contribute a larger share to the financing of public goods and second, taxation is necessary to raise the money to be redistributed.

Before going further, let us recall that to work at the two levels simultaneously is generally not a good idea because it raises serious incentive problems. To see why, enough is to take the case of the so-called 'negative income tax'. Let $R$ denote personal income, $t$ the income tax rate, and $S$ a threshold separating the population into two categories: those who pay income taxes and those who do not but benefit instead from money transfers. What any individual with revenue $R$ pays or receives is hence given by the function $T(R) = (R - S)t$, those whose income is below $S$ *receiving* from the state the amount $(S - R)t$. Clearly such a policy creates the wrong incentives since a poor person who starts working will receive less money from the state. The temptation is strong, therefore, to turn to the illegal market in order to keep the benefits of low-income workers. For that reason redistributing devices based on such mechanisms have come to be known as poverty traps.

There are two reasons why one may wish to redistribute. One is to reduce wealth inequalities, the other to make the poor richer. Clearly, the short-term

effect of redistribution is to realize both. In the long run, however, things are much more complex. Economic development relies heavily on rule of law and private entrepreneurship motivated by profit. Therefore economic development, which makes everyone wealthier, including the poorest, might require an *increased* degree of wealth inequality; and, inversely, fighting against wealth inequality might slow down economic progress and keep many in poverty. If there is such a trade-off between the two – and there is strong evidence that such a trade-off exists[16] – it will have to be decided on political grounds.[17]

The literature on tax and growth is a rich one. In a recent study, Patrick Minford and Jiang Wang compare two rival models of the effects of public spending: the first one, labelled the 'activist' model, is based on the supposition that public spending (on *R* and *D* in that case) fosters growth. The second model, the 'incentivist' model, is built around the idea that public spending reduces growth by penalizing incentives through higher taxes. Using data from the 1970–2000 period they conclude: 'What we have found is that there appears to be no identifiable effect of *R* and *D* and other capital subsidies on growth but that there is an effect of taxation depressing growth. In this we join a growing literature that finds similar negative tax effects on growth.'[18]

The two figures below, taken from a study by Garello and Spassova (2006), confirm the previous findings: countries with high public spending

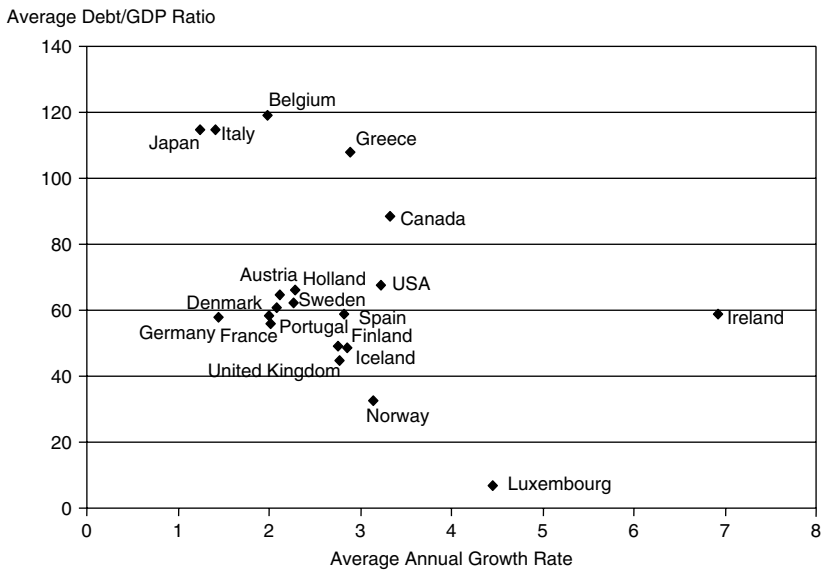



*Figure 2.2(a) The debt–growth relationship (average level, 1992–2004)*

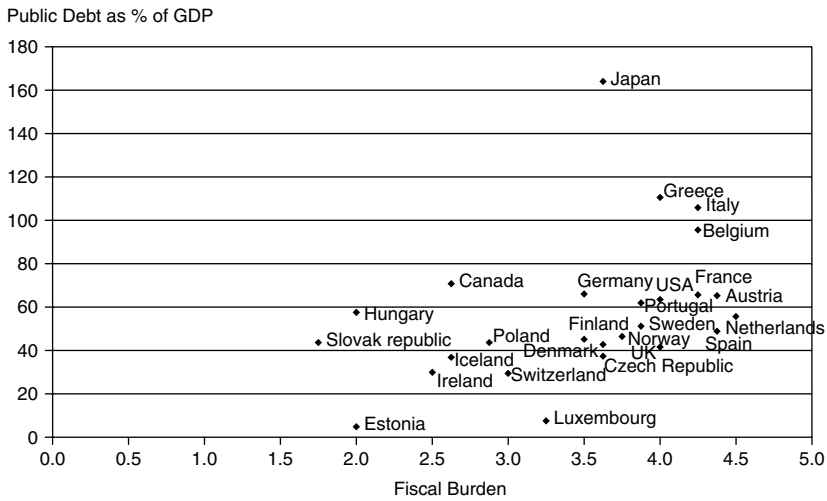



*Figure 2.2(b) Public debt and fiscal burden (2005)*

tend to have lower growth and high fiscal burden; inversely, low fiscal burden tends to be associated with higher growth and healthier public finance.

The tendencies shown in these figures corroborate another well-known effect to be kept in mind when designing a fiscal policy: the Laffer-curve effect. The economist Arthur Laffer has indeed reminded us that increasing tax rates does not necessarily result in higher tax revenues for the obvious reasons recalled above: higher tax rates generate tax avoidance, tax evasion and slower growth, thus reducing the tax base.

Summarizing the evidence, it is reasonable to conclude that, economic growth being probably the best way to fight poverty, an extensive use of taxes for purely redistributive purposes is not advisable.

## 5. THE NECESSITY OF DECENTRALIZED AND COMPETING FISCAL JURISDICTIONS

The three previous sections have shown how, because of the number of parameters to be taken into account, the science of taxation is bound to remain a very imperfect one. We must in particular emphasize the fact that, besides the use of efficient taxing techniques, some 'political' choices (or value judgments) have to be made concerning the level of redistribution to be implemented. It is therefore not surprising to observe a great variety of fiscal systems throughout developed economies.

This diversity raises new questions at two levels. At the national level, the question is how centralized and 'harmonized' should the fiscal system be? At the international level, the question is whether there exists such a thing as unfair tax competition. For instance, should the international community do something about 'tax havens'? We will deal here with the first question, known in the literature as the question of fiscal federalism.[19]

Fiscal federalism studies the distribution of fiscal power between various layers of government in a given autonomous jurisdiction which can be a unitary state or a federal state.[20] At what level should decisions be made on taxes, tax base, tax rates and on spending? What degree of autonomy must be given to local jurisdictions?

Not surprisingly, arguments in favour of a decentralized fiscal system resemble those put forward to defend a market economy; the market economy being indeed nothing other than a decentralized system for wealth creation and resource allocation. One of the most fundamental advantages of a decentralized system is to allow for a better use of local and tacit knowledge, a knowledge not easily transferred to a central decision maker.[21] Another related advantage is to free individual creativity: in a market economy virtually every market participant is invited to behave like an entrepreneur, looking for better ways to serve consumers, with heterogeneous preferences and varying purchasing powers, while making profit at the same time. The market economy thus opens the door to a competition process during which discovery takes place, and new knowledge is acquired and used to the benefit of a large number.

Similar benefits are to be expected from competition between various fiscal jurisdictions. Competition would allow different jurisdictions to offer different levels of 'public services' according to the needs and preferences of local populations. In a decentralized fiscal system, citizens (or experts, or politicians, or taxpayers' associations) would be able to compare the costs and qualities of the public goods and local services provided in various jurisdictions (for example, water supply, waste collection, school system, public transportation, physical security, and so on). The less efficient providers would therefore be much easier to spot and it would be possible to imitate the best practices. This is the principle of yardstick competition.

Beyond yardstick competition one can also expect citizens to exit from the jurisdiction which does not offer a satisfying ratio of tax burden to quality of services and move towards a preferred one.[22] Of course, the possibility to exit exists even in the absence of fiscal decentralization: one can always migrate to another country (or to the illegal market). But it is probably less expensive to move to a nearby region or district than to move to another country. Hence fiscal decentralization opens new choices for a

wider range of the population. In a fundamental sense, because it gives more reality to the option of 'voting with one's feet', fiscal decentralization increases the quality of a democracy.

Combining yardstick competition with lower barriers to exit will put pressure on the administration, hence providing an interesting means of control, somewhat similar, although not as powerful, to the control a regular consumer can exert on producers.[23]

If many nations have been moving towards a more decentralized system,[24] some, such as England or Ireland, have maintained a highly centralized one. This suggests that fiscal decentralization might also have some disadvantages compared to centralization. The most often mentioned potential weaknesses of decentralization can be classified in two categories. The first one includes all the usual arguments in favour of large-scale production. Economies of scale are probably the first to come to our mind. It can be convincingly argued, for instance, that national defence is best organized at the national level; that having each region organizing its own defence against an external aggressor is not an optimal solution.

A second category of frequently invoked argument against decentralization has to do with the presence of spillover effects and strategic behaviours on the part of local authorities: strategic behaviours which could quickly turn into a 'race to the bottom'. The mechanism can be illustrated with the following example. Assume we have two autonomous and competing jurisdictions, *A* and *B*. If jurisdiction *A* decides to implement a programme involving a large redistribution of wealth and many public services, the fiscal burden for the wealthiest taxpayers of that jurisdiction is likely to be heavy. The neighbouring jurisdiction, *B*, can then make the choice of a low fiscal burden together with less wealth redistribution and public services. This strategy will be even more likely when the public services implemented by jurisdiction *A* are subject to spillover effects, as when citizens (taxpayers) of jurisdiction *B* have the possibility to go to the theatre, or to use the public swimming pools or the public gardens maintained by the taxpayers of jurisdiction *A*. Owing to the quality of redistribution programmes offered to the poorest citizens of jurisdiction *A*, it is also very likely that the poorest of jurisdiction *B* will migrate to jurisdiction *A*, while the wealthiest of jurisdiction *A* decide to avoid the high fiscal burden and move to jurisdiction *B*. If such behaviour is observed, the financial situation of jurisdiction *A* will obviously not be sustainable. Jurisdiction *A* will sooner or later have to lower the quality of its public services, or the amplitude of its redistribution programmes. A 'race to the bottom' will be initiated.

These arguments are to be taken seriously because they have served as the main obstacle to most decentralization processes and, more generally, to institutional competition. Regarding the presence of economies of scale and

spillover effects, it must be noted that their presence does not necessarily call for centralization. One can indeed imagine that local jurisdictions will *voluntarily* choose cooperation if they can benefit from economies of scale (and then split between them the benefits resulting from higher productivity); and if they fear that the threat of free-riding behaviour will lead to an 'underproduction' of public services, they might also enter into some kind of contractual arrangement.[25] Central tax authorities therefore have an important role to play, which is to allow and even facilitate such cooperation between local jurisdictions, and if need be to enforce agreements between them.

But there is also the question whether a race to the bottom is likely to take place in those countries where a more or less decentralized system is chosen. First, from a theoretical point of view, 'the bottom' will in fact be the lowest level of public services that might pass a voting decision in one of the jurisdictions, and this is likely to be far from zero and could even be increasing over time.[26] Also, from an empirical point of view, history shows that, if jurisdictions tend to cut programmes when other jurisdictions do so, they also tend to enlarge their programmes when others do. But, most importantly, it has been shown that the best way for a poorer region to narrow the economic gap with a richer region is by keeping (at least temporarily) their level of public services and welfare programmes low. This has been observed, for instance, in the economic development of the Southern states in the US.[27] Evidence is therefore simply that 'races to the bottom' do not occur.[28]

If the fear of a race to the bottom appears largely unfounded it does not follow that fiscal decentralization always brings the expected return. Indeed, looking at the level of fiscal decentralization and the way it relates to economic growth and fiscal burden, one can observe that some highly centralized countries are performing well as far as economic growth and public spending are concerned.[29] Should we conclude from this that in the realm of taxation competition is not effective? We do not think so. As suggested by Curzon-Price et al., a more plausible explanation to what could seem a paradox in the light of the fiscal federalism literature is that fiscal decentralization will bear its fruits only if it is well done, that is to say, if the local jurisdictions benefit from a true autonomy and are accountable for their choices. Looking more closely at the fiscal institutions of various 'decentralized' countries, this opinion receives support. Typically the local jurisdiction has discretion on how to spend the money, but no discretion on what type of tax can be levied. In brief, centralization might be better than half-way and therefore incoherent decentralization, but is likely to lose the battle against genuine decentralization.

Finally, let us emphasize that the evolution of institutions is a slow process and that it takes time for individuals to adjust to a new institutional

logic. Knowing that most developed economies are emerging over centuries during which a highly centralized system was in place, more than a few years will be necessary for local jurisdictions to learn the best way of using their newly granted autonomy. And their chances of learning will be real only if there is *a clear commitment from central authorities* and if the latter do not bail out local jurisdictions which are in trouble, or do not leave to those jurisdictions the possibility to experiment with new fiscal policies.

## 6. ASSESSING CHINA'S ACTUAL FISCAL STRUCTURE

Since the opening up in 1978, China has engaged in major fiscal reforms. Hence, in 1984, profit delivery was replaced by tax payments, transforming enterprises in independent entities. In 1994, the barriers of local protectionism were largely abolished, dividing the central and local revenue into tax categories (before, revenues were divided by proportion). Those reforms were pushing in the right direction of greater accountability and fiscal coherence and Bao seems to be right when writing that 'The guidance of our tax system reform is to simplify the tax system, widen the tax base, lower the tax rate and tighten tax administration' (2004, p. 522). Hence, at least at first glance, China's tax reforms appear to have been promoting efficiency. Is that first judgment confirmed when we go into greater detail?

Comparing China's main fiscal indicators to those of a typical OECD country, the first striking fact is, as noted earlier, that the ratio of tax revenues (and more generally of state budget) to GDP, although steadily increasing, remains low (see Table 2.1, taken from BOFIT Review, 2005). In the rest of this section we first give more specifics on the nature of the actual fiscal system, leaving for a second sub-section our comments about the degree of decentralization prevailing in that system.

*Table 2.1 Fiscal indicators (percentage of GDP)*

| | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004* |
|---|---|---|---|---|---|---|---|---|
| Revenues | 11.6 | 12.6 | 13.9 | 15.0 | 16.8 | 18.0 | 18.5 | 19.3 |
| Expenditures | 12.4 | 13.8 | 16.1 | 17.8 | 19.4 | 21.0 | 21.0 | 20.8 |
| Balance | −0.8 | −1.2 | −2.1 | −2.8 | −2.6 | −3.0 | −2.5 | −1.5 |
| Government debt | | | | 22.8 | 23.6 | 25.1 | | |

*Note:* * = preliminary results.

*Sources:* Budget: National Bureau of Statistics of China; debt: IMF.

## 6.1 Is China Using the Right Taxes?

As shown in Table 2.2 below (taken from Bao, 2005), China is relying essentially on VAT and income tax for rising funds, and of those two sources, income tax remains relatively low. These two types of taxes accounted in 2001 for 77 per cent of total tax revenues. The other revenues were provided by resource taxes, property taxes (including an important stamp tax on private legal transactions), agricultural taxes, specific taxes and custom duties.

Below we briefly present the main components of tax revenues before passing on to their critical appraisal.

## 6.2 Personal Income Tax

Direct taxes represent about 25 per cent of total tax revenue in 2001 (to be compared with an average of 35 per cent for OECD countries). Personal income tax includes a tax on wages and salaries, levied on a monthly basis, with a lump sum deductible amount of 800 Yuan and rates between 5 and 45 per cent (see Table 2.3 for the 2005 data). It is therefore a progressive tax, as is the tax on personal income from business activities (the latter with a progression from 5 to 35 per cent).

Passive income such as interest, capital gain and royalties is taxable at a standard rate of 20 per cent.

## 6.3 Corporate Income Tax

A limited company was liable for tax at the rate of 33 per cent in 2005. This tax is made up of a 30 per cent national tax and a 3 per cent local tax. In specific, legally defined areas company tax is 24 per cent or 15 per cent.[30] It must be noted also that this enterprise income tax is *progressive*: there exist lower rates (18 per cent and 10 per cent) for firms with lower incomes.

*Table 2.2 Tax revenue*

| | Total tax revenue (Hundred million Yuan) | VAT + consumption tax (%) | Personal income tax (%) | Tax on foreign enterprises (%) | Tax on domestic enterprise (%) | % of total tax |
|---|---|---|---|---|---|---|
| 1995 | 5974 | 64.2 | 2.2 | 0.9 | 12.5 | 79.8 |
| 2001 | 15 116 | 53.0 | 6.6 | 3.4 | 14.0 | 77.0 |

*Source:* Bao (2005), based on China Statistical Year Book.

*Table 2.3 Taxes and income*

| Tax rate (%) | Income (CNY) |
|---|---|
| 5 | 1–500 |
| 10 | 501–2000 |
| 15 | 2001–5000 |
| 20 | 5001–20 000 |
| 25 | 20 001–40 000 |
| 30 | 40 001–60 000 |
| 35 | 60 001–80 000 |
| 40 | 80 001–100 000 |
| 45 | 100 001 and above |

### 6.4 Consumption Taxes

These are excise taxes on 'luxury' goods. Their rates range between 10 and 50 per cent. At present 11 types of products are subject to consumption tax: cigarettes, wine, cosmetics, skin and hair care products, expensive jewellery, gems and jade, gas and diesel oil, vehicle tyres, motorcycles, sedan automobiles, and fire crackers and fireworks.

### 6.5 Value Added Tax (VAT)

The VAT applies to sales of goods and is conceived as a turnover tax (it is a production-type VAT as opposed to a consumption-type VAT prevailing in most VAT countries) with very limited scope for sales of services (which are subject to the business tax). Its rate is 17 per cent (the normal rate) or 13 per cent (for basic subsistence goods and farming products). Exported goods are exempted from VAT.

### 6.6 Business Tax

This tax is again levied on turnover of taxable services and some transfer of assets; its level is low (8 per cent or less).

### 6.7 Assessing the Current Tax System

Like the vast majority of fiscal systems, the Chinese one is fairly complex so that efficiency could be enhanced through mere simplifications. A first, often suggested, simplification is the suppression of the business tax. The idea is to have all sales, on goods *and on services*, subjected to the same tax.

That tax could be, and this is a second efficiency-enhancing move, a consumption-type VAT since the actual production-type VAT penalizes the purchase of assets by a company, and more generally penalizes capital-intensive techniques.[31]

In light of the discussion of the previous sections, it would be probably a good idea to reduce the number of gradations of the progressive income tax, and to suppress the progression of the corporate income tax (which might slow down the growth of mid-size companies, the best engine of growth and employment). Again let us recall that it is wise to move away from policies designed to modify resource allocations. Tax incentives, as a rule, lead to unforeseen results and, in that field more than any other, if the immediate effect is satisfactory, the long-term effect turns out to be disappointing.

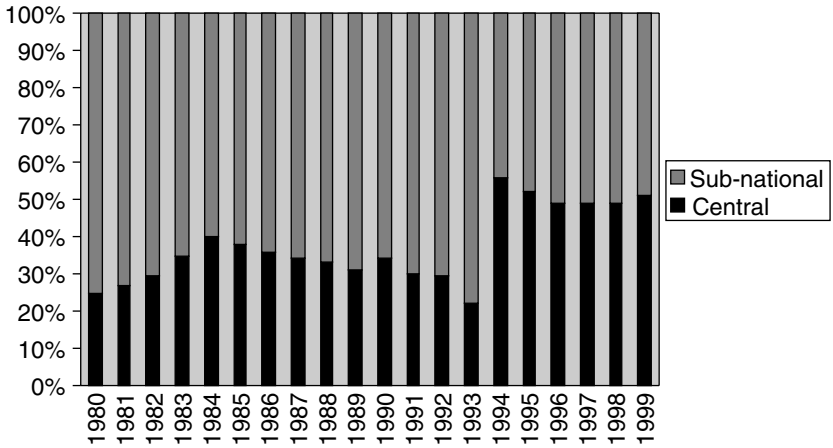
Another reform often suggested is the suppression of the many charges and fees imposed by local jurisdictions and their replacement by taxation. As will be explained in the next sub-section (and as was suggested by the discussion in section 2), this is not necessarily a good idea. As a matter of fact, the main lesson to be drawn from economic analysis is probably that, in the absence of a clear consensus on what the optimal taxation policy could be, local jurisdictions should have the freedom to experiment with new policies and to adjust them to local conditions.

### 6.8 Is the Central/Local Jurisdictions Split Well Designed?

To evaluate the degree of decentralization of the fiscal system in China is not an easy task, and comparing it to other countries is a perilous exercise owing to the size of this economy of over 1.3 billion inhabitants. Today, the structure of fiscal jurisdictions follows the structure of the government with, globally, three layers: the central jurisdiction, 31 provincial jurisdictions and thousands of sub-provincial jurisdictions (prefectures, cities, townships, towns and city districts).

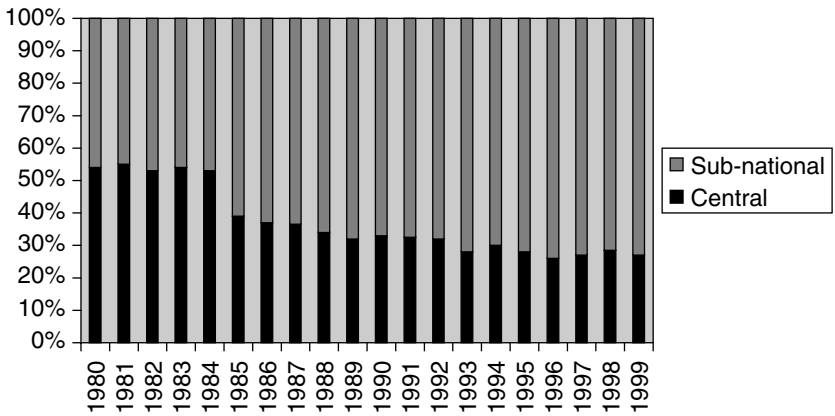
Looking just at the distribution of tax revenues and public expenditures (see the figures below), we are tempted to conclude that this system is highly *decentralized*, the figure being comparable to that of a federal state such as the USA or Germany. Indeed, more than two-thirds of expenditures are made at the provincial or sub-provincial levels (and the trend toward a larger share for local expenditures is stable), and the ratio of central revenue to total tax revenues reached a low of 22 per cent in 1993, before rising to the 50 per cent level following the 1994 tax reform.[32]

But, as pointed out in previous sections, what matters most in terms of efficiency is the degree of autonomy of the various jurisdictions, or, to put it differently, the degree of fiscal coherency: to what extent are the various




*Source:* OECD (2002), based on China Statistical Year Book, 2000.

*Figure 2.3(a) Central/local share of government budget revenues*




*Source:* OECD (2002), based on China Statistical Year Book, 2000.

*Figure 2.3(b) Central/local share of government expenditures*

layers of the fiscal system accountable for their choices? Are they free to choose their tax bases and tax rates as well as the nature and level of expenditures? If answers to those questions are positive, then the benefits from fiscal competition will soon show up. Otherwise, irresponsible behaviour is likely to surface. In the case of China, answers to these questions are ambiguous, which means that China is at a crossroads.

On the positive side (as far as implementing a responsible decentralized system is concerned), efforts have been made, especially since the 1994 reforms, to clearly divide the tasks between central and local government. Hence central government will be in charge of national defence and nationwide infrastructures, while local governments are taking care of education, social security and welfare. Also, it has been noticed that Chinese authorities at every level have gained more clearly defined tax rights than in many transition economies. Indeed each layer of government has exclusive rights on the taxation of a given base, hence avoiding the tragedy of the commons which rapidly develops when many authorities are authorized to tax the same base.[33] As Berkowitz and Li put it: 'When tax rights over a tax base are divided among more than one government, the tax base becomes a common-property resource . . . and the commons – the tax base – is "over-grazed." '[34]

On the negative side one can first point to the fact that this assignment of responsibility is still very theoretical and that, in practice, many responsibilities are still shared (see Table 2.4). It can also be pointed out that contracts passed between central and local governments binding the latter's budget are not scrupulously followed. More importantly, many observers will judge the Chinese system as a highly centralized one in view of the fact that, with few exceptions, the tax legislation process is totally centralized.

This might explain the tremendous role played by the so-called extra-budgetary revenues in the financing of local expenditures. More than 26 per cent of local expenditures are indeed financed by various charges, fees and surtaxes imposed by local authorities.

In the light of our previous survey of economic theory, that use of extra-budgetary expenditures can be seen as a positive or a negative feature. It is a positive feature to the extent that, if a public service is not a public good (that is, if it is possible to identify the consumers of that service), and if the service cannot be privatized, then the best thing is to resort to user fees. On the other hand, to the extent that extra-budgetary practices lack transparency and enable local governments to increase their budget beyond what was politically decided, they might just add to waste and corruption.

Putting everything together, it seems that China, which has already implemented a division of labour between the various layers of tax administration, still has to take the step of giving true autonomy to lower levels, that autonomy being granted not only to provincial jurisdictions but also to sub-provincial ones which, as shown in Figure 2.4, spend much more than they earn. If that (courageous) step is not taken, China will progressively fall into a new centralization process which, in the case of such a large economy, is likely to lead to a poor allocation of resources.

*Table 2.4 Share of central and local governments in major expenditure items (% of total spending in each category)*

| Expenditure item | Central government | Local government |
|---|---|---|
| 1. Expenditure for capital construction | 43.9 | 56.1 |
| 2. Circulation fund for SOE | 50.7 | 49.3 |
| 3. Innovation and new product funds | 23.1 | 76.9 |
| 4. Geological prospecting expenditure | 98.8 | 1.2 |
| 5. Expenditure for government administration | 6.9 | 93.1 |
| 6. Operating expenses for industrial, commercial and communication department | 38.2 | 61.8 |
| 7. Operating expenses for culture, education, science and health care | 11.2 | 88.8 |
| 8. Expenditure for national defence | 99.3 | 0.7 |
| 9. Expenditure for armed police troops | | |
| 10. Expenditure for social security and welfare | 3.7 | 96.3 |
| 11. Agriculture aids | 10.9 | 89.1 |
| 12. Price subsidies | 51.1 | 48.9 |
| 13. Expenditure for urban maintenance and construction | 0 | 100 |
| 14. Aid funds for less developed regions | 0 | 100 |
| 15. Others | 26.3 | 73.6 |
| Total | 28.9 | 71.1 |

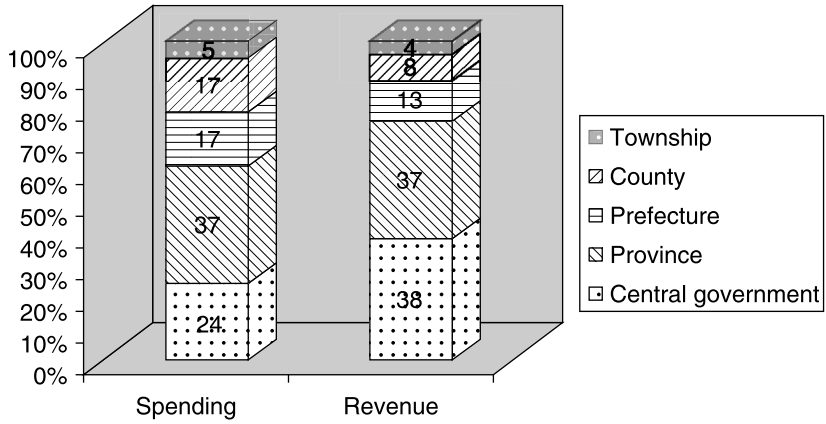
*Note:* All data are for 1998.

*Source:* OECD (2002, p. 688).

## 7. THE CHALLENGE FACING CHINA

The fiscal situation of China remains a very unusual one in the sense that China is nowadays one of the largest world economies and, contrarily to other large economies, the share of public revenues and expenditures relative to GDP remains remarkably low. China can use that opportunity to bring more transparency progressively to the fiscal system and more accountability at all levels of governments, thus reaping all the benefits of a healthy fiscal competition.

But China can also take a diverging road, centralizing its system and relying on public expenditures in the hope of fostering growth and securing welfare. At a time when most developed countries are struggling with a welfare system established after the second World War, a system which turns out to be non-sustainable, it would be a pity if China were to adopt




*Source:* Molnar (2005, p. 4).

*Figure 2.4 Spending and revenue of government levels (2002)*

the same scheme. China should therefore be careful not to stop the growth trend with the implementation of an intrusive tax system and economic control. To do so, it will be necessary to resist calls for increased taxation such as the one recently formulated by the OECD or the World Bank. One can read the following in the last OECD comprehensive survey on China:

> There is probably little disagreement over the need to increase the level of taxation in China. As indicated earlier, there has been a declining trend in the ratio of tax revenue to GDP over the past 20 years. Even compared to some developing countries, the ratio in recent years has remained low.
>
> China faces heavy pressure on expenditure in the near term to further develop its social security system, to provide support to unemployed and laid-off workers, and to continue to build infrastructure. It is clear that the current level of tax revenues is insufficient to finance all of these. In 1996, the World Bank estimated China's financing gaps and concluded that additional expenditure needed was equivalent to about 6 per cent of GDP. The major spending gaps are in the areas of health and education (2.3 per cent of GDP) and infrastructure (1 per cent of GDP). Social insurance, pensions and environmental protection are other areas where expenditure gaps now exist or are likely to occur.[35]

As recalled above, the economic history of the last two centuries shows that a high fiscal burden tends to be associated with lower growth. Another temptation to be resisted is to use taxation for equalizing economic development throughout the country. True, between 1978 and 2000, the Gini coefficient (a measure of income inequality) went from 0.16 to 0.458, and the gap between regions is widening. But, during that same period,

disposable income per capita of urban residents was multiplied by 18.3, while disposable income for peasants was multiplied by 16.8.[36] What is more, to quote Bao (2004, p. 145), 'the situation of the whole society was relatively stable which showed that this gap was approved by the society'.

Facing a crossroads, China should give priority to the implementation of a coherent fiscal decentralization and not asphyxiate current economic growth with a heavier fiscal yoke.

## NOTES

1. I wish to thank the participants in the Law and Economics conference in Shanghai as well as the participants in the CAE seminar in Aix-en-Provence for very helpful comments.
2. As of 2 March 2006, 1€ = 9.68 CNY = US$ 1.21.
3. Data from OECD (2002, p. 630). The figures for OECD and EU countries do not include social security contributions. If those contributions are included, we obtain 37.3% for OECD countries and 42% for EU countries.
4. See Webber and Wildavsky (1986) for a history of taxation.
5. Brennan and Buchanan (1980).
6. When such a 'private good' is managed collectively, we run inexorably into the so-called 'tragedy of the commons'. See Hardin (1968).
7. See Coase (1974).
8. Owing to lack of space, I ignore here the question of aggregating individual preferences. But it is well known, at least since the work of Arrow, that there is no satisfactory way for aggregating individual preferences into 'social preferences'.
9. Physical protection of persons and goods is a good illustration of that phenomenon. It is today possible to buy some protecting devices (using, for instance, alarms and the telephone) which will protect a given house or factory without protecting those located in the neighbourhood, so that free-riding on others' investment is no longer an option to protect one's property.
10. The explanatory power of Mancur Olson's logic of collective action is, in our view, particularly strong: a public project which benefits a small, easily identified, group of individuals and whose cost will be spread over a large set of taxpayers so that the individual cost will be 'negligible', has great chances of being adopted by the representatives, even though it does not have the characteristics of a public good (see Olson, 1965).
11. The literature on development highlights a trade-off between increasing the wealth of the poorest and reducing inequalities similar to the trade-off between risk and return on the capital market.
12. Smith (1981, p. 826). Recent studies (for example, Jones, 2004), show that, for OECD countries, the cost of raising one euro would be between 1.2 and 1.3 euros (without taking into account administrative costs). On this, see also Robson (2005).
13. For a demonstration of that well-known result, see for instance Slemrod (1990).
14. For a survey of optimal taxation, see Slemrod and the references provided there (1990).
15. As Slemrod says (p. 168): 'The leap from the blackboard to the real world is a large one when it comes to taxation'.
16. See, for instance, Rosenberg and Birdzell (1986).
17. One of the founding fathers of Law and Economics, Aaron Director, gave his name to a law predicting how decisions regarding redistribution policies will be made in a context of majority voting. On this, see Stigler (1970).
18. See Minford and Wang (2005, p. 19).

19. A discussion on international tax competition would lead us too far away from the main concern of this chapter.
20. For a comprehensive survey on fiscal federalism, see Oates (1999). Fiscal federalism should not be confused with the narrower topic of 'federal finance', the latter focusing exclusively on the study of the fiscal system of a federal state.
21. Classical references on the dynamics of the market include Hayek (1945), or Kirzner (1973).
22. Hirschman (1970), Tiebout (1956).
23. Bruno Frey has even suggested that the jurisdictions which are in competition for providing various goods and services could overlap territorially. This is the idea behind his concept of Functionally Overlapping Competing Jurisdiction. See Frey and Eichenberger (1996) for more details, including some historical illustration of the practical working of that system.
24. See, for instance, the fiscal reforms in France (1981), Spain or Italy. Federal states tend of course to have a fairly decentralized fiscal system, but the case of Germany, and the historical evolution of Federal taxation in the USA, show that even Federal states can be fairly centralized as far as taxation is concerned. For a comparative study of fiscal decentralization throughout European countries, see the special issue of the *Journal des Economistes et des Etudes Humaines* (2003).
25. It must also be noted that many of those public services are not public goods in the economic sense of the term. That is to say, that it is perfectly possible to exclude from their consumption those who do not contribute to their payment. We could for instance have different prices for the theatre, or the swimming pool, or access to public transportation, for residents and non-residents of the local jurisdiction.
26. To come back to the previous illustration, the wealthiest inhabitant of jurisdiction *A* can pressure their representatives to lower taxes, and the poorest of jurisdiction *B* can put pressure on theirs to increase the level of redistribution, both tendencies being likely to improve the quality/cost ratio of public services.
27. See Oates (1999) for references. Today, this debate is of particular importance in the EU where the two theses are opposed. One of them, pushed in part by the Commission and the OECD, favours fiscal centralization (or harmonization) coupled with wealth redistribution towards the poorest countries. The other thesis favours tax competition and lower redistribution and is often supported by new EU countries. It is interesting to note that the 'poor' countries are in favour of competition and the rich ones oppose it.
28. What may occur instead is that some groups will lose their privileges. But this is an entirely different question.
29. This is for instance the case of England and Ireland. For a complete survey of those studies, see Curzon-Price and Garello (2003).
30. See OECD 2002 (p. 633) for the detail of the specified regions benefiting from lower corporate income taxes.
31. The coastal regions' businesses tend to use labour-intensive production while the inner country regions use capital-intensive production (mining, for instance). The prevailing form of VAT therefore further penalizes the non-coastal regions.
32. In 2000, the share of central government revenues to total tax revenues (including social security taxes) was 30% in Germany and 46.3% in the USA. Leaving out social security taxes, the share of central government revenues in Germany becomes similar to that observed today in China, while that share in the US exceeds 50%.
33. See Berkowitz and Li (2000).
34. Berkowitz and Li (p. 370). The authors contrast the situation of China with that of Russia. In Russia, a survey of small firms revealed that each firm has been controlled on average by 5.42 different agencies from regional, local or sub-local levels.
35. OECD (2002, p. 637).
36. Data from Bao (2004).

# BIBLIOGRAPHY

Bao, L. (2004), 'China: the characteristics and trend of the new tax system reform', *Intertax*, **32**(10), 519–23.
Bao, L. (2005), 'China: how should tax policies regulate personal income tax distribution?', *Intertax*, **33**(3), 143–54.
Berkowitz, D. and W. Li (2000), 'Tax rights in transition economies: a tragedy of the commons?', *Journal of Public Economics*, **76**(3), 369–97.
Bils, B. and T. Koivu (2005), 'Regional inequalities widening further in China', *BOFIT China Review, Yearbook 2005*, Bank of Finland, Institute of Economies in Transition.
Brennan, G. and J.M. Buchanan (1980), *The Power to Tax: Analytical Foundations of a Fiscal Constitution*, Cambridge: Cambridge University Press.
Brueckner, J.K. (2001), 'Strategic interaction among governments: an overview of empirical studies', *WP*, **88**, Institute of Government and Public Affairs, University of Illinois.
Coase, R.H. (1960), 'The problem of social cost', *Journal of Law and Economics*, **3** (October), 1–44.
Coase, R.H. (1974), 'The lighthouse in economics', *Journal of Law and Economics*, **17** (October), 357–76.
Coase, R.H. (1991), 'The institutional structure of production', *Journal des Economistes et des Etudes Humaines*, **2** (4 December), 431–9.
Curzon-Price, V. and J. Garello (2003), 'Index of fiscal decentralisation: methodology and findings', *Journal des Economistes et des Etudes Humaines*, **13**(4), 441–78.
Feld, L.P. and G. Kirchgässner (2003), 'The impact of corporate and personal income taxes on the location of firms and on employment: some panel evidence for the Swiss cantons', *Journal of Public Economics*, **87**, 129–55.
Frey, B.S. and R. Eichenberger (1996), 'FOCJ: competitive governments for Europe', *International Review of Law and Economics*, **16**, 315–27.
Garello, P. (2003), 'The dynamics of fiscal competition', *Journal des Economistes et des Etudes Humaines*, **13**(4), 421–40.
Garello, P. and V. Spassova (2006), 'Looking, without success, for a good reason not to worry about public debt', *IREF Working Paper* (available at <http://www.irefeurope.org>, *The Journal for the New Europe*) **3**(1), 5–38.
Gramlich, E.M. and H. Galper (1973), 'State and local fiscal behavior and federal grant behavior', *Brookings Papers on Economic Activity*, **1**, 15–58.
Hardin, G. (1968), 'The tragedy of the commons', *Science*, **162**, 1243–8.
Hayek, F.A. (1945), 'The use of knowledge in society', *American Economic Review*, **35** (4 September), 519–30.
Hines, J.R. Jr and R.H. Thaler (1995), 'Anomalies: the flypaper effect', *Journal of Economic Perspectives*, **9**(4), 217–26.
Hirschman, A.O. (1970), *Exit, Voice, and Loyalty*, Cambridge, MA: Harvard University Press.
Hors, I. (2005), 'China's governance in transition: adjusting relation across levels of government', *BOFIT Review*.
Inman, R.P. and D.L. Rubinfeld (2000), 'Federalism', in B. Bouckaert and G. De Geest, *Encyclopaedia of Law and Economics*, Cheltenham, UK and Northampton, MA, USA: Edward Elgar, pp. 661–91.
Jones, C. (2004), *Applied Welfare Economics*, Oxford: Oxford University Press.

*Journal des Economistes et des Etudes Humaines* (2003), **13**(4), Special issue on fiscal policies in Europe.
Kirzner, I. (1973), *Competition and Entrepreneurship*, New York: New York University Press.
Krug, B., Z. Zhu and H. Hendrischke (2004), 'China's emerging tax regime: devolution, fiscal federalism, or tax farming?', *ERIM Report Series*, ERS-2004-113-ORG.
Laffer, A.B. (2004), 'The Laffer curve: past, present, and future', *Backgrounder*, **1765**, 1 June, Heritage Foundation.
Minford, P. and J. Wang (2005), 'Public spending and growth', *IREF Working Paper* (available at <http://www.irefeurope.org>).
Molnar, M. (2005), 'The challenges facing public spending policy', *BOFIT Review*.
McKinnon, R.I. (1997), 'Market-preserving fiscal federalism in the American monetary union', in M. Blejer and T. Ter-Minassian (eds), *Macroeconomic Dimensions of Public Finance: Essays in Honor of Vito Tanzi*, London: Routledge, pp. 73–93.
Oates, W.E. (1999), 'An essay on fiscal federalism', *Journal of Economic Literature*, **37**, 1120–49.
OECD (1998), *Harmful Tax Competition: An Emerging Global Issue*, OECD.
OECD (2002), *China in the World Economy: The Domestic Policy Challenge*, OECD.
Olson, M. Jr (1965), *The Logic of Collective Action – Public Goods and the Theory of Groups*, Cambridge, Mass: Harvard University Press.
Rabushka, A. (1987), 'Taxation, economic growth, and liberty', *Cato Journal*, **7**(1), 121–48.
Robson, A. (2005), 'Taxation, individual incentives and economic growth', *IREF Studies* (<http://www.irefeurope.org/col_docs/doc_27_fr.pdf>).
Rosenberg, N. and L.E. Birdzell Jr (1986), *How the West Grew Rich: The Economic Transformations of the Industrial World*, New York: Basic Books, Inc. Publishers.
Scully, G.W. (1989), 'The size of the state, economic growth and the efficient utilization of national resources', *Public Choice*, **63**, 149–64.
Slemrod, J. (1990), 'Optimal taxation and optimal tax systems', *Journal of Economic Perspectives*, **4**(1), Winter, 157–78.
Smith, Adam (1776), *An Inquiry into the Nature and Causes of the Wealth of Nations*, reprinted in H. Campbell and A.S. Skinner (eds) (1981), Glasgow edition of the works and correspondence of Adam Smith Vol. 2 Indianapolis Liberty Fund.
Stigler, G. (1970), 'Director's law of public income redistribution', *Journal of Law and Economics*, **13**(April), 1–10.
Tiebout, C.M. (1956), 'A pure theory of public expenditures', *Journal of Political Economy*, **64**, 416–24.
Webber, C. and A. Wildavsky (1986), *A History of Taxation and Expenditure in the Western World*, New York: Simon and Schuster.
Wilson, J.D. (1999), 'Theories of tax competition', *National Tax Journal*, **52**(2), 269–304.