ELGAR ADVANCED INTRODUCTIONS

Advanced Introduction to

PUBLIC FINANCE

Vito Tanzi

Elgar

Advanced Introduction to Public Finance

Elgar Advanced Introductions are stimulating and thoughtful introductions to major fields in the social sciences and law, expertly written by the world's leading scholars. Designed to be accessible yet rigorous, they offer concise and lucid surveys of the substantive and policy issues associated with discrete subject areas.

The aims of the series are two-fold: to pinpoint essential principles of a particular field, and to offer insights that stimulate critical thinking. By distilling the vast and often technical corpus of information on the subject into a concise and meaningful form, the books serve as accessible introductions for undergraduate and graduate students coming to the subject for the first time. Importantly, they also develop well-informed, nuanced critiques of the field that will challenge and extend the understanding of advanced students, scholars and policy-makers.

For a full list of titles in the series please see the back of the book. Recent titles in the series include:

Regional Innovation Systems
Bjørn T. Asheim, Arne Isaksen and Michaela Trippl

International Political Economy
Second Edition
Benjamin J. Cohen

International Tax Law
Second Edition
Reuven S. Avi-Yonah

Social Innovation
Frank Moulaert and Diana MacCallum

The Creative City
Charles Landry

International Trade Law
Michael J. Trebilcock and Joel Trachtman

European Union Law
Jacques Ziller

Planning Theory
Robert A. Beauregard

Tourism Destination Management
Chris Ryan

International Investment Law
August Reinisch

Sustainable Tourism
David Weaver

Austrian School of Economics
Second Edition
Randall G. Holcombe

U.S. Criminal Procedure
Christopher Slobogin

Platform Economics
Robin Mansell and W. Edward Steinmueller

Public Finance
Vito Tanzi

Advanced Introduction to

Public Finance

VITO TANZI

Honorary President of the International Institute of Public Finance, Munich, Germany

Elgar Advanced Introductions

Edward Elgar
PUBLISHING

Cheltenham, UK • Northampton, MA, USA

Published by
Edward Elgar Publishing Limited
The Lypiatts
15 Lansdown Road
Cheltenham
Glos GL50 2JA
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 Control Number: 2020942926

ISBN 978 1 78990 699 8 (cased)
ISBN 978 1 78990 701 8 (paperback)
ISBN 978 1 78990 700 1 (eBook)

To Stephanie, Nico, Emilio, Lorenzo, Bellamina, Mia and Luca
who will inherit the future.

Contents

Preface

Public finance is a huge field. A short introduction can hardly do justice to it. This introduction is intended for students who have some background in economics and who want a broad overview of the field, and for economists who have specialized in other branches of economics and want to have a taste of public finance. Public Finance has many followers, many sub-branches, and, increasingly, different views. It is not a self-contained field, because it is interconnected with macroeconomics, welfare economics, public choice, public administration, political science, tax administration, tax law, public policy, cost benefit analyses, law and economics, and some other areas. There is even public finance focused on advanced countries and public finance focused on developing countries.

Inevitably, political views play a major role in what ideally should be objective analyses. These views often predispose an economist, perhaps subconsciously, to accept some conclusions and some policies, more readily than others. Public finance is also a field of study in which thinking has changed significantly over the years. In some earlier periods, the economic role of the government had often been seen as detrimental to that of the market. In others, it has been seen as a necessary complement to it.

The author of this book has his views and biases. However, having been engaged in this field for many decades, he has seen his biases, or at least his way of looking at some issues, change. At times he has been surprised by these changes, and even a little embarrassed by them. But, then, he has been reminded of the reply that Keynes gave to someone who accused him of having changed his position on a particular issue. Keynes' reply was: "when I am faced by different evidence, I change my position, what do you do, sir?"

Over recent decades there have been reasons to revise one's positions, because of changes that have taken place, in both the market and in the government operations. The changes have had the same effects as those produced by weeds in gardens. Sometimes, they point to the need to change the design of the gardens' landscape.

February 15, 2020

PART I

Public finance objectives

1 Introduction

Public finance is a branch of economics that has grown in importance and scope over the past couple of centuries. It would not exist if all individuals acted in a purely individual capacity and in strictly selfish or personal interests; if there were no collective needs; and if there were no community authority. Public finance would also not exist in a society that had eliminated completely the freedom of actions of individuals and had imposed absolute obedience to a central authority. As the British economist, Hugh Dalton, put it in his classic *Principles of Public Finance*: "in the Soviet Union . . . public finance merges into Public Economy as a whole, and is dominated by central planned direction of all the economic activities of the community towards certain deliberately chosen ends" (1954, pp. 161–2), and "The individual taxpayer fades into the background and the public enterprise becomes the chief taxable subject" (p. 162).

Both markets and governments can be more or less efficient, in the use of resources and in what they do, and the economic role that the state plays can vary among different countries. In some, that role is very large; in others, it is much smaller. However, in all countries, it is larger today than it was in the 18th and 19th centuries (see Tanzi and Schuknecht, 2000; Lindert, 2004).

Public finance deals with the financial and economic operations of individuals as parts of communities. It deals with the *public* part of what is called "economics". Public finance does not concern itself with the financial or the economic behavior of single individuals, legal persons, or families, in their private activities, except for some of their operations that are in reaction, or response, to government policies. These include, for example, the reaction of free individuals to high tax rates, and to welfare programs; or in their anticipation of government actions, as assumed for example by the "Ricardian Equivalence Hypothesis", or by models of "rational expectations", à la Lucas.

Public finance deals with the choices that groups, or communities, make as *groups*, and with the pursuit of *collective* interests that can be better satisfied by joint actions (see the Introduction to Flora, 1909, for an early and sophisticated discussion of this issue). These collective choices may relate to defense against hostile foreign groups, to the provision of some public goods, including those related to individual protection and justice, and to others. An important question is, inevitably, how the preferences of individuals should be reflected, or aggregated, into those of whole groups.

The group, or the community, may embrace a very large number of individuals, as it does in China, India, the USA, Brazil, and elsewhere; or very small ones, such as Andorra, Belize, San Marino or Monaco. Many countries are still organized around *national* groups, so that their community reflects national or historical traditions and characteristics. However, migration, globalization, the existence of large, multinational corporations, membership in international organizations, and other trends, over past decades, have weakened the link that once existed between *national groups* and *states*. These trends have also created some collective needs and "public goods" (or "public bads") that extend beyond the frontiers of single groups, or countries. They have created, increasingly, a need for a multi country, or *global*, public finance, and for actions taken in an international setting. The fight against global warming and global epidemics are good examples of such a need, as are efforts to combat global terrorism, crime, and money laundering.

Global public finance does not yet exist as a separate field. It will undoubtedly grow in importance and will require more attention in the future. One day there is likely to exist a branch of public finance called *Global Public Finance*. If one day the world should establish some form of global government, public finance would have to deal with the objectives, the financial needs, and the scope of that government. For the time being, much of the government scope remains *national* and group or *country specific*, although global needs and global constraints have become increasingly evident and felt. The number of public goods with global dimensions and importance has been increasing, especially over recent decades, creating needs for additional international institutions such as a World Tax Organization or Authority (see Tanzi, 2016).

What makes some finance *public* rather than private is that it deals with financial and economic relations among large groups with respect to some economically significant variables of group importance. The term *Public Finance* has become a bit of a misnomer, because, today, the field studies more than the *revenue* or the *finance* side of governments' operations, those being the operations that attracted most of the attention of economists in the distant past, when public expenditures were strictly limited; they were generally better defined; and economists considered them necessary, but not particularly productive or worthy of much attention; or justifying higher taxes. At that time the focus was on which taxes to use, and who should pay them. Today, a great deal of what we still call public *finance* deals with issues on the expenditure side, and with regulations.

In his *Principles of Public Finance*, originally published in 1922, a book that ran to many editions, many printings, and publication in ten languages, Hugh Dalton, who had served as Chancellor of the Exchequer and President of the Board of Trade of the UK, wrote that "English economists as a body have had surprisingly little to say concerning the principles of public expenditure" (1954, p. 139). He cited an early American writer (Adams), who, in a book called *Science of Finance*, said:

> [T]he older English writers did not need a theory of expenditure, because the theory of government which they held implied a fixed limit to government functions . . . every particle of expenditure beyond what necessity absolutely requires for the preservation of social order and for protection against foreign attack is waste and an unjust and oppressive imposition on the public.

That statement implies that there is a clear understanding of what the fixed limit of public spending and its composition are, and that any public spending beyond that limit would only do damage. Given this understanding, all the attention could be directed on how to finance that spending. This explains why (British) economists had focused exclusively on taxes. Dalton added that "This barren and negative view of the proper economic activities of the State still finds some support, even if it is seldom expressed in such extreme terms" (1954, p. 139), and "Modern [Anglo-Saxon] economists have been slow to correct vulgar prejudices on this matter and to place the whole question, from the point of view of principles, upon a rational footing" (p. 140). As evidence, he cited a March 9, 1952 article, in the *Sunday Times*, which indicated that, in the USA, this "emotive and question-begging language" was still common (p. 140).

The situation would start to change rapidly in the 1950s. In those years these attitudes were still more prevalent in the USA than in European countries and they have continued to survive, especially among Anglo-Saxon economists. However, today, Public finance deals with both the taxing and the spending side of the *public sector's* operations. Paul Samuelson (1958, p. 332–8) took to task a prominent English economist, A. C. Pigou, for having devoted 200 of the 285 pages of his *A Study of Public Finance*, published in 1928, to traditional tax analysis, while largely ignoring public spending. Samuelson could have done the same with Flora's important, 1909 public finance book, cited earlier, which, out of about 700 pages, had dedicated only 33 pages to government spending. Or, with the better-known 1936 book by De Viti De Marco, which did not address public spending at all. Thus the sin of omission was not exclusively a British or American defect, though it may have been more frequent in those countries.

While in the distant past there seemed to have been little or, at least, less disagreement on the (limited) areas to be publicly financed, and the view was that the less public spending there was, the better it was for public welfare, today it is the spending side of the public budget that attracts more, or much, of the attention of economists and politicians, and a large part of public debates and disagreements. However, financing issues (both by taxes and increasingly by debt) have remained important. Today, there are some economists that criticize what they call "austerity" (control over public spending) even in countries where governments spend half of their countries' GDPs. There are even economists who believe that higher public spending could be financed by public debt without difficulties or limits, a position that would have horrified past economists.

Today, financing difficulties occasionally put limits to the spending action of governments. Public debt, which has become increasingly available to most countries, has made the relation between public revenue and public spending less rigid than it has been in the past. A more liberal, or more relaxed, attitude toward public borrowing has loosened the link that once existed between finance and public spending. The determination of which expenses to finance and how to finance them has become an important part of public finance. There has been also an increasing blend between public finance and financial economics.

Because public finance is undoubtedly the most *political* part of economics, it remains one of the most controversial. Public finance economists have tried to develop universal and objective laws and principles that, at least in general terms, should guide the actions of governments both on the revenue and spending side, principles of neutrality, efficiency, equity, sustainability, optimality, and others. However, the attitudes of the populations of different countries, and of individuals at different income levels within countries, continue to favor and to demand government actions that often diverge from those principles. Furthermore, empirical studies have often provided conflicting results, on some important, assumed, relations. They have failed to make public finance a “science”, one capable of overriding value judgments, as some 19th-century economists had thought was possible.

In today’s more democratic world, politicians pay more attention to the demands of the electorate, and to the pressures that come from politically powerful groups, than they do to some of the principles developed by economists. Economic principles do not finance elections – lobbyists and some groups do. This conclusion seems to have become more valid in today’s more populist and less equalitarian times than in earlier decades. Still, hopefully, at least some of the general, basic principles developed by influential economists should provide useful guidance to policymakers, especially when they have been widely endorsed by the economic profession. Otherwise, we will have a situation in which economic principles no longer provide any compass to help guide public policy. Since the Great Recession of 2008–09, some commentators have written about the “twilight of economists” and about their declining influence, because of often lack of agreement among them on basic principles and policies.

On some important issues, there are now wide differences among economists, which are in part caused by their different political views, and in part by conflicting results obtained from empirical studies. Econometrics has not provided the clear answers that it had been expected to provide in the 1960s. Some economists continue to prefer small governments and low taxes, because they believe that these leave more liberty to individuals, are more efficient, and promote faster economic growth. Others prefer larger governments, which in their view make society more equitable, increase economic opportunities for all citizens, reduce some important financial risks and, some argue, even increase the *economic* liberty of individuals in the lower levels of income distribution. For these individuals, *economic* freedom and increased opportunity may be even more important than narrowly defined *political* liberty.

The late James Buchanan and Gordon Tullock, and economists associated with the School of Public Choice, have been concerned about budgetary decisions that are based predominantly on majority rule, because those decisions may be opposed by, and may reduce the liberty of, minorities. They have followed a tradition that goes back to Wicksell, which, in democratic countries with universal suffrage, taxing and spending decisions based exclusively on majority rule might not reflect the "voluntary consent" of many citizens. In other words, democratic rules might lead to the exploitation of richer citizens by the masses (see the discussion of Wicksell's work in Richard Wagner, 1988). It should be mentioned that at the time when Wicksell did his writing, socialism was growing in popularity in Europe, and socialist thinking, with democratic rule, could easily have led to the result that Wicksell feared. Therefore, unanimity, or qualified majority rules, or other constraints, as those imposed by some constitutions (such as the US Constitution), might be considered necessary to neutralize worrisome electoral decisions in some areas, such as those concerning budgets.

However, constitutions, such as the US Constitution, are documents that, regardless of their merits and their beautiful wording, were often drafted centuries ago. They inevitably reflect the particular circumstances, attitudes, and power structures of the countries at the time when they were written. Unless significantly and occasionally amended, they may reflect the interests and the views of the few and mostly rich individuals who had drafted these documents. Thus, the fundamental question remains, whether majority rule or constitutional rules ought to be given more weight, in purely economic matters, at the present time, when they conflict.

Many economists tend to give more weight to the economic aspiration of large percentages of *living* individuals, individuals that have a more expansive view of what the government's role should be, in societies that may be becoming more unequal. They tend to give less weight to the views of *dead* political figures and more to the democratic aspirations of the *living*, as long as those aspirations do not challenge fundamental civil rights and do not clearly damage economic developments. This is the area in which, in principle, economic analysis ought to help. Economic analysis cannot be constrained by the constitutions of particular countries. It should have a more universal application.

These different views have made public finance both an exciting and a controversial field. It could be added that both sides of the debate often pay little attention to the needs, or the interests, of *future* generations. Those needs appear to be increasingly endangered by some ongoing trends. It is also an interesting, philosophical question whether *future* generations have, or should have, rights that could influence *current* policies.

Finally, many of the more recent popular textbooks in public finance have been written by American economists, or by economists trained in US universities, and mostly for American students – they reflect American attitudes, values, history, and institutions. This is especially the case with respect to the economic role of the government, and to issues related to taxes, spending and fiscal federalism. These textbooks have influenced foreign writers. This is especially the case in areas such as Public Choice, and in the relations between central (or national) and sub-national (or local) governments, which often reflect particular political attitudes.

The present book is aimed at an international readership. Its author was born and raised in Italy but was educated in a top US university, where he had the good fortune to study with some of the leading economists and public finance scholars of the time. He spent a good part of his professional life in the USA, first teaching in two universities and then working for almost three decades in senior positions at the International Monetary Fund (IMF). There he led technical missions to countries, supervised research activities, and provided guidance to countries in public finance. He also spent some years as a member of the Italian government. In all these activities he could observe directly the operations of governments, some from inside, and to analyze public finance issues as they developed in many countries, from both a practical and a conceptual perspective. As a consequence of this background, the author has aimed at making this book more cosmopolitan, more practical, and less US-centered, than are many textbooks. He hopes that he has succeeded in this objective.

In the USA, especially since the 1980s, developments in public finance and policies seem to have become somewhat detached from those of many other advanced countries, and especially from those in the

European continent. This has made the USA a bit of an outlier on the global stage, unless one believes that the outlier is not the USA but the rest of the world. This has been another reason for the attempt to make this book less US oriented and more universal.

Another characteristic of the book has been the attempt to put some theoretical developments within a historical context, in the belief that, as Friedrich Hayek concluded, Economics and Public Economics cannot be separated from the historical context in which concepts and developments evolved. Public finance cannot be provincial in time and place. It is not, and cannot be, *pure science*, a science not affected by history and by social context. The development of public finance must incorporate, or at least take into account, historical and social developments. At times, concepts that have attracted many pages in academic textbooks, but little, if any, attention in the real world, have been given less coverage in this book. This may be the case especially in some of the theoretical analyses of taxes, such as tax shifting, optimal taxation, and in the theory of fiscal decentralization. Especially the latter has reflected specific, American, historical developments, which were significantly different from those of many other countries.

Finally, with the expansion of the role of government in dealing with recessions, since the Great Depression of the 1930s and the Keynesian Revolution, a new important branch of economics, "Income Theory" or "Macroeconomics", has been created. Because it became significantly detached from traditional public finance, it was somewhat difficult to decide how much of that new field to include in a public finance textbook. The author hopes that the coverage that has been provided of the stabilization role of the government is adequate. Space limitations have played an obvious role in what could be covered.

2 Why public finance?

2.1 Introduction

Fundamental questions to start with when examining public finance are the following: In a democratic country with private property and that has a free market, a market that produces goods and services that citizens want and can buy, and that creates jobs and generates incomes to the factors of production (capital and labor), why is there a need for *public* finance? Why does the state have to play an economic role, when the market is expected and is assumed to be able to deal with the economic activities and the needs of private individuals and enterprises? Put another way, should the government play an *economic* role in such an economy? If the government must play an economic role, what role, and how big, ought it to be?

The above questions have concerned philosophers, social scientists, economists and just plain citizens for centuries. The answers to these questions can follow purely technical lines, or they can recognize their political nature. The answers have changed over the years, and they continue to differ today among economists and countries. The answers cannot be strictly scientific and must be seen as significantly time-determined and, inevitably, political and subjective. We shall start with some *technical* answers on which there ought to be more agreement among economists.

2.2 Reasons for government intervention

2.2.1 Provision of pure public goods

In a book on public goods, James Buchanan stated that "People are observed to demand and to supply certain goods and services through market institutions. They are observed to demand and to supply other goods and services through political institutions. The first are called private goods; the second are called public goods" (Buchanan, 1968, p. 1). The need for governments to play an economic role is assumed to depend, first of all, on the existence of what economists call *public goods*. That existence has been recognized and discussed at least since the later part of the 19th century (see e.g. Sax, 1887). Discussions on public goods became more precise and more technical when Paul Samuelson (1954; 1955) published two widely cited articles that explained the *technical characteristics* that made some goods public and the reasons why they have to be supplied by the government. The central point was that there are some needs of individuals living in communities that a free market cannot satisfy. Therefore, some representative of the community (assumed to be the government) has to intervene to provide those goods. Some examples can help explain why.

Take, first, the possibility that a country, or a community, might be at risk of invasion by other countries or communities. Protection against foreign invasion may be seen as not just the personal need of some, or many, citizens, but as a fundamental community objective. Many citizens would want to promote it, by allocating some community resources to protecting the community. Illegal immigration also creates a need for some resources to be used to protect frontiers from unwanted, illegal crossings. Some elements among the country's population may engage in crimes against honest citizens. It would, therefore, be desirable to have a police force and a justice system to reduce the frequency of crimes. There may also be a need for city streets, city lights, canals, and other major infrastructure that the private market may not provide. A government will need some public employees, and some policymakers to run government's institutions, to register births, marriages, property rights, some contracts, and so on.

If the above public goods are considered necessary, and if they are desired by the country's citizens (that is, if there is a *collective* demand for them), they *must* be collectively provided, because the free market will not do it (see Samuelson, 1954, 1955; Buchanan, 1968; Head, 1974). The reasons for this conclusion are essentially two and they were spelled out clearly in Samuelson's articles. They have to do with two characteristics specific to these goods that make them different from private goods.

The first characteristic is the *generality*, or the *non-exclusivity*, of the benefits that these goods provide. While the benefits that individuals receive from the use of private goods or services (such as bread, apples, haircuts), rest with the specific individuals who buy and use them, and are not available to others, once a public good has been provided and has become available, say defense for the country, all the individuals who live in the country potentially benefit from its provision, even if they have not contributed, or have refused to contribute, to the financing of the public goods' provision. No one can be excluded from the benefits provided by the public good once that good has been provided. A *free rider's problem is created by the difficulty of exclusion* of those who do not wish to contribute to its financing. Although the benefits from the public goods are shared by all citizens, they are not necessarily equally valued by them.

The second characteristic that makes a good *public*, is that once it is provided, more beneficiaries can be added to its consumption and can benefit from it (at the same time) without increasing the cost of providing it or reducing the benefits to others. Thus *non-exclusivity* in use and the *possibility of adding more users* at no extra costs to its consumption, make these goods *pure public goods*, *and* different from private goods. The use of some private goods, such as books and cars, can be shared but not at the same time, and within strict limits. Because of the two characteristics mentioned, no private person or enterprise would have an interest in providing these public goods at their expense. If a private agent provided them, he/she would not be able to exclude free riders from the benefits that the goods provide, those who would benefit from the goods' provision but would not be willing to contribute to their cost.

Because of the two reasons given above, the government has to provide them, *using public resources*. However, the actual supply of the needed public goods might be bought by the government from private enterprises, rather than be produced directly by the government. This is often the case with military equipment and with large public investments and, in more recent years, with an increasing number of previously public activities, including security services, which are financed by the government but provided by the private sector. In the distant past mercenaries were often used to fight wars to defend countries. Now private volunteers are used and compensated by governments.

For some public goods, such as defense spending, public roads, and some others, there may be a debate as to how much of the public good (say how much defense spending, or how many public roads and of what kind) ought to be provided. Different citizens may have different preferences. The theory on the existence of public goods does not answer this important question. Some citizens might see a greater need for some public goods than others. There may be also some private interests (some rent seeking) that may push the government to spend more for these goods than might be necessary or desirable. The reason is that some *indirect* benefits from the provision of public goods may occur to private enterprises or to some politicians. For example, some private enterprises might sell weapons to the government and benefit from larger defense spending. And some politicians may benefit politically from having military bases located in their geographical areas. Therefore, some public goods may be over- (or also under-) supplied.

While the public goods reflect collective needs, the benefits that different citizens receive from them are not the same. For example, some citizens may have less interest than others in having the country protected against foreign invaders (see Tanzi, 2018a, pp. 175–9). But there are no revealed preferences available so that the differences among citizens cannot be taken into account in determining how different citizens should contribute to the financing, on a benefit-received principle of taxation.

The above, separate but important issues have attracted less attention than they deserve on the part of public finance scholars (but see Tanzi, 1972). There has been more agreement that public goods should be publicly financed, and some debate on how common public goods are, but less about how to determine how much to provide, and who should pay for them. In some of his writing, James Buchanan has pointed out that the provision of public goods is determined by demand and supply conditions and cannot be assumed to be outside political considerations. The desirable tax incidence may be influenced by the perceived distribution of the benefits that citizens derive from the public goods. These considerations may have become more important in recent times.

In the 1960s, there was a lot of not very productive discussion about how to make individuals reveal their preferences for public goods. However, even if the preferences had been known, there would remain the problem of how to aggregate them, to determine the level of the provision of public goods. In today's world, *pure* public goods account for a relatively modest share of advanced countries' total public spending. They have not been the main cause of the growth of public spending over recent decades. In several countries their share of GDP has even fallen. President Eisenhower, at the end of the 1950s, called attention to the possibility of "rent seeking" associated with defense spending, because, in his view, some vested interests were pushing the American government to spend more on defense than he thought desirable. Various studies have also shown that some public investments – called "white elephants", "roads to nowhere" and "cathedrals in the desert" – are at times promoted by private interests, and are accompanied by acts of corruption. They are not genuine public goods.

2.2.2 Provision of quasi-public goods

Beside "pure" public goods, there are "quasi"-public goods. The latter bear some relation to public goods but raise more questions about whether the government has a genuine responsibility to provide them. One reason is that individuals who may not wish to pay for their use (potential free riders) could be excluded from their use. However, exclusion may be costly and not desirable on social grounds. For some of these goods (basic education, city roads and other infrastructure, health expenditure, and so on), there may be also limits to the possibility of adding users at no extra cost. The reason is that adding too many users would lead to congestion, which would reduce the value of the good and its characteristic as public.

Examples of quasi-public goods are city streets. It would be just too costly, or too impractical, to exclude citizens, who do not wish to contribute to the cost of building the streets, from using them. When too many individuals or cars use the streets at the same time, there may be congestion, defying the "additive" characteristic of the pure public goods. Modern technology has made it possible in some cases to charge cars, at low cost, for the use of streets in city centers, during particular hours of the day; or to use tolls to reduce congestion and user costs for some roads. There may come a day when particular monitors, worn by pedestrians, might also make it possible to charge individuals for the use of city streets and sidewalks. Technology has the power to change some public goods into private goods, just as it can change some monopolies into competitive markets. However, there are cases where the exclusion from the use of particular, quasi-public, goods, while easy, may not be desirable. For example, exclusion from vaccination against some infectious diseases for individuals who do not wish to pay for the cost of the vaccination may be easy but not desirable. Exclusion from access to primary public schools, for non-paying children, may also be easy. However, it would not be desirable on social grounds.

2.2.3 Merit goods

In his influential 1959 book, *The Theory of Public Finance*, Richard Musgrave introduced the concept of *merit wants* or *merit goods*. He argued that these are goods which society might wish to promote, even though they are not and do not have the characteristics of *public* goods. Thus their promotion would not be justified on allocation grounds, but on social grounds. These "merit wants and goods" can be subjected to exclusion, but they are "meritorious" and thus worthy of public support. Musgrave mentioned "public luncheons" for school-children, subsidized low-cost housing for low-income families, and "free education" (1959, p. 13).

Public support for merit goods might be more easily provided through the tax system, by allowing rebates against the payment of income tax liabilities for the money that taxpayers spend on the purchase of these "merit goods". The use of "tax expenditures" for this purpose in the USA was introduced in the 1960s and has grown over the years. There are now about 150 such tax preferences in the US tax code. These tax expenditures have become common in some countries but much less so in others. They do not help families that are too poor to pay income taxes.

2.2.4 Patriotic goods

One could add "patriotic goods" to the list to be financed publicly. These would include, for example, publicly supported spending on national monuments, national parades or support for national arts. As illustrations, the French government supports French language courses in foreign countries, the Italian government subsidizes some opera performances, the USA has allocated significant public resources for historical sites and for historical museums that promote some aspects of US culture, and several countries support costly national parades.

The concept of merit good has been criticized by some American economists on the grounds that it is based on value judgments and not on allocation principles, as are presumably public goods. However, much of public spending (including defense spending) and much public finance are based on value judgments. It is an illusion to continue to believe that public finance can be value-free, as was attempted by the "Marginal Revolution in Economics" during the last third of the 19th century (see Collison Black, Coats and Goodwin, 1973). Public finance cannot be value-free in a society that has some community spirit and some community objectives, which include empathy for other community members. In criticizing attempts to make public finance value-free, Buchanan (1968, p. v), wrote that "[in the past] traditional public finance [had] been applied Marshallian economics with a liberal side dosage of utilitarian nonsense".

2.2.5 Guaranteeing minimum incomes

Somewhat more controversially, and in an area where value judgment is clearly determinant, it can be argued that there are individuals in communities that, because of mental or physical disabilities or other circumstances (e.g. young and orphaned, a single woman with small children), are not able to earn an income to sustain themselves. In some societies where the family (and not the individual) is considered the main component of the community, family members may have a *legal and not just a moral* obligation to support economically the disabled members of their families. In past societies, asylums for the insane and orphanages for orphans were often publicly financed even in *laissez faire* societies.

In modern, advanced, societies, there continue to be reasons to support some of the above individuals using public resources. The alternative may be seeing some individuals living and dying in the streets. It should be pointed out that some of the leading libertarian economists and political scientists, including Friedrich Hayek and Karl Popper, supported the idea of providing some minimum income to everyone, and Milton Friedman supported the idea of a *negative income tax* (see Green, 1967).

Once the concept of a public obligation for people in need is accepted, questions of definition and of controls become important. When is a person so disabled that he/she cannot earn an income? Did the person have some incentive that contributed to placing him/her in their present condition? Increasingly the *disability* has become a question of degree, and not a black and white question. When is a person truly disabled and unable to earn an income? How is the decision made to assist or not a given person? Who makes it? Political, administrative and governance problems inevitably arise in these decisions. Should the individuals be forced to accept jobs that government bureaucrats consider them capable of performing? Should the jobs be privately offered, but publicly subsidized; or should they be public? All these questions point to the benefits that can be derived by having some *universal* public programs that reduce personal financial risks and that are accessible to everyone. They also point to potential problems that may accompany the actual use of such programs.

The range of individuals that deserve to be socially supported through *means-tested* programs has been extended with the passing of time, going beyond the truly disabled or incapable. They may now include individuals with minor disabilities, those temporarily unemployed, those considered "old" or "poor", single women with children, and others. Therefore, numerous assistance programs have been justified on the principle of need in many countries. Their use reflects the belief that restrictions to accessing these programs reduce the number of those who accede to them, compared with universal programs which are accessible by all, and, because of that, are more expensive, and may cover some "undeserving" individuals.

In many countries, workers are required to pay taxes on their wages during their working lives. These payments, called "contributions", go into special accounts that are used to cover pension costs and some other costs, such as medical expenses when the workers retire. In other countries, general revenue, and not taxes on wages, is used for paying *social* pensions and health-related expenses not linked to previous "contributions". In a growing number of countries, *vital* or *basic incomes* are being considered to ensure that *all* citizens have available some *minimum* income, to support them at some low, basic level. In principle the provision of a basic income might make it less necessary to have *means-tested public programs*.

2.2.6 Market failures

For a long time there was a belief, among orthodox economists, that markets were essentially efficient. Being efficient, they justified *laissez faire* policies by governments that would promote economic *progress*, a concept that became important in the 19th century and was associated with economic growth and with the belief that everyone would benefit from it. There had been little, sustained, real economic growth (little progress) in the world in the millennia that had preceded the Industrial Revolution. *Laissez faire* policies had been expected to require low taxes, little government spending and very limited public interventions. They placed a lot of trust in the work of the free market.

Because of the often bad, *mercantilist* and *interventionist* experiences on the part of past governments, there was great skepticism, among non-socialist economists, about the merit and the justification of government interventions in economic matters. *Laissez faire* policies came to be widely recommended and endorsed by classical economists. The prevailing views of these economists were influenced by, and were consistent with, an evolutionary view of changes in the market and in the world. Some called this view *Social Darwinism*. It was a "survival of the fittest" ideology, inspired by Darwin's theory of evolution, believed to bring a better future for society over the long run.

However, there were many sympathizers of some forms of socialism who were not happy with the status quo, and were not willing to wait for the long-run beneficial effect of "progress". These sympathizers included some economists who thought that particular policy changes could improve matters in the short run, and who demanded more governmental interventions in the economy. There were also many full-fledged socialists who were skeptical of the market, including Karl Marx. In 1848 socialist demands led to revolutionary acts, in Paris and in several other European cities. The writings by Karl Marx, and by some other socialists had become influential with many common citizens and workers in several countries.

The *structure of economies* and the still relatively limited *democratization* of many countries in those early years played important roles in promoting the low tax levels and low public spending that prevailed. The informal structures of economies, especially in the earlier years of the Industrial Revolution, had made it difficult for governments to raise high tax levels, and in many countries few citizens had the right to vote. Those who voted were, in many cases, the same richer individuals who paid a large share of taxes (see Tanzi, 2018b). Throughout the 19th century, and until the Great Depression of the 1930s, tax levels would remain low in most countries. For example, in the USA, the tax level stayed as low as 10 percent of GDP until 1930. In Sweden it was only 15 percent of GDP until 1940.

In 1888, a prominent and well-informed French public finance scholar, Paul Leroy-Beaulieu, author of a monumental two-volume treatise on the public finances of many countries, could write that a share of taxes in the range of 5–6 percent of total income was "moderate"; that that share became "heavy" when it reached 10–12 percent, and that it became "exorbitant" when it exceeded 12 percent. Once that level was reached, taxes would inevitably damage the growth of the countries' economies. In those years tax levels were generally under (and at times significantly under) 12 percent of GDP (see Tanzi and Schuknecht, 2000, Table III.3, pp. 52–3). However, by the late 19th century taxes had started to rise, although slowly. Tax levels generally remained in a low range until the early 20th century and continued to grow, slowly, until World War II. Then, they grew rapidly until the late 20th century. In the closing decades of the 19th century, public finance scholars were already expressing concerns about the growth of public spending that was taking place and forcing taxes to rise. In 2018, public revenue (mostly tax revenue, including some fees, fines and profits from public enterprises) exceeded 50 percent of GDP in five advanced countries, and 40 percent of GDP in 17 advanced countries. In the countries of the European Monetary Union public revenue averaged 46 percent of GDP; by contrast, in the USA it was still 31 percent, or a full 15 percent of GDP lower (IMF Fiscal Monitor, 2019).

The above statistics give an idea of the changes that had taken place by the second half of the 20th century. These changes had happened in countries that were still democratic and with free markets. Some of the biggest public spenders (the Scandinavian countries and a few others) were countries that, in most relevant indices, were ranked very high among countries. These indices included personal freedom, labor participation, indices of happiness, indices of competitiveness, and others. These countries are a challenge to the concern that had been expressed by Paul Leroy-Beaulieu, and to the hypothesis, later summarized in the Laffer

Curve, which have made higher taxes enemies of economic growth and of economic freedom. This continues to be a concern for many economists.

While *laissez faire* remained an important guiding principle for many economists and governments in the later part of the 19th century and the early part of the 20th century (at least until the 1930s), market failures and abuses, especially the existence of monopolies, had become progressively more evident and more difficult to ignore. *Laissez faire* had started to collide with the democratic aspirations of many voting citizens and workers. Market failures and abuses were attracting increasing attention on the part of some economists and other observers, including major writers. They also started to invite some governments' interventions in the economy, and changes in policies.

In *The Gilded Age* (1873), Mark Twain took American capitalism to task because of its corruption and abuses. A Swedish dramatist, August Strindberg (1849–1912) commented that "economics [had become] the science by which the economic elite remained the economic elite", and Thorstein Veblen launched his attacks on orthodox economics and on some aspects of capitalism (see Veblen, 1948). Adolph Wagner theorized that the role of government was bound to grow and that it would include wealth redistribution. In Germany, Otto von Bismarck had given a new and important role to the government by guaranteeing the pensions of workers. In 1913, the USA introduced a tax on high incomes. In several countries, labor unions had acquired increasing power and were promoting strikes.

However, many classical, orthodox, economists continued to mistrust governments more than they did the market, and continued to have more faith in the work of the market than in that of the government (see Röpke, 1969; Le Grand, 1991; Kirzner, 2001). The Austrian School continued to be particularly influential in promoting trust in the market, and many US and British economists continued to share that trust. In the USA many economists, especially at the University of Chicago and at Columbia University, continued to express faith in the work of the market and to complain about growing government interventions.

At the beginning of the 20th century, US president Theodore Roosevelt had seen the need to regulate monopolies to limit their enormous power and profits, which had made some of their owners among the world's richest and most powerful individuals. The attention on monopolies continued in the 1930s in the USA when new regulations were introduced by the Franklin D. Roosevelt administration. Around the turn of the century, the high concentration of income in a few hands, and the lagging levels of real wages, which had contributed to making a very uneven income and wealth distribution, had attracted the attention of some major economists, including Adolph Wagner in Germany and Vilfredo Pareto in Italy.

The concentration of income and wealth would fall significantly during the Great Depression and World War II, periods when high marginal tax rates were introduced on high incomes, and when profits fell, although these extremes flattened out up to the 1970s. Gini coefficients would start rising rapidly in the 1980s and in later decades, and few individuals would end up owning large shares of the total wealth (see Saez and Zucman, 2019).

In the 19th century, the high concentration of wealth in the hands of a few had contributed to promoting the growth of socialist movements and labor unions. European labor unions had been more sympathetic to Socialist ideologies, while American labor unions had focused more on pushing for higher real wages and for better working conditions. In time, the power acquired by the labor unions would start interfering with the work of the free markets, leading to complaints, even by Keynes, in the 1920s (see also Perlman, 1949). Most orthodox economists continued to have faith in the market and to be critical of a larger government role until after the Great Depression and World War II.

In the USA taxes on income had been introduced in 1913 but by that time they had become common in other advanced countries. In the USA, income tax had been introduced with very low rates and with very high personal exemptions, and against strong resistance from the relatively few, powerful individuals who would pay them. In future years, taxes on incomes would become major sources of public revenue in most industrial countries. They would also become increasingly popular with the general public, and more progressive, until the 1970s. They would help finance the high spending levels of many governments.

At the beginning of the 20th century increasing attention was paid to income and wealth inequality, as is the case in more recent years. In 1912 that led to the development, by Corrado Gini, of a statistic to measure income inequality, called the Gini coefficient. By that time, Wagner, Pareto and some other economists had been paying increasing attention to income and wealth inequality. In a small book published in 1926, Keynes had predicted the *end* of *laissez faire* and a growing role for government in the economy. That role was needed to correct for what he saw as growing economic inefficiencies and difficulties.

The end of *laissez faire* would have major implications for what was then called the "science of public finance", which had minimized the role of government. The 1917 Bolshevik Revolution in Russia, and the spread of socialist thinking in several countries (e.g. Germany, France, Italy, the UK) must have played a role in some of these developments, as would the Great Depression, especially in the USA which had been less influenced by that thinking. The government role in promoting some income redistribution would become one of the objectives that governments were expected to promote.

The Great Depression of the 1930s would be an eye opener for economists and for policymakers. It would dramatically change the *science* of public finance. For an increasing number of economists, the Depression was a clear indication, if they needed one, that unregulated, free market *laissez faire* was no longer an acceptable ideology, and its results were no longer welcome. Nevertheless, some influential economists (including prominent examples such as von Mises and Hayek, and later Friedman and others) would continue to believe that interference with the free market had contributed to the Great Depression, or, at least, had made it "Great", and that a free market would continue to generate the best possible outcome in the long run. Similar comments would be made by conservative economists about the Great Recession of 2008–09, which some blamed on government intervention.

The period after World War II brought rapid and fundamental changes to the role that governments played in the economy and in public finance. In the 1940s and 1950s the search for "market failures" by economists intensified (see e.g. Chamberlin, 1948; Bator, 1958; Robinson, 1963). The discovery of "market failures" would invite and justify new governmental interventions to correct the failures. It would also give prominence to other economists, such as Kenneth Galbraith, whose 1958 book, *The Affluent Society*, had commented negatively about the existence of great *private* wealth and great *public* poverty that existed at that time in the

USA. Galbraith's book became a rare bestseller for an economics book and helped to promote some rethinking on what governments were doing and should do.

The 1950s would be a decade of fundamental changes in economic thinking, both in the USA and in other countries, even though orthodox, classical thinking retained some influence. More significant changes in policies would come in the 1960s, especially in the USA, while in some European countries they had started in the late 1940s with the introduction, in the UK, of some of the reforms that had been proposed by Beveridge in 1942, especially in public health. Before addressing market failures, and the role that they would come to play in changing the policies of governments, it might be useful to be reminded of the main thinking that had prevailed among orthodox economists until that time.

First, the prevailing view among most economists had been that the market was basically efficient and, in the long run, it would promote what was called a Pareto optimum. This view incorporated an evolutionary view of the market and of social developments. A Pareto optimum implied the existence of an equilibrium in the allocation of resources, which once reached, would not make it possible to improve welfare by reallocating resources, or redistributing income. Therefore, at the optimum, it was not possible to make someone better off without making someone else worse off (see Mishan, 1965). Very able mathematical economists of the past had offered proof of this conclusion, using highly powered mathematics. A fundamental assumption was that neither individual producers nor individual consumers had the power to affect market prices. Prices were determined by the market and were given for consumers and producers. This conclusion was challenged by the existence of monopolies and monopolistic practices, and by other market failures.

Second, at the Pareto optimum, all the incomes that individuals received were legitimately and fully earned, and deserved. They did not contain unearned "rents", or monopoly profits. The incomes reflected what each individual had contributed in genuine value to the total output and to the incomes that the market had generated. As a consequence, taking incomes from high-income individuals to give it to lower income ones would be tantamount to stealing from the former. Interpersonal utility comparisons were ruled out.

Third, at the equilibrium of the Pareto optimum, forced income redistribution could not play any desirable role, such as making income distributions more equitable, because redistributing income would upset the optimal allocation of resources. Unless there were market failures that made the Pareto optimum less relevant, or unless society concluded that equity was more important than efficiency, redistribution of income by governments should not play a role. In the 1950s, market failures came to be recognized as being common and important, and views started to change about what a fair income distribution should be and became more egalitarian. This would make public finance *less scientific* but *more realistic* than it had been.

2.2.7 What were the main market failures?

2.2.7.1 Monopolies

The existence of monopolies and cartels had been recognized for a long time, and some actions had been taken in the past to deal with them. The view had been that there are natural monopolies that make competition impossible in some areas. These had been considered isolated cases (railroads, highways, telephones, electricity, airlines, water provision and some others). Some countries had chosen to nationalize these enterprises, others to regulate them. In some cases new technologies would, in time, remove the monopoly status of some enterprises. These isolated cases had not been believed to affect competition in the rest of the economy.

2.2.7.2 Monopolistic competition

Concerns about the existence of widely spread monopolistic competition, which had been raised in the 1940s by E. H. Chamberlin and Joan Robinson, brought some new thinking about the work of markets. The work by Chamberlin and Robinson had shown that monopolistic competition was not limited to a few isolated cases. It tended to be widespread, and to have broader implications for the efficiency of the market. Monopolistic competition raised questions about the assumption that individual buyers and sellers had no influence on the prices that they faced. The existence of many monopolistic practices implied that perfect competition was indeed rare in the real world.

2.2.7.3 Missing markets

Another market imperfection that attracted some attention in the 1950s, initially on the part of Kenneth Arrow, was the possibility that, for some individual needs, no market would develop to satisfy them. This might be especially the case with some insurance needs. If individuals would like to be insured against specific events (such as becoming unemployed, getting a divorce, financial penalties for incorrect assessment of tax liabilities) but being insured against these events might encourage the insured to act in ways that might precipitate the event, allowing them to claim payment from the insurance company, then a market would not develop for those needs. This might be important especially in the health sector.

2.2.7.4 Asymmetry in information

Asymmetry in information in market exchanges can also damage a market, as George Akerlof would show in a 1970 article about the market for used cars, which he had called a market for "lemons". That article earned him the Nobel Prize in economics. When asymmetry in information is present in a market exchange, as it is likely to exist in the market for used cars (in which the seller knows whether a car has serious defects, while the buyer often does not), this asymmetry inevitably distorts the market. Asymmetry in information and "moral hazards" may exist in other areas. There are many areas where full information is missing on one side of an exchange, and areas where this happens have been growing in importance in the current world (see Tanzi, forthcoming). Manipulation and deception have also been increasing for a number of reasons, among them changes in the structure of the market and globalization (see Akerlof and Shiller, 2015). Putting it differently, the areas in which full information is available, *ex ante*, to both sides of a market transaction have been shrinking, making the free market less efficient than it had been assumed to be.

2.2.7.5 Externalities

A market failure that attracted increasing attention during the second half of the 20th century was *negative* externalities. Externalities had attracted less attention in a world in which most activities were largely rural, and/or based on small, cottage-type, economic activities that left little traces on the environment. In that world the legitimate or normal activities of individuals and of small enterprises (to distinguish them from illegal activities) tended to have little or no impact on other individuals, or on the environment, and, generally, could be and were ignored. However, over time, with the development of large cities (that brought into closer proximity many individuals), with the growth of large and often polluting industrial enterprises and activities, with new technological developments, and with the growth of activities of large mining, chemical and energy enterprises, externalities became more frequent, harder to ignore, and often more damaging to some.

Negative externalities came to be seen by an increasing number of economists as significant market failures because they tended to make private costs, for those who generated the externalities (say the polluters), differ from the social costs, to society. This failure required governmental intervention, as had been recognized by Arthur Pigou in 1920. Externalities might require and justify taxing or regulating those who generate them; or might require compensating those negatively affected by them. Their existence raises questions about the welfare implications of *laissez faire* and about the wisdom for governments of not intervening.

In 1960, Ronald Coase (a future Nobel Prize winner in economics) argued in an influential paper that, at times, the activities that create negative externalities might be socially important, and that it might be too costly for a society to prevent, or tax, them, as Pigou had recommended. Coase suggested that private agreements, achieved through direct negotiations between those who generate the externalities and those who are damaged by them, might result in some financial compensation and would make the intervention of the government unnecessary, allowing the activity that produced the externality to continue to operate.

Questions of timing, as to which activity (that of the generators of the externalities, and those who were damaged by them) had come first, might also be *legally* important in assigning costs and settling legal disputes. Legal issues would become important in dealing with externality cases. The legal issues raised new questions, and made the original (Pigou's) analysis seem too simple. Coase's article led to the creation of the new, important and related field of *Law and Economics* (see Malloy, 1990; Dnes, 2018). Externalities also have implications for cost–benefit analysis of major projects, when the social costs diverge from private costs.

Because of externalities, regulation has become a major and controversial instrument of governmental intervention, and of public finance. In the

USA, official regulations now cover many thousands of pages of official documents, and many thousands of people have found well-paid jobs, some administering regulations and some fighting them, or lobbying against new and old regulations. This development has created continuing conflicts between legislators and regulators, on the one hand, and the regulated enterprises (especially in the energy, financial and private health sectors) and affected citizens, on the other. While some citizens see the need for stronger regulations, the regulated enterprises focus on the cost that the regulations impose on them, and on the restriction of their economic freedom. Regulations have dramatically changed the allocation of resources that an unregulated market would have generated. Regulations can be assumed to become progressively more important in future years.

Regulations have become an important battleground in today's world of ideas. James Buchanan once remarked that regulations had been politicized and were being abused by governments and bureaucrats interested in increasing their political powers. Others have complained that some activities are not being regulated enough, creating significant safety problems for citizens and future problems for the planet. The differences in assessment may relate not only to ideology but also to the relevant time horizon. The reason is that the costs to the regulated are often immediate and fairly certain, while the benefits to society may be delayed and may also reflect more uncertainty.

Science inevitably plays a role in some regulatory decisions. The conflict is also determined by the importance that one attaches to the freedom and the standard of living of some *living individuals*, as compared with the welfare of *future* generations. Externalities that cross national frontiers (and, in the USA and other federations, also those that cross state or regional lines) tend to attract less attention from the governments of the countries or the states that must make the decisions, than regulations that are strictly local. Issues of impact measurement and scientific evidence enter into these debates, because scientific conclusions may not yet be settled with a reasonable degree of certainty.

In some ways this debate is an extension of the past one between supporters of *laissez faire* and individual freedom, on the one hand, and those who saw the need for greater intervention by governments in limiting smoking, on the other. Those who supported *laissez faire* and individual freedom, and there were many of them, did not worry much about externalities connected with smoking in general, and with smoking in public places, restaurants, planes, classrooms, movie houses and so on that created health costs for non-smokers.

The debate about externalities now extends beyond national frontiers because many negative externalities have become increasingly global, or at least multinational. Some public goods or bads have also become *global* (see Kaul et al., 2003). What is to be done about global externalities, causing "global warming", the extinction of many species, contamination of the oceans and so on? According to many reputable scientists, global warming risks becoming the *mother* of all negative externalities because it might change the world we live in for the worse, making it increasingly uninhabitable for many (see Wallace-Wells, 2019).

Many decisions continue to be made by *national* governments, while some important public goods and externalities have become global and require global solutions. Governments mainly focus on their *national* interest and on *current* generations. They pay little or less attention to the future, or to the globe. The *invisible hand* that guides markets seems to be largely absent, inactive, or truly invisible, in a world with global activities but without global governance (see Tanzi, 1998; Tanzi and Davoodi, 1998). The invisible hand has so far remained largely invisible or ineffective in issues such as global warming (see Nordhaus, 2019a; 2019b).

2.3 Concluding remarks

Especially after World War II, an increasing number of economists and citizens started calling for more governmental intervention in the economy. The Great Depression and the publication of Keynes' *The General Theory* in 1936, had raised fundamental questions about what governments could, or should, do to help stabilize economies. This was a new kind of governmental intervention. The Great Depression had created a great psychological fear among economists that the Depression would return after the war and would become a permanent phenomenon. That fear had given support to the novel and radical view that governments *could and should play a stabilizing role* in the economy, and to the view of other economists that some safety nets for citizens were needed.

After encountering earlier resistance by the then leading economists, the "Keynesian Revolution" put *laissez faire* economists on the defensive (see Stein, 1969 and Tanzi, 2018c for reviews of early criticisms of *The General Theory*).

In 1959, Richard Musgrave provided a timely synthesis of what the main roles of governments should be in modern, democratic countries, with market economies based on private property. He argued that governments' fundamental roles could be placed into three broad categories: (a) *allocation of resources*, to correct for the existence of public goods and for market failures, (b) *stabilization of the economy*, to reduce the negative impact of business cycles, and (c) *redistribution of income*, to make income distribution more in line with society's preferences.

Musgrave recognized that the redistribution role that had been largely ignored by non-socialist economists in the past, would be aimed at promoting income distribution that the majority of the population would consider fair, thus challenging those that the free market would generate. Musgrave perceived that the determination of the desired distribution would be largely based on *political* decisions and not on technical or scientific considerations. Different countries or governments, and different individuals at different income levels in the same countries, might have different views of the socially desired income distribution, but only the democratic, political process could help determine the desired distribution and the policies required to achieve it. Musgrave was aware that promoting a different income distribution to the one determined by the market might generate political opposition and also some efficiency costs.

The distribution of income within a country would no longer be the accidental consequence of market forces and of institutions created over centuries by past governments, such as the right to inheritance and intellectual property, limited liability for the shareholders of corporations, favorable treatment of capital gains, and many others that, often in non-transparent and non-obvious ways, contribute to the income distribution that the market generates. Those legal institutions significantly influence the Gini coefficients, *before* governments intervene with their spending and taxing policies. The belief that the income distribution that is created within a relatively free market economy is strictly the result of the value that each market participant contributes to the economy is a convenient illusion, used to justify whatever results the market generates. Most pro-market economists have failed to recognize the extent to which *past* institutions and past rules contribute to *today's* incomes of many individuals (see Tanzi, 2018a).

The enlarged government role has required different policies, new institutions and new policy instruments. It will continue to need new knowledge. The new role has inevitably attracted strong opposition from conservative and libertarian quarters, and from economists that continue to have great faith in the virtue, ethic, and results generated by the free market. Conservative economists have continued to be concerned about restrictions on individual freedom – they believe a larger government role inevitably imposes on individuals, and on the effect that government policies might have on personal incentives and on the dynamism of economies.

In the 1960s these concerns led to the creation of a new school of thought in economics, the School of Public Choice. They also stimulated the rise in importance of the Chicago School, which became a strong advocate of the free market and replaced in influence the Austrian School as the main defender of the free market. James Buchanan became the main, or most visible, thinker in the School of Public Choice, while Milton Friedman, for many years, became the main exponent of the Chicago School. Both would win Nobel Prizes for their contributions to economics, and both would have major influence on economics and on public finance (see Mueller, 1989 for a description of the School of Public Choice; Van Overtveldt, 2007 for a description of the Chicago School. See also Le Grand, 1991; and Buchanan and Musgrave, 1999 for a fascinating debate between the authors in Munich).

In 1961 James Buchanan had recognized that "Public Finance seems to be on the threshold of becoming one of the most stimulating fields of inquiry in all social sciences" (NBER, 1961, p. xii). He recognized that "The practitioner . . . is appropriately impatient at the seemingly irrelevant attempts of the welfare economists to develop the models of an ideally neutral fiscal system" (pp. xii–xiii). He recognized that public finance, because of its political nature, could not be "scientific".

Obviously, the possibility that market failures may be replaced by government failures must be recognized.

3 Stylized views of government

3.1 What kind of state is in power?

Most of the writings by economists on public finance are influenced by how they see the normative role that they expect the state to play in the market. What are the concerns that, in their views, should guide policy-makers, especially those in democratic countries with market economies, when the latter make policy decisions? These concerns depend largely on the perceptions that economists have formed of how governments operate. As a popular public finance textbook put it:

> Public finance economists analyze not only the effects of actual government taxing and spending activities but also what those activities *ought to be*. Views of how a government should operate in the economic sphere are influenced by *ideological views* concerning the relationship between the individual and the state. (Rosen, 2005, p. 4, emphasis added)

Clearly, public finance cannot be considered a "science" free of value judgments. Over the years and in different countries there have been different views of the role that governments should play in the economy. The French and the Americans have different views. We shall outline, briefly, some of the main views, starting with those assumed, in much of the public finance writings, by American, British and most other Anglo-Saxon economists. In the wider world there have been, and there still are, different *types* of governments. Therefore, the study of public finance cannot be made to depend only, or predominantly, on one of these "idealized" types. In the real world, the types described below are rarely found *in their pure form*. Nevertheless, the different governments that one finds in specific countries bear some closer relations to one of the ideal types, rather than to the others.

3.2 Individualistic state

Especially in the USA and in Anglo-Saxon countries, most of which are organized as fiscal federations, the predominant view of the government type, the one that has influenced much of the academic writing on public finance in those countries, has been associated with what might be called an *individualistic view of the government*. Rosen (2005, p. 5), provided a nice definition of such a government, attributing it to a 19th-century American statesman, Henry Clay, who, in 1829, stated that “Government is a trust, and the officers of the government are the trustees, and both the trust and the trustees are created for the benefit of the people”. Rosen added that “[t]he individual rather than the group is at the center stage” (2005, p. 5).

In some sense, the above view of the government (which in the USA has been largely based on the principles expressed in the US Constitution) contrasts with the view that the government exists to satisfy (and because it satisfies) *collective* needs, rather than those of undefined individuals. The implicit view is that groups, even democratic majorities, cannot impose rules on individual citizens or minority groups. The only views that would seem to be legitimate are *unanimity rules*. However, since only few, male individuals had then the right to vote in Clay’s time, it is not clear how unanimity rule could ever be achieved in those circumstances, or what it would mean.

The *individualistic* view of the state raises fundamental questions about how individuals express their views, and how those views are taken into account and consolidated. It raised even more questions at the time when Clay wrote it, when the share of the US population that could vote was very small. Are the electoral rules legitimate? Are the individual’s views expressed in elections, in surveys, in large meetings, or in other ways, including, today, through social media? If individuals express them in elections, is the right to vote universal, or are some or many excluded from voting for various reasons? Are the reasons for that exclusion legitimate? How many people actually vote? Of those who vote, do they understand what they are voting for? And how do we take into account the views of those who do not vote, which can be a large share of the population? Do those views count? Are the preferences expressed by different individuals given equal weight, even when those preferences may be differently felt by them? Does "fake news", or selective social issues (such as the right to abortion and similar), influence the way people vote?

All the above questions have strong implications for Clay's view, and for the individualistic view of the role of the state. And most of the above questions continue to be important in the present-day context of American and, to some extent, Anglo-Saxon countries. The above questions inevitably lead to doubts about whether concepts such as "the public interest" and "social welfare", which are widely used in public finance writings, can be extracted from electoral results, or have a specific meaning. Unless those concepts are clearly defined, they cannot have real-life meanings, as they are often assumed to have in economic analysis. They are not substantive concepts. Can these concepts be identified by the preferences expressed by voters? Giving the difficulties of defining them, the mathematical symbols that identify them, which modern economists often use, may give an impression of rigor and precision, but that does not make them any more concrete.

In the 1950s, when there were increasing calls for a larger economic role for the state, calls that still appealed to the individualistic conception of the state, some important economists and political scientists raised doubts about the possibility of determining the *public interest* or *social welfare* from the votes that were cast during elections. Especially important was a book by Kenneth Arrow (1951), who was undoubtedly one of the giants among 20th-century economists. Arrow listed a series of reasonable conditions that would have to be satisfied to reach a consensus that could be identified as the "public interest" or "social welfare". His conclusion was that it would be almost "impossible" to satisfy all of those conditions. This came to be called the *Impossibility Theorem*. Duncan Black (1958) raised similarly relevant questions.

In another book that would have a great influence on many economists, especially on those connected with the School of Public Choice, Anthony Down (1957) argued that, in democratic countries, different political parties would compete for votes and would propose different policies. Therefore, citizens were exposed to both an economic and a political market. The economic market offered many products that could be bought with dollars. The political market offered different policies that could be bought with votes. Competition among political parties would presumably lead to a political equilibrium, one similar to the market equilibrium, which competition among firms was assumed to achieve in a competitive economy.

Down's work attempted to extend the concepts of competition and equilibrium to the political arena, an idea that, later, would be further developed by James Buchanan and his followers in the School of Public Choice. An implicit assumption in Down's work was that politicians were essentially honest, kept their promises and, more importantly, that voters were well informed and rational, and that they voted. It will be argued later that, as policies become many and more complex, the assumption that voters are well informed and rational becomes increasingly questionable. As a consequence, the political market loses a great deal of its presumed efficiency (see Tanzi, forthcoming).

3.3 Organic state

In some countries, especially in those organized around populations that have strong *national* links and common history and traditions, the view of the state that prevailed, especially at certain times, was that of an *organic* entity. This was the state that some major philosophers, such as Hegel, had visualized in Germany. In such a state, the individual citizens become like the water of a river. They keep changing, but the nation and the river remain essentially the same. This view attracted followers in Germany and in some other countries, where many citizens saw the nation as being more important than the individuals who lived in it at any one time – the state represented a *national* community and not the *individuals* living in it. In this setting there may be *national* goals that are considered more important than the goals of individual citizens (on this, see Veblen, 1948, "The Dynastic State: The Case of Germany", pp. 547–72).

This organic definition seems to bear some similarity to a view expressed by Edmund Burke, when he wrote that "society is a partnership of the dead, the living and the unborn". A government that is based predominantly on the desire of (or of some of) the individuals living at one time is less likely to pay full attention to the needs of future, yet unborn, generations. As a consequence, problems such as "global warming", contamination of the oceans, reduction of biological diversity, debt accumulation, poor upkeep of infrastructure, excessive use of antibiotics, rapid exploitation of irreplaceable resources, and others, are all public finance problems that receive less or little attention. This problem was also clearly recognized by Dalton (1954), when he wrote that ". . . since the community outlasts the individual . . . the statesman should regard himself as trustee for the future . . . making a more generous provision for the future than would be made by private individuals left to themselves" (p. 16). In this definition the statesman seems to be a different trustee to the one in Clay's definition. Dalton also believed that the costs and the benefits of future generations should be discounted at a zero rate.

3.4 Paternalistic state

An Italian variation of an organic state is what could be called a *paternalistic* version (see Tanzi, 2000, chapter 1). A paternalistic version is one in which the state takes upon itself the making of some decisions, even some that may go against the wishes of the majority of current voters. It does so under the belief, by the policymakers, that they know better than the average voter what is good for the country. It is a "father knows best" notion of decision-making. It resembles the modus operandi of some private corporations where the CEOs make all the important decisions, and it reflects to some extent Dalton's view expressed above. The governments of some countries (Singapore? China?) may reflect this version. Of course, this version can easily be abused by governments that are not truly paternalistic, but claim to be.

Results from "behavioral economics" in recent years (which have shown that individuals can and do act irrationally) can justify some government policies (which may go against the free choices that individual citizens would make). Policies against smoking and the consumption of drinks with too much sugar might be considered examples of a paternalistic approach. And so could be policies that *force* individuals to buy protection against old age and illnesses, to attend school until a given age, and so on.

The literature on "behavioral economics" has been growing at a fast pace over the past couple of decades. It has been reporting on many examples of irrationality on the part of individuals when they are free to choose (see Shiller, 2000; Ariely, 2008; Kahneman, 2011; Thaler, 2015). Behavioral economics may in time be better integrated with public finance, and may provide more justification for some kinds of *paternalistic* governments. In some cases, it might justify a *tutorial role*, one that directs (or, occasionally, forces) individuals toward making presumably more rational choices.

J. S. Mill (2004 [1848]) had hinted at such a tutorial role, when he wrote about a ". . . not authoritative" role, ". . . when a government, instead of issuing a command and enforcing it by penalties, adopts the course so seldom resorted to by governments, and of which such important use might be made, *that of giving advice, and promulgating information* . . ." (p. 857, emphasis added). However, Mill also warned that "every increase of the functions devolving on the government is an increase in its power . . ." (p. 859), and "the depositories of power who are mere delegates of the people, that is of the majority, are quite as ready . . . as any organs of oligarchy, to assume arbitrary power, and encroach unduly on the liberty of private life" (p. 860). One can see in this warning the fear of a Leviathan government and the concerns expressed later by the public choice literature.

Some countries that have combined a market role with a strong government-guiding role might claim to follow some sort of tutorial role to promote general welfare. These countries have governments that are organized around clearly organic or national concepts, with some totalitarian inclinations. In more democratic countries the tutorial role would have to be a much softer one, and be largely limited to the provision of useful information and light "nudges". Obviously a tutorial role may easily become a suffocating role.

As Alan Peacock (1992) emphasized in a survey of the then public choice literature, "the composition and powers [of governments] vary in time and in place depending on which economic group formed the 'Political Enterprise'" (p. 95). He stressed that what we should have learned from the Italian Scienza delle Finanze is that "the study of the *supply side* of political decision making is essential if we are to understand why government has grown . . ." (p. 95). The behavior of that side cannot be taken for granted, as was done by public finance scholars in the individualistic conception of the state.

Next, we take a closer look at the Italian Scienza delle Finanze, and especially at its views of the *monopolistic* role of the state, views that are generally less known to most public finance scholars, but that are, nonetheless, important for understanding public finance.

3.5 Monopolist state

The Italian Scienza delle Finanze, a lesser known school, due in part to linguistic and, perhaps, ideological obstacles, identified as one of the *typical* government types the *monopolistic state*. The Scienza delle Finanze – which had developed mainly during a difficult historical period for Italy (after the Italian Unification of 1861) and partly during the fascist years after 1923 – saw the government's actions in a different light. Only a small part of the extensive and rich literature of the Scienza delle Finanze has been translated into English, and much has been forgotten. (For a few exceptions, see De Viti De Marco (1936), a book that deals exclusively with the revenue side of the budget, the side that mainly interested English-speaking readers at that time; and a few items in Musgrave and Peacock (1958) and Musgrave and Shoup (1959).)

Few aspects of the vast Italian public finance literature have found their way into the modern public finance literature, mainly through the work of James Buchanan, who, in 1956, spent a sabbatical year in Italy and was exposed to some of that literature which, as he reported later, was an "eye opener" for him, and greatly influenced his thinking (see Buchanan, 1960; Buchanan and Musgrave, 1999, p. 19). Later, the work of other members of the Public Choice School, such as Richard E. Wagner (1976), Mueller (1989, pp. 342–3) and others also helped.

Especially influential was Puviani's *Theory of Fiscal Illusion*, and the adoption by other public finance scholars of the concept of the government as a Leviathan, or a monopolist (see Mueller, 1989, pp. 266–73; see also Hobbes 1963 [1651] who was the first to use the term). More than a century ago, Pareto had believed that "governments try to get from the taxpayers all that they can; [and that] they are never stopped by lack of needs to be satisfied; the only obstacle is the resistance of taxpayers" (see Pareto, 1964 [1916], vol. II, p. 646, own translation). This view was held by Pareto in a period when *laissez faire* ideology was still assumed to drive the actions of governments.

Taxpayer resistance can be reduced by the use of government trickery, or reliance on "fiscal illusions". Fiscal illusions are tools that *monopolistic governments* use to extract more revenue from tax-averse citizens (see Tanzi, 2000, chapter 1 for a short description). At that time, *the ecology of taxation* was still making it difficult for governments to extract higher revenue from taxpayers (see Tanzi, 2018b). Government education on the benevolent use of taxes, or government propaganda and use of "fiscal illusions", can try to reduce taxpayers' resistance. Some surveys have indicated that the greater is the citizens' trust in a government, the greater may be the taxpayers' compliance.

The fundamental innovation of the Scienza delle Finanze was that of seeing the normal government role in the economy in a less favorable light than Anglo-Saxon economists had seen it in those years (see especially Fasiani 1951 [1941]). The view that prevailed in the Scienza delle Finanze was that the state, and the government that represents it, almost always originated out of the conquest, or the domination, of one group over other groups. This domination leads to the distribution of political power, which in turn leads to distributions of income and wealth that are not as equitable as they could, or should, be. Pareto (1953 [1896–97]) and especially Achille Loria (1913 [1886]) had expressed similar views. Based on his historical research in 1896, Gaetano Mosca (1938) had concluded that *in all societies* some small groups (leading classes, elites or plutocracies), acquire great political influence over governments and their policies, and that power determines the economic outcomes.

We should worry about how much views that have been recently expressed by economists and by others have come to resemble, without their authors' recognizing it, the views theorized by the Italian Scienza delle Finanze a century ago. Recent developments may have moved individualistic governments toward monopolistic ones by increasing the influence of some groups, such as the managers of large enterprises, those at the top of wealth distribution, and others. Among several relevant, recent books that have argued along the above lines, see MacLean (2017) and Levitsky and Ziblatt (2018).

PART II

Public finance instruments and techniques

4 Government tools

To promote their goals and to exercise their responsibilities, different governments have used various instruments over the centuries. The use of instruments has changed with time and place; some are now more used than they were in the past, others less so. The quality and the type of government, authoritarian or democratic, and efficient and less efficient, have determined, to some extent, the instruments that governments choose, or rely upon. As its name implies, the study of *public finance* traditionally focused on the *financing* side of government operations, namely on taxes and, to a lesser extent, public debt. For a long time, public finance books were mainly books on taxation.

4.1 Regulations

Regulations were also important instruments frequently used by governments in the past, because they required little financing. Their effects were, thus, less discussed, except when they were criticized, as in Adam Smith's *The Wealth of Nations* (see, e.g. De Viti De Marco, 1936; Dalton, 1954; Musgrave, 1959; or even recent textbooks such as Rosen, 2005, in which regulations attract only a couple of pages). Especially in the second half of the 20th century, public spending had been added to the study of public finance and had become more important, but regulations were still little discussed.

Beside the instruments mentioned above – taxes, debt and regulations – governments have relied and continue to rely on other instruments to achieve the goals of allocation of resources, stabilization of economies, and redistribution of income and wealth. In this chapter we address, briefly, the use of these less important instruments. In some countries and at some times, they became important, but they still attracted little attention from public finance scholars, and public finance textbooks continued to ignore them. Some brief descriptions may be justified in a book that deals with the economic actions of governments.

4.2 Conscription

The instrument of *conscription* was important in the past. Governments simply appropriated the time and the work of some individuals to pursue particular objectives. This appropriation was equivalent to heavy taxes on those individuals, and of taxes that were highly regressive. Many of the large public works of the distant past, such as pyramids in Egypt and in Central America, were built by individuals forced to provide their work, at times as slaves, against some meager subsistence. The same was the case with the building of the Great Wall and canals in China, and of the cathedrals and protective walls for cities in medieval Europe. The authorities simply forced some individuals to provide their time and work. Wars were also fought by (often) forcing able-bodied individuals to serve in the army. The use of this instrument may have helped convey the impression that, in the distant past, individuals always paid little in taxes. This was true in a statistical sense, but not in an effective sense, at least for some individuals.

4.3 Ownership of assets

In many countries governments own significant public assets, such as land, buildings and natural resources, among others. In the USA the federal government, in some "states" such as Nevada, owns more than half of the states' land. In other countries, valuable mineral resources, such as petroleum, natural gas, copper, iron, became government property when the resources were discovered. In still other countries, such as Italy, the government owns many man-made assets that in the past had been owned by religious orders or by civil authorities that no longer exist, such as convents, castles, fortresses, jails, unused churches and palaces. In Italy, all land near the coastline, outside of cities, is also owned by the government.

The market value of these assets can be high. In the past, they had been used by their original owners before they became public property. Decisions have to be made about what to do with them, how to use them productively, and whether to sell them to raise revenue that can be used for various purposes. These decisions involve potentially important public finance issues and are often controversial. A prevalent view among economists is that public assets are not used as productively as they could be, so that it would be good to privatize them.

Public assets may be kept under-utilized, or they can be put to productive uses, including those of satisfying social objectives, as for example public land is kept as national parks, or beaches are available to all citizens. In these cases the social (but not the financial) rate of return may be high, but it is difficult to measure. In many cases these assets may be utilized in some public sector's activities, such as school buildings or buildings used by the military. When this is the case, the use of the assets is often not counted as a budgetary cost of providing the particular public service, such as education or defense. Therefore, the real cost of providing those services may be underestimated (see Tanzi and Prakash, 2003 for examples).

Some such assets may be kept to meet future government obligations, such as pension systems, or simply to increase the *net worth* of the public sector, a concept that New Zealand has used to evaluate the economic status of its public sector. A higher public sector's "net worth" might reduce the current cost of borrowing for the government. The concept of net worth of the public sector deserves more attention on the part of public finance scholars; however, it is difficult to measure. For example, it is difficult to put a value on assets owned by the government that, for constitutional reasons, cannot be sold. Various legal or even political obstacles might make it difficult to sell some of these assets, especially in federations.

4.4 Public enterprises

In several countries (e.g. France, Italy, Russia, China, the UK) some enterprises were nationalized at some point in time. Many were nationalized during the Great Depression, to prevent them from going broke, or after

World War II, as a consequence of socialism's growing popularity. Some countries created *public* enterprises, which were often connected with public transportation and the provision of drinking water, because these ventures were assumed to be "natural monopolies". Some of them were later privatized, especially in the 1990s when market fundamentalism became popular.

Enterprises may be public, either because of their monopolistic character or because they are seen to serve important social objectives (including national security) better than private enterprises. Some of them are productive, others less so. Some need subsidies. In the 1980s and 1990s, when "market fundamentalism" became popular, many economists came to believe that the private sector was inherently more efficient than the public sector in running enterprises, which led to the boom in privatization. In some countries, such as Italy, privatization was also promoted by the need for government revenue when increasing taxes was difficult. There was also the belief that privatization would make the enterprises more efficient because they would be exposed to competition. Unfortunately, the process of privatization did not always deliver the expected beneficial results and, recently, some economists have questioned the assumption that public enterprises are naturally less efficient.

4.5 Use of contingent liabilities

Another instrument that governments often use is contingent liability. Contingent liabilities are implicit liabilities that show up, or attract attention only when governments are called to honor them. These liabilities range, for example, from guaranteeing saving deposits for citizens, to guaranteeing pensions for public employees, guaranteeing rates of return for investors that have built infrastructure using public–private partnerships (PPPs), and guaranteeing bonds that support mortgages of individuals who buy houses. Debts incurred by sub-national governments or by public enterprises can at times become liabilities for national governments; some are implicit.

These contingent liabilities are important in determining the allocation of resources but they do not show up as liabilities in normal budgets until governments are called to satisfy them, as many had to do during the 2008–09 recession and during other crises. Contingent liabilities are important instruments of fiscal policy. They are instruments that have been increasingly used in recent years and they deserve more attention on the part of economists and public finance textbooks.

Since the 1990s, various governments have reduced their spending on public investments by providing guarantees to private investors who carried out major financing, using private funds with some public guarantees. These guarantees, associated with PPPs, created potential future risks for government budgets (for some examples, see Polackova Brixi and Schick, 2003; Levitt, Scott and Garvin, 2019). Governments are exposed to (implicit or explicit) contingent liabilities in financial sectors when banks assume high risks and they are deemed “too big to fail” (see Schuknecht, forthcoming). The large rise in both public and private debt in recent years must have created increasing fiscal risks for governments in future years.

4.6 Timing maneuvers

At times, governments use delays in making payments or they anticipate the collection of taxes to achieve particular fiscal, cash, objectives. Delay tactics are employed in many areas, such as payments to suppliers for goods and services provided (to show better cash results); repayment of loans to banks; reimbursement of value added taxes (overpaid by exporters); salaries to employees; and repayments of the principals on loans. In extreme cases default on the principal due to creditors, and not on the interest due, is used. Finally, public expenses may be reduced by delaying the needed operation and maintenance of public infrastructure, or even delaying required public investment. Attempts have been made in recent years to make more use of *accrued* accounting rather than *cash* accounting, but this is not always easy or possible.

4.7 Fines and fees

Governments that experience difficulties in raising needed revenue from taxes have at times increased user fees for public services (e.g. for obtaining passports or driving licenses, access to national parks, public schools and some public health services, use of public utilities). Fees can provide some revenue in addition to the information that they provide about the demands for some services (see Brownlee, 1961). Governments have also increased the value, use and frequency of fines (e.g. for parking violations, speeding, and other, often small, misdemeanors). These fines have increasingly been used as an easier way to raise public revenue, especially by local governments (perhaps excessively so in some cases) who have increased penalties financially and seemingly set traps for drivers to catch minor traffic violations.

The distributional implications of these fees or fines are obvious but have attracted little attention. They may also have reduced the number of minor violations. In some countries taxes on some kinds of betting, and on the use of some drugs such as marijuana, have become easy revenue sources, as have been other "sin taxes", on smoking, drinking and gambling. Some of these methods employed by governments may be examples of the "fiscal illusions" which Puviani (1973 [1903]) wrote about a century ago. They can be justified by the argument that they reduce "sins" and bad behavior.

4.8 Maturity of public debt

The maturity of public debt can be changed to reduce the costs of borrowing for the government, or to promote some other specific objectives, for example by replacing more expensive long maturity debt with cheaper shorter maturity debt. This change makes the short-run debt burden for the government lighter but it exposes the country to greater longer term dangers. The rise in the activities of hedge funds have facilitated some of these maneuvers, as has reportedly happened in Greece and some other countries in recent years. The growing complexity of the financial market has not only facilitated these operations but has also made them less transparent and often more risky.

4.9 Tax amnesties

Several governments have occasionally used *tax amnesties* to obtain additional short-run revenue from taxpayers who have not paid past taxes, or who have intentionally cheated the government over tax payments. Tax amnesties are not likely to increase revenue over the long run and may even reduce it. However, in the short run they may increase government revenue. Tax amnesties are often announced as being the last ones, to encourage taxpayers to take advantage of them and cleanse their past records. However, taxpayers may formulate rational expectations that, if amnesties have been used in the past, they are likely to be used in the future. Therefore, they may continue with, or may even intensify, their tax evading behavior in future years.

4.10 Appeals to patriotism

To assist governments in dire financial need, especially during major wars or catastrophes, governments have appealed to citizens' patriotism. In exceptional cases citizens have been asked by their governments to buy war bonds or, in extreme cases, even to donate their wedding rings to the state to fund major wars.

All the above instruments play, or at times have played, some important roles in providing financial resources to governments, or in allocating real resources to them. They are all part of public finance. The use of some of them changes little the *official look* of public budgets, but makes them less transparent measures of the real, fiscal situation of a country. Fiscal outcomes and fiscal policy become progressively more complex, and their effects become more difficult to assess properly using the standard, available statistics of fiscal deficits and public debts. These are the statistics that receive much attention on the part of macroeconomists and the public. Complex models are often developed by economists based on statistics that are not as accurate as they ought to be, and are less indicative of the true fiscal situation of countries. Public finance scholars, and also macroeconomists, should pay more attention to these issues rather than ignore them as they often do.

4.11 Privatization of government operations

Some governments, including that of the USA, in recent years, have reduced the number of public employees and have kept down their salaries. They have hired private enterprises and private consultants to perform some of the functions that in the past have been performed by regular government employees. These functions now include, among others, national security, providing meals to jails and to public schools, issuing parking fines, repairing roads, making public investments, renewing passports and driving licenses, running jails and hospitals, and regulating some financial activities (and to some extent even drafting tax bills). In this way a government can show less *public* employment and more market use, but, often, without genuine financial saving and with some compromise in its regulatory and other functions. Public employment may go down, as it has in some countries, while public spending and public debt may go up.

This has happened in the US federal government in recent decades, where the number of public employees has been reported to have fallen. This fall has reduced: (a) the staff of senators and congressmen, to the point that some tax laws and regulations are now written by lobbyists; (b) the staff of the Internal Revenue System (the US tax administration), significantly reducing the number of tax audits and affecting tax revenue; (c) the number of regulators, reducing the ability to regulate in important sectors, including the safety of new aircraft; and (d) the number of scientists working in important fields.

The border between public and private has become more blurred. The "common areas", areas that are neither fully in the private sector nor in the public sector, have grown, facilitating acts that have allowed private providers (a) to inflate the costs of the services that they provide to the public sector; (b) to inflate the costs of investments made on behalf of the government; and (c) to charge governments for work not actually performed, or performed badly. In some cases public sector inefficiency has been traded for private sector corruption.

As a consequence, the social status of government jobs, and possibly the average ability of those who choose government careers, has also declined over the years. Many able individuals are now more likely to choose a career in the financial market rather than in the public sector, or to take on senior public positions that will allow them to land highly paid jobs in the private sector (e.g. banks, think tanks) after a short public career. There are now many examples of these transitions by previously high-level public servants.

4.12 Rationing and price controls

Finally governments occasionally use the rationing of some goods that have become scarce, and controls over some prices, especially during emergencies, including wars. These tools obviously have redistributive effects and, if sustained over time, lead to inefficiencies and corruption. The use of price controls, related to products or services that benefit from temporary monopoly power, such as new medicines, is now the topic of much debate in some countries. Here the goal of stimulating the search for new cures for illnesses collides with that of protecting patients from exploitation, making it a difficult area for public finance.

All the above tools indicate that governments can influence economies, including the allocation of resources and the distribution of income, in various ways, apart from the traditional ones on which public finance scholars have focused, that is, the official public budget. Even stabilization objectives can to some extent be promoted by changing regulations that have become obstacles to economic activities. Removing some obstacles to investments and to the labor market can provide a stimulus to the economy, helping Keynesian countercyclical policies. These possibilities should receive more attention on the part of public finance scholars. However, the more governments rely on these other tools, the more difficult its task becomes.

5 Guiding tax principles

5.1 Introduction

Public finance started mainly as a study of tax principles, at a time when the government goals of redistributing income and stabilizing economies did not exist. The main concern of public finance scholars, especially in democratic countries, was how to make citizens pay for the limited, government expenses, in ways that would be bearable for them and the least damaging to economic activities. Were there *scientific principles* that governments could follow to make taxes less burdensome and damaging? In countries with "monopolistic states" the main concern was how to reduce the resistance of taxpayers to paying taxes, by using "fiscal illusions" and other strategies. There was a belief among scholars that a *science* of public finance could be created.

A tax is a compulsory charge imposed by a government on some, hopefully well-defined tax base, for indirect taxes, and well-defined taxpayers, for direct taxes. What distinguishes it from a fee is the absence of a *direct*, *immediate*, *quid pro quo* between taxpayer and government. In years past, tax revenues were used to finance relatively well-defined and limited government activities.

Economists did not consider public spending as productive. It promoted expenses that were not seen as useful, such as the luxurious lifestyle of royal families and other rulers. Therefore, the general rule was: the less the better, and the less the spending the lower the taxes. There was no view that public revenue might be used to make the distribution of income and wealth more equitable; that it could help deal with business cycles; or, that it could promote general welfare in other ways.

Laissez faire or classical economists believed that tax revenue above some essential minimum would be wasted by governments, and higher taxes would have damaging effects on economic activities. This view was made clear by Leroy-Beaulieu (1888), cited earlier in Chapter 2. David Ricardo (1973 [1817]) dealt mainly with taxation, writing that ". . . the great evil of taxation is to be found, not so much in any selection of its objects, as in the general amount of its effects taken collectively" (p. 95). Ricardo paid a lot of attention to tax shifting, pointing out that the final burden of a tax does not always rest on the subject on which it is originally placed.

More than a century later, even Keynes would believe that taxes could be too high, and that a tax level greater than 25 percent of GDP should be considered a limit to the *desirable* tax level (see Clark, 1964). Other such citations, expressing concern for the effect of high taxes, can be easily found. In the USA, the total tax revenue during the 19th century was well below 10 percent of GDP and it remained at that level until before the Great Depression. The tax revenue of the federal government was only 2–3 percent of GDP, partly collected from import duties, until the introduction of the income tax in 1913.

5.2 Adam Smith's tax canons

In a long chapter on Public Revenue in *The Wealth of Nations*, Adam Smith (1999 [1776]) dealt with the characteristics, or the *canons* that a good tax system should satisfy in a democratic country with a market economy. His concern was mostly with efficiency, the allocation of resources and the concept of equality before the law. Smith paid attention to equity but mainly to *horizontal* equity, that is, to the tax treatment of individuals or families in similar conditions. He listed four canons of taxation that are still useful today, though they may no longer be considered sufficient by tax experts. These canons were: *certainty*, *convenience*, *economy* and *equity*. A few, brief comments on these principles seems appropriate.

Smith asserted that a tax liability should be clearly determined and known with *certainty* by taxpayers. Taxes should not be levied arbitrarily, and taxpayers should know exactly what they owe, and also when and how the owed tax should be paid. Taxpayers should not have to live with the worry, or the uncertainty, that they might have paid too much, or too little; or that, at a later time, they might be faced with requests from tax authorities for additional payments, or even with penalties, for having paid too little, or too late. The act of paying the tax should be simple and should not require additional costs beyond the tax payment itself. As Smith put it: "Every tax ought to be so contrived as both to take out and to keep out of the pockets of the people as little as possible over and above what it brings into the public treasury of the State". What, today, we call *compliance costs*, costs beyond the tax payment itself, should be zero, or close to zero.

Smith did not specifically consider efficiency costs, costs attributed to distortion of market equilibrium created by taxes. Those costs would become important in the tax analysis of later years, when economists discovered the concepts of marginal utility and equilibrium, and they became concerned with market distortions created by taxes. Later years' analysis would stress that taxes should not distort the economic behavior of taxpayers, or the allocation of resources that the free market would create. These distortions would be called *dead weight costs* for the economy, because they change the allocation of resources in markets and the free choice of taxpayers. Dead weight costs are created when taxes change the behavior or the choices of taxpayers, or the allocation of resources, beyond those created by the impact of the taxes on the spending power of citizens, the so-called income effects.

Finally, taxes paid should reflect some principle of social justice, by which Smith seemed to mean respect for *horizontal* equity, the view that two taxpayers in similar situations should be treated equally. At that time there was no view that taxes should respect *vertical* equity, or should consider taxpayers' ability to pay. Generally, at that time, taxes tended to be regressive with respect to income or wealth, and income taxes did not exist, or were not important. However, Smith wrote that ". . . as nearly as possible [the tax contribution of the subjects] should be in proportion to the revenue which they respectively enjoy under the protection of the state". Therefore, there was no view of *progressivity* but one of *proportionality*.

Let us add a few additional comments on the above characteristics, starting with *certainty*. The law should inform taxpayers on the exact amount that they owe, in connection with a given taxable action, and also when the tax payment is due. Taxpayers should not need to negotiate with tax collectors either the amount of the tax or the timing of the payment. When taxes are imposed arbitrarily, or when tax laws are complex and lack clear and objective criteria that determine the tax due, taxpayers face uncertainty, and uncertainty is rarely a desirable characteristic in the economic world. *Presumptive* and *forfeit* taxes were, and at times still are, widely used in some countries. Those taxes use(d) criteria that might have been somewhat arbitrary, or might have followed specific, though questionable, rules. They are still widely used today in developing countries (see Tanzi and Casanegra, 1989).

In later chapters we shall come back to the issue of tax complexity, an issue that, in many countries, has become much more important with the passing of time, and that merits more attention than it has received by tax experts and governments (see Tanzi, forthcoming). The introduction of modern accounting methods and of withholding at the source of the tax, during the 20th century, reduced some of the tax uncertainty. Unfortunately, the pursuit of increasing numbers of social and economic objectives by governments through tax systems have made the tax laws of many countries more complex, reducing the certainty that Smith's canons advocated.

Complexity has increased the scope for different interpretation of laws on both sides of the tax payment act. It has also contributed to frequent disagreements between taxpayers and tax administrators, which are not always settled by tax audits. Uncertainty has led to the creation and the growth of a large, sophisticated and growing industry of tax advisers and consultants that, by absorbing many talented resources, must be considered a significant *dead weight* for modern economies. That industry has also increased the search for tax avoidance, to be distinguished from explicit tax evasion, thus raising equity questions.

Convenience in the payment of taxes has become a smaller problem over the years. The reason for this is that some sales taxes (value added tax, taxes on gasoline and other excises), can now be collected directly by the sellers when the taxable purchases are made, and some income taxes can be withheld directly by employers when they pay wages to workers. Other taxes (such as those on income not withheld at source and taxes on property) can be paid by sending checks to the tax administrations, and/ or by using the banking system to make the payments. These options were not available in the past, when payments had to be made in cash and in person, and at specific places.

5.3 Compliance costs

For middle-income taxpayers, *compliance costs* have increased significantly over recent decades, due largely to the growing complexity of tax laws and to the fact that, in many countries, taxpayers are required to prepare their own tax declarations. Estimates of the hours required to prepare tax declarations have become available from some sources. Tax complexity has made it difficult for many taxpayers to determine precisely and with certainty what they owe, and it has encouraged more attempts at cheating. Some data indicate that complexity is greater in countries with federal systems.

"Tax gaps", between what is estimated to be owed to the government and what is paid, have become available for several countries and seem to have increased over the years. The cost for taxpayers of determining what is due has also gone up, and in a non-equitable way (see Evans, 2003). Compliance costs, as shares of taxpayers' income, have been estimated to be less for large corporations and rich individuals who can hire tax experts than for those with lower incomes, except those who do not need to present a declaration because of low taxable incomes. Estimates of annual global tax evasion, made by the OECD, the IMF, the Tax Justice Network and some private sources, indicate that they now run into hundreds of billions of dollars.

5.4 Ability to pay

Because of the objective of making income distribution more equitable, something that has been endorsed in many countries over recent decades, and because of the recognition of the important role that taxes can play toward achieving that objective, the principle of *ability to pay* and the related one of *vertical equity* have become increasingly important. As a consequence, the *benefit-received approach* has become less important, except for some specific taxes, such as those on gasoline and properties.

The concern for vertical equity was especially reduced in the 1980s and in later years in some countries, while concerns for efficiency increased as a consequence of the "supply-side revolution". Efficiency of taxes and allocation of resources received more attention from tax economists. Some recognized the potential conflict that may exist between efficiency and equity. The more one worried about allocation, the less one would have to worry about equity and ability to pay (see Davie and Duncombe, 1972, pp. 154–5).

The growing complexity of tax systems and the greater use made of "tax expenditures", "tax incentives", and other "special tax treatments" by different categories of taxpayers, in addition to different possibilities of tax evasion, inevitably affect the allocation of resources and create issues of equity. *Horizontal inequity* is officially created and condoned when two taxpayers with similar incomes end up being subjected, by official rules, to different tax burdens. The same happens when two enterprises with similar profits pay different taxes because of different tax incentives or tax rules. In today's world some of the most profitable technologically based enterprises, such as those that rely on the Internet and sell their services globally (e.g. Apple, Google, Facebook, Microsoft) are paying little taxes on their profits because of existing rules.

Modern governments often intentionally cause, with their policies, what could be considered horizontal inequity, when they try to promote specific goals. Ironically these policies are created to improve general equity, as, for example, when two families with the same income, but different sizes, or different acquisition of merit goods, end up paying different taxes. These officially promoted "inequities" are used to achieve particular social objectives.

Depending on the political biases of economists, some favor these policies while others, while not favoring them, do not necessarily consider them economically damaging. The public finance literature has continued to assign significant weight and to allocate many pages to tax-induced distortions. We shall discuss some of them below, in the contexts of supply-side economics and optimal taxation literature (see earlier discussions in Dalton, 1954; Groves and Bish, 1973; Rosen, 2005).

During Adam Smith's time there had been no view, or at least no consensus, that taxes should be progressive, or that they should favor particular taxpayers' behavior. This would have been considered to be against the natural order of things. Taxes on those with lower incomes often tended to be heavier as shares of their incomes than those on the rich, because most taxes were on basic commodities. The view that *ability to pay* should be a criterion for taxation became popular mainly in the 20th century.

Conservative, or libertarian, economists, such as James Buchanan and his followers in the School of Public Choice, and members of the Chicago School, have at times questioned tax progressivity and have expressed preference for proportional and flat taxes on grounds of efficiency, simplicity, and because of how they interfere less with the free choices of individuals. Flat taxes made their way back in the tax systems of several, especially transition, economies in the 1990s (see Hall and Rabushka, 1995). Many of these countries had had relatively even income distributions in those years.

The "ability to pay principle", often identified with the level of income, has a lot of intuitive appeal, but there remains the problem of how to measure ability to pay. The economic literature has tried to solve that problem by assessing the sacrifice that taxpayers experience when they pay taxes. Principles of "equal sacrifice", "proportional sacrifice" or "minimum sacrifice" have been considered in the theoretical literature. These measures of sacrifice give different answers. They all depend on the relationship assumed between the (actual or permanent?) income of individuals and the utility that the income provides to them. In any case, there remains the fundamental problem that the concepts are not concretely measurable. There also continues to be disagreement among experts on whether the tax unit should be the individual, the family (and how defined?), or the household. Also, wealth as a tax base has been receiving increasing attention from some quarters.

5.5 Benefit received

A tax principle that was considered important is that taxes, or at least some taxes, should reflect the benefits that citizens receive from public spending (see Musgrave, 1959, chapter 4). This principle had been suggested as far back as 1677 by William Perry. It was raised in connection to the question of who should pay for the public goods that governments made available. The Italian Scienza delle Finanze had simply assumed that the benefits that individuals or families received from public spending could be considered to be broadly proportional to their incomes or their total spending. Therefore taxes broadly proportional to incomes or spending would satisfy the benefit-received principle. The Anglo-Saxon literature had generally tried to be more precise. It may be useful to cite from a standard public finance textbook, Davie and Duncombe (1972, p. 145), which reflected that view:

> [T]axes are regarded as the prices citizens pay for the goods and services they buy through their government, and are assessed on each citizen according to the benefits he directly and indirectly receives. Direct sale to buyers . . . where the [government] department [is] making the sale is . . . expected to be self-supporting from revenue, represents charging on the benefit principle . . . The Federal motor fuel excise tax and most state gasoline excise taxes are earmarked for highway construction and maintenance . . . These taxes are basically assessed on the benefit principle.

The view that taxes are prices for goods offered by the government has been a popular concept. These taxes are based on the principle that those who use the roads or other public goods, including protection and defense, should be the ones to pay for the services received. This is the concept of earmarking, which is closely associated to that of benefit received. However, for many years in the USA it has been politically impossible to adjust the (specific) motor fuel excise taxes, even for inflation. This has led to a fall in revenue and the deterioration of many roads and bridges. Opposition to tax rises has come mainly from states with low population density and with lower per capita incomes, where the residents have to travel longer distances by car.

The above is a classic example of how distributional considerations have entered into technical tax decisions, including those on benefit taxation. All earmarking taxes are subject to the same political issues, proving that public finance decisions remain inherently political in democratic countries. As Davie and Duncombe (1972) recognized, "[t]he ability to pay principle takes the position that the benefit principle is irrelevant" (p. 148). Changing from a system where governments are financed on the basis of the benefit principle to one based on ability to pay represents a fundamental adjustment. However, the problem also moves from how to define "benefits received" to how to measure "ability to pay".

5.6 The Laffer Curve

During the 1970s, economists rediscovered the importance of the supply side of economies, the side that had attracted much attention in the 19th century, but which had been largely ignored during the Keynesian Revolution. In the mid-1970s, Arthur Laffer advanced (on a napkin in a restaurant in Washington DC to a group of conservative politicians) a hypothesis that suggested that high marginal tax rates on income might have strong detrimental effects on the economic performances of individuals. The reason he gave was that taxes reduced the efforts of taxpayers by reducing the financial compensation they received for their efforts. This made them work less and prefer more leisure. High marginal tax rates were also likely to promote a return to more tax evasion.

Laffer argued that when a country used high marginal tax rates its economy would experience both an output and a revenue loss. By reducing its high marginal tax rates, the country would experience faster economic growth and its governments would obtain more revenue because of higher growth and lower tax evasion. Therefore, reductions in marginal tax rates would be self-financing. They would provide a proverbial "free lunch".

Conservative economists and politicians enthusiastically endorsed the new, politically attractive theory, and several, especially, Anglo-Saxon countries, in the 1980s and 1990s followed Laffer's advice and significantly lowered their marginal tax rates. In the USA the highest marginal tax rate for individuals was reduced, within a few years, from 70 percent (and over 90 percent in earlier years) to 28 percent by the 1986 Fundamental Tax Reform of the Reagan administration, giving large windfalls to individuals with very high incomes. The *Wall Street Journal*, conservative think tanks and conservative economists and politicians became fervent promoters of the new theory (see Malabre, 1994; Tanzi, 2014a). The 1986 US tax reform had an almost immediate impact on the tax systems of other countries (see Tanzi, 1987). Some very high-income individuals (millionaires), saw their tax burden collapse and their after-tax income rise dramatically, making income distribution less even.

The Laffer Curve changed the social and economic landscape. It became an influential and easy to understand "political instrument" that, in the USA in 1986 and later in some other countries, led to large tax rate reductions and to changes in income distribution, and in political power in the following years. The Laffer Curve became a very influential theory and a leading tax principle, in spite of its rather shaky theoretical foundations and its questionable social outcome. By reducing tax rates, a policy always welcome to individuals in the highest income brackets, and for conservative governments, it contributed to significant increases in Gini coefficients (see Slemrod and Bakija, 2004). Recent Federal Reserve statistics have reported that in the USA in 2019, the top 1 percent held 56 percent of the value of all US shares (Federal Reserve, 2020).

Whether the lowering of marginal tax rates also contributed to higher economic growth and to more public revenue, as had been claimed, has remained a hotly debated and controversial issue. Empirical evidence indicates that reductions in the rates were not self-financing. The first President Bush had to increase tax rates a few years after the 1986 reform. Public debt has increased in many countries in recent decades, in spite of unusually low financing costs; and it has increased even more in the USA. Nevertheless, the Laffer Curve has been a "principle" that has guided tax policy and has influenced the tax policy decisions of many countries since the 1980s. Globally, *marginal* tax rates on both individuals and enterprises were significantly lower than they had been in the 1970s (see Tanzi, 2011a, table 1.5, p. 21).

5.7 Taxes and efficiency

It had been a firm belief for classical economists that taxes can change the economic behavior of economic agents, reduce economic efficiency and lower the rate of economic growth of countries. Leroy-Beaulieu (1888) had believed that this was possible even when the tax level of a country was as low as 12 percent of GDP, at a time when the taxes that existed were low. Even President Kennedy endorsed this view, when, in a speech delivered in New York in December 1962 before he started reducing taxes, he stated that: "[I]t is a paradoxical truth that tax rates are too high today and tax revenue is too low, and the soundest way to raise the revenue in the long run is to cut the rates now".

The Laffer Curve was based on the same belief as was held in the past – it was a modern and more radical extension of it. Discussions of the efficiency costs of taxes now fill many pages of public finance textbooks, as they did in the 19th century, and have been dealt with at length in welfare economics and in books on taxation (see Musgrave, 1959, chapter 7; Slemrod and Bakjia, 2004; Rosen, 2005; and many chapters in Dalton, 1954 for informed earlier discussions. Basic references to the enormous literature on welfare economics are Pigou, 1932; Graff, 1957; Mishan, 1965; and Hicks, 1981).

Public finance books argue that income taxes with high marginal rates reduce an individual's incentive to work or work hard, because they reduce the net of tax compensation received, and because of the implicit subsidies that taxes give to leisure. Taxes can also reduce the incentive to save if the return on saving is highly taxed. They can encourage shifts from better-paid, but more demanding, activities, to less demanding and lower paid ones. Excise taxes can make individuals shift their consumption from higher taxed to lesser taxed products, especially if the products are a close substitute. Income taxes can reduce capital accumulation if the return on capital is highly taxed, and can encourage some individuals to move from visible, taxed occupations, to more difficult to tax underground activities, or to difficult to tax foreign activities, while encouraging tax evasion (see Tanzi, 1980d). They may even induce individuals to remain single or get married, and get more or less children, depending on the tax treatment of families. They may encourage some individuals or some enterprises to accumulate more debts, if the servicing of the debt reduces taxable income.

All of the above reactions are of course possible. However, they all ignore the use to which the government will put the money. Therefore, the reactions are based on what economists call "partial analyses". Some of the above potential reactions to high marginal tax rates might result in lower growth rates and in lower government revenue. Others may just result in lower assumed welfare. All the above effects are possible and the analysis of those possibilities fills many pages of books on taxation. However, it is one thing to theorize about these effects and another to prove their existence or importance.

The theory has suggested more certainty than the empirical evidence supports. While many empirical estimates have tried to measure those effects, the results have been far less certain than one would like them to be. By choosing specific studies, one can support or reject some of the theoretical conclusions. Some empirical studies have concluded that a high tax level reduces the rate of growth of economies; others have challenged that conclusion, and several European countries have continued to do well in spite of having some of the highest tax levels in the world.

It is worthwhile to cite one of the major students of these issues. In an important empirical study published in *The American Economic Review* in 1957, when marginal tax rates were very high, George Break concluded that "... the results showed no ... rise in the incidence of disincentives ..." even though there was "... a chorus of complaints, vehement and eloquent against 'penal' taxation". In addition, at the conclusion of an important book, *Welfare States, Taxes and Work Incentives*, A. B. Atkinson wrote:

> Many people hold strong views about the effect of the welfare state on economic performance. These views are highly influential in policy-making, yet they are all too often based on a superficial analysis of economic behavior and unsupported by rigorous empirical evidence to how work incentives have in fact been affected. (Atkinson and Mogensen, 1993, p. 288)

In the 1960s, when UK marginal tax rates were very high, an important public finance British economist could report that

> ... a series of empirical studies of the effect of income tax on work effort in the United Kingdom [indicated] that [w]hilst some people worked less as a result of high marginal rates of income tax, others were impelled to work more. None of the studies revealed significant net disincentive effects. (Sandford, 1969, p. 240)

There are various shortcomings in most of the empirical studies. First, as mentioned earlier, they generally ignore the uses to which revenues are put. Those revenues might finance essential infrastructure or highly productive public investments, or research and development (R&D) that opens new frontiers. Or, they may reduce important risks for taxpayers, lessening their need to spend their own money to protect themselves from those risks. In Scandinavian and some other countries, authorities have encouraged the opening of facilities to care for young children and old people, making it possible for many women to join and/or remain in the labor force, something not available to American women as there are no publicly financed crèche or childcare day center facilities in the USA.

The more efficient and the more focused a government is in the use of the taxes it collects, the less negative is likely to be the impact that the taxes will have on economic growth and economic welfare. For example, Scandinavian countries have some of the highest labor force participation rates in the world, in spite of very high taxes. The negative impact of high taxes requires also inefficient use of tax revenue by governments.

The view that the government is always inefficient and the private sector is always efficient is a convenient libertarian belief. Also, the *substitution* effects of taxes are given prevalence over the *income* effects, which may be important for many individuals. There is also the hidden assumption that individuals face free and costless choices: between occupations, in the number of hours that they work, and between work and total leisure. The existence of these choices is another strong assumption that often contrasts with the reality that most workers, and especially most dependent workers, face in today's world. Furthermore, only a very few individuals are exposed to the highest marginal tax rates, the ones that attract much of the attention of researchers. Most workers are exposed to the rates determined by their income levels, which are much lower.

At high-income levels – say at the rates that affect the top 1–5 percent of income distribution – tax studies give no weight or importance to psychological considerations such as professional reputations and standing of taxpayers, or to other factors that often accompany incomes subject to high tax rates. The studies allocate all importance to *financial* incentives and none to *reputational* incentives. The former are seen to predominate in the behavior of individuals. This contrasts with the observed behavior of many successful individuals who are often guided by professional ambition, and who are not likely to want to endanger their achieved professional standing and reputation by reducing their effort because the *marginal* tax rates on their *extra* income are high. The idea that successful and highly paid athletes, surgeons, artists, CEOs, and others will work less and will endanger their *professional* standing, because of high marginal tax rates, is not likely to reflect reality in many cases. A major review of many empirical studies that had dealt with the impact of tax rates on labor force participation found little effects of tax rates on work incentives (see Keane, 2011). The Scandinavian and some other countries that have some of the highest taxes in the world continue to have the highest labor force participation rates.

A more consistent result of economic analysis has been that high marginal tax rates on labor may discourage labor force participation by a second (female) member of a family or household; may encourage jobs in the underground economy; and may encourage attempts at tax evasion. However, empirical studies of the incentive effects of taxes in Sweden, the UK, Germany and Denmark all found relatively small or insignificant effects (see e.g. Atkinson and Mogensen, 1993).

One problem with empirical studies is the assumption that the world would be the same if no taxes were levied and if no government expenditures were financed by taxes. Taxes have not only potential substitution effects but also real income effects. Substitution effects receive much of the attention, but income effects can also play important roles. An individual who chooses leisure over work, because of the high tax on wages, must still deal with the loss of income that he/she experiences, and with some risks that he/she will continue to face. And the government that loses revenue may not be able to finance programs that make it possible for women with children to get jobs, or that reduce some financial risks for citizens, or that help economies grow.

The leisure that individuals may choose will not buy them bread for their table, or milk for their children, unless a generous government compensates them with free public transfers for the income loss, thus creating potential "poverty traps" that in some cases may become important. As to the shifting of occupations, or the reduction of hours worked, the assumption in tax analyses is that these changes are often possible, easy and relatively costless. In the real world, often, they are not.

Taxes reduce the disposable income of individuals, while they increase that of governments, thus, in principle, creating a *zero sum transfer* between individuals and government. However, taxes also create distortions that can create *excess burdens*. Excess burden is defined as an economic cost that is in *excess* of the payment of the tax, and that creates a net loss to society. This makes the tax payment neither a zero sum transfer nor an equal financial transfer between taxpayers and governments.

Excess burdens may be created when, because of taxes, individuals change their behavior from a presumably optimal level, by, for example, choosing leisure over work, less demanding jobs over more demanding jobs, and so on. Excess burdens are also created when individuals buy untaxed, or lower taxed items, over taxed, or highly taxed products; or when individuals choose consumption over saving, when the capital that is acquired with saving is highly taxed.

Some excess burdens are financial; others are purely psychological. The latter may not result in measurable changes in GDP, but may result in changes in welfare. Theoretical excess burdens are defined as costs to the economy that arise from tax-induced distortions of *optimal* choices. Some excess burdens may arise from distortions created by indirect taxes on consumption and direct taxes on incomes. Some basic assumptions are necessary to estimate these excess burdens and equity or re-distributional aspects are generally assumed away in those estimations (see, for examples, Harberger in NBER, 1961, and Harberger, 1964).

Some excess burdens have been shown graphically, using areas under demand and supply curves and pointing to areas lost under the curves, due to the taxes imposed. These areas are presumed to indicate utilities that individuals lose, and output that suppliers do not produce because of taxes. Equilibrium prices are assumed to be determined by the intersection of supply and demand schedules, in the absence of distorting taxes. Taxes move prices away from their equilibrium levels, leading to the loss of some areas below the schedules. These lost areas are assumed to represent welfare losses. This is the case in the "Harberger triangle" that is due to the burden created by the existence of taxes on corporate profits. These taxes are assumed not to be shifted to those who buy the output.

Questions that are often raised are: How much impact on economic growth can be accounted for by differences in tax levels? And how much real (rather than imagined) costs are generated in the economy by tax-created distortions? A lot of literature has dealt with these two questions, especially in the 1960s and 1970s, and similar questions have continued to be raised in more recent decades. There are some forms of excess burdens, including compliance costs, that are different from the more theoretical concepts of burdens based on lost utility. Some excess burdens can actually be measured, and they definitely imply real costs and lower efficiency. Others may simply reduce the theoretically measured welfare value by changing the preferred allocation or choices. These may not necessarily lead to reduced, measured output.

In a well-working economy, taxes should not bring distortions and should not impose "excess burdens" if these can be avoided. But taxes are needed by governments to finance important activities, and economies need governments. In today's world, avoiding all tax burdens is an impossible and unworthy task. The best that governments can do is to be aware of their existence and to try to reduce or minimize them, at not too high social costs. Furthermore, there are questions as to whether private markets always allocate resources rationally. The real world is one of second-best choices, not one of optimum outcomes.

It must also be asked whether normal people, as distinguished from economists, place as much importance on some forms of excess burden (such as, for example, item shifting, because of different excise taxes) as economists assume they do. How much real burden is there when I shift my purchase from oranges to apples, when an excise tax has been put on oranges? Economists that deal with real tax reforms, rather than with the rarified world of tax theory, seem to give much less importance to some of the theoretical issues of excess burden. They give far more importance to the *administrative* feasibility of proposed reforms, to their *impact on revenue* and to *equity* considerations. Furthermore, oranges may be easier to tax than apples, and apples may be produced in poorer areas.

A tax that, for theorists, would not impose any "excess burden" (as that concept is defined) is a *lump sum tax*. This is a tax collected in equal amounts from everyone, rich or poor, young or old, sick or healthy, employed or unemployed. Such a tax would presumably satisfy the requirement that all citizens contribute to the provision of a country's public goods, and that the tax should not change the existing market equilibrium because it cannot be avoided by some actions of individual taxpayers. Such a tax might even make sense in a country with a relatively even income distribution. However, such an "efficient" tax has not attracted many followers in the past, and it attracts even fewer in today's world, with its greater concern about equity and income distributions. As Rosen (2005) asked: "If lump sum taxes are so efficient, why aren't they widely used?" (p. 308). Such a question is obvious and important. It suggests that, at times, economists see the world in a peculiar way, which may help to explain why economics seems to be having less of an impact on many decisions today than it should have.

These “efficient” lump sum taxes are not used because they defy basic, common sense criteria of fairness; and these criteria are far more important to normal individuals than they have been to theoretical economists. Dalton (1954) recognized this problem. As he put it in his popular and influential book, “From the point of incentives, a poll tax [an equal tax on everybody] is one of the best forms of tax. But from the point of view of distribution . . . it is one of the worst” (p. 81). When the author of the present book taught public finance, decades ago, an African student once commented that such a tax would make many Africans flee into the jungle. Another one suggested that it might make some commit suicide. And, as prime minister of the UK, Margaret Thatcher discovered that this tax could be more hated than any other form of tax.

Perfectly proportional income taxes, or “flat taxes”, collected with uniform, low rates (from individuals or from families?) may better satisfy some efficiency criteria, but they have also received little backing in the real world, except in a few transition countries, because of their perceived inequity and because of the low revenue that they would generate in countries in need of revenue. Wide-based value added taxes, levied with one, low, rate would also come close to satisfying *some* efficiency criteria. However, many countries that use that tax have preferred to apply higher rates to finance spending, and have often used rates that are differentiated on the basis of the assumed *necessity* of the taxed products, giving more importance to equity than to efficiency. In the process, they have defied the Ramsey Rule, the rule that states that, for commodities that are not related, the tax rates should be inversely related to their elasticity. In other words, the most essential commodities, because of their lower demand elasticity, should be taxed at higher rates.

Two questions remain: If a government must deal with issues of income distributions, with distributions that are considered inequitable by the majority of the citizens; and if it cannot do it with taxes, but it does not have the revenue to do it with spending, then what other way is there? Does it have the option of ignoring the issue? The conclusion must be that the amount of attention that economists have allocated to some finer *theoretical* issues of excess burden issues that a former head of the tax program of the OECD called “the metaphysics of tax policy”, may reflect a relatively inefficient use of their time (see Messere, 1993, p. 37).

Equity considerations have become important in today's world and much more important than they used to be in the distant past. They have come to overwhelm in importance some efficiency considerations. As someone once asked, ironically: "how many 'Harberger's triangles' are needed to fill an 'Okun's gap'?" Arnold Harberger has been a pioneer in using equilibrium models in taxation. The "Okun's gap" is the gap in output created by high unemployment. It was named after Arthur Okun, a leading economist in the 1960s and 1970s (see Okun, 1970; 1975). Okun's gap, associated with lost output due to unemployed workers, obviously has more relevance for the welfare of citizens than do theoretical "Harberger's triangles".

5.8 Optimal taxation

Before closing this chapter some mention should be made of an area of public finance that has attracted considerable theoretical attention in recent decades, but far less real-world interest, in spite of claims to the contrary made by some of its followers (see e.g. Boadway, 2012). That area is *optimal taxation*. That topic has different dimensions and is linked with the earlier discussion of excess burdens. It is also very complex. It attracted considerable interest from some leading economists over the years, including some who received Nobel Prizes in Economics, such as James Mirrlees and Peter Diamond.

Optimal taxation may have started with the so-called Ramsey Rule, named after the economist (Frank Ramsey) who first proposed it, in 1927. Its most essential element is the rule that states that in order for excise taxes not to disturb the production equilibrium that presumably exists in an efficient market and maximizes welfare, the greater the elasticity of demand for a product is, the lower the tax rate on that product should be. It is better to tax with the highest rates products for which the demand is inelastic, which are often basic necessities, than less necessary, luxury products, for which the demand is elastic. Most normal citizens would consider this rule strange or even absurd and, not surprisingly, governments have regularly ignored it.

The implications of this rule are important and not socially, or administratively, desirable. First, the rule implies that basic necessities, products that have the lowest demand elasticity because they are necessities and are demanded by all individuals including those with the lowest incomes, should be subjected to the highest tax rates. Second, that there should be as many rates on as many products with different elasticity. Third, that the government must know the elasticity of the products to determine the tax rates to apply. It is easy to see why this rule has not attracted many real-world followers in societies that, today, pay attention to equity and to administrative simplicity. Both equity and administrative considerations disqualify the use of that rule. Optimal taxation also disqualifies progressive income taxes and favors flat taxes because of the impact that high tax rates are assumed to have in the choice between work and leisure.

Can optimal taxation provide some guidance on the issue of how consumption should be taxed, and on how progressive income taxes should be? Some economists have argued that it can. The issue of how progressive a tax system (and especially a personal income tax) should be, has been and remains a most contentious issue in public finance. Can optimal taxation theory be of some help in answering that question? (See Slemrod, 1990; Mankiw, Weinzieri and Yagan, 2009; and Boadway, 2012 for contrasting views.)

A basic assumption has been that the marginal utility of income and of any commodity that a person consumes diminishes with the increasing level of income, or with the increasing consumption of a product. This diminishing utility is what makes demand curves downward sloping. In principle, it implies that income taxes could be set so that they are paid by those with the highest incomes, making the distribution of income, after the payment of taxes, more equal. However, high tax rates on individuals with high incomes would generate Laffer Curve reactions on their part, aimed at reducing their tax burdens. This would lead to inefficiencies. Therefore the tax rates might be equilibrated, to achieve the objectives of both redistribution and efficiency.

Some tax schedules (such as "linear" taxes) may help achieve that objective. They would redistribute income with less (or without) disincentive effects. But higher tax rates would be needed. The more elastic is the supply of labor with respect to tax rates the lower must be the rate of income tax. Income tax may require the assumption that the value of high income falls in the same way for different individuals, and that they all react in the same way to the tax. That is an assumption that many economists have rejected, and one that might conflict with other goals.

These and several other theoretical models developed by optimal taxation theorists indicate that, as Musgrave (1959) concluded, the question of how progressive a tax system should be is and must remain a *political* question, one that cannot be answered scientifically. It also cannot be completely ignored because of possible efficiency considerations. Long before Musgrave, Léon Walras had stressed in the 19th century that issues of income distribution are not "scientific", and that, for economics to be considered a "science", it should not deal with those questions, because equity issues require (non-scientific) value judgments.

In the real world, those issues also depend on practical questions, such as collection costs, administrative difficulties, and on the reactions by taxpayers (including potential tax evaders) to the tax rates. They also depend on the *ecology of the tax system* and on how well the market is working (see Tanzi, 2018b). When "crony" or "casino" capitalism is believed to exist and to have become significant, and the market has become less efficient, the importance of theoretically determined efficiency criteria is likely to be much reduced, because the assumption of an efficient market is no longer sustainable. If there are already inefficiencies in the market, second-best solutions become more attractive, even theoretically.

In conclusion, the search for efficient (or magic?) formulas, often based on unrealistic assumptions, is and is likely to remain a futile effort. The truth is that no tax is truly neutral and that, in the real world, the use of taxes must consider various aspects and objectives, which include revenue needs, allocation of resources, equity, administrative difficulties and increasingly global aspects. The more attention is paid to one of these aspects, in isolation from the others, the more negative is likely to be the effect of the others. The quantification of the effects is rarely easy and never uncontroversial. Common sense must continue to be given its due.

In the decades after World War II, equity considerations and revenue needs became more important than they had been in earlier times. However, starting in the 1970s and especially during the 1980s and 1990s, some economists revived the importance of efficiency and tried to reduce that of equity. Because of the alleged conflicts that they saw between efficiency and equity (see Okun, 1975) for the following two decades equity objectives were awarded less importance by some economists and by some countries. However, following the 2008 financial crisis and recession, equity objectives are assuming more importance in the second decade of the 21st century and they are likely to continue to influence the choice of taxes in future years.

To the above trend must be added the growing impact of complexity that often accompanies the use of taxes when the number of objectives that governments want to promote increases, as is the case in recent years. These trends have implications for optimal taxation. As Rosen (2005) concluded: “optimal taxation . . . pays little attention to the institutional and political setting in which tax policy is made” (p. 343). He also quoted Holcombe (2002), who had argued that “in the presence of real world political institutions, policy recommendations based on optimal tax logic may actually reduce welfare” (cited in Rosen, 2005).

Before closing this chapter we may add a few words about the impact that the Marginal Revolution in Economics had on tax theory. That revolution was developed by economists William Stanley Jevons, Carl Menger, and Walras (among others) during the last three decades of the 19th century (see Stigler, 1973). That theory became popular with economists at a time when economics was trying to become “scientific” and a “university profession”; and when “the sovereign importance of policy questions diminished” for classical economists (Stigler, 1973, p. 311). This removed economics from the reach of common people.

Classical economists became interested in the “science” of economics, not in the policy implications of it. As Stigler (1973) concluded: “[the Marginal Revolution] took no important part in any policy-oriented controversy up to World War I” (p. 312). The fact that the “Marginal Revolution” considered the pursuit of income redistribution unscientific, and thus not deserving of the attention of a “science” of economics, is part of the explanation. During those years public finance became the “Science of Public Finance”.

6 The development of modern tax systems

6.1 Qualitative changes in taxation

In this chapter we shall report on development in tax systems over the past two centuries. Taxation was the part of public finance that attracted much of the attention of economists in earlier times. Until World War II there had been little attention paid to public spending by public finance scholars, except for occasional, random observations, mainly stressing that it should be kept at a minimum, or concerns that it had started to rise. Today's tax systems are different from those of a century ago. They are different in the bases they rely on, in the amount of revenue they generate, and in the objectives that governments try to achieve through their use. Taxes are now used to promote a large number of economic and social objectives, besides raising revenue.

We shall start by giving some description of important *qualitative* changes over the years. Later, we shall provide some *statistical* information on how the advanced countries' tax burdens changed over the very long run. Both supply and demand considerations have determined the kind of tax systems that the advanced countries have today (see Tanzi, 2018b). Most governments are now freer to choose the tax systems that they want, although there are still important political and administrative considerations. In recent decades, globalization and tax competition have been added to these considerations.

We shall list the main bases on which taxes can be imposed, and discuss how the use of these bases has changed (see Tanzi, 1973 and 2018b for more detailed descriptions). Historically, the first important tax base was probably *real wealth*, mainly land and buildings. In the past the wealth that individuals or families owned was mostly in concrete and visible forms, such as land, buildings, cattle and occasionally gold and silver. These were visible tax bases. Wealth received a lot of attention in Ricardo (1973 [1817]) and also in book V of Mill (2004 [1848]). Transfer of wealth *inter vivos* and also the passing of wealth to heirs at death, attracted the attention of governments and often comments by economists, some of whom thought that it should be taxed and some that it should not.

6.2 Taxes on wealth

Many governments that taxed wealth found it convenient to develop official registers, called *cadasters*, for real properties. These cadasters described the physical characteristics of the properties taxed (land and buildings) such as their size, the fertility and quality of the land, and other characteristics. These cadasters were used to assign values to properties that formed the bases for the wealth taxes. The cadasters required occasional revisions to keep them in line with market and other changes. Economic developments, urbanization and inflation could and did change the values. Large infrastructures, such as roads, canals, and later airports and others, built in the vicinity of private properties, could change the value of properties. These developments created arguments for so-called "betterment taxes", taxes to share in the "rents" that the properties had received from them.

Attempts were occasionally made to introduce some progressivity in these property taxes, for example by making the tax liability depend on the number of windows of houses, or on their frontal width. These aspects inevitably generated taxpayers' reactions to change the elements that called for higher taxes. It was one of the earliest forms of evidence available to economists that taxes *can* induce taxpayers' reactions aimed at reducing their tax liabilities, and can distort the resource allocation. In those years most of the properties were visible and owned by individuals, rather than by legal entities such as corporations.

6.3 Taxes on income

In the distant past the modern concept of income did not attract as much attention as that of wealth, and as it does today. Generally, individuals and families were defined by their visible wealth. There were no statistics of personal incomes on which taxes could have been assessed. The standards of living of families, and their ability to pay taxes, were determined largely by their visible wealth. Except for rare episodes, such as during the Napoleonic Wars, when in England income taxes were used to help finance the wars, income taxes were only rarely used, until later in the 19th century. However, some other parts of total income, such as wages, rents and interest received, were occasionally taxed (see Ricardo, 1973 [1817], chapters X and XVI; Mill 2004 [1848], book V, chapter III).

Because of industrialization and economic developments that would progressively change the structure of the economies, and because of political developments that were extending the power to vote to larger shares of the populations, 20th-century tax revenue from income became progressively more important and soon surpassed that of taxes on wealth. Income taxes were first introduced as taxes on specific incomes as *scheduler taxes* with different rates on different kinds of incomes. Some countries, such as Italy, also started aggregating the incomes from the different schedules into a comprehensive income, which was taxed at progressive rates. This was the beginning of the "comprehensive income tax". A prominent professor at Columbia University, Edwin Seligman, had been highly skeptical about the feasibility of taxing comprehensive income (Seligman, 1908).

6.4 Excise taxes and taxes on local markets

Beside the taxes on wealth and real property, countries levied taxes (called *excises*) on the sales of specific products. Among these the main commodities were tea, coffee, sugar, tobacco, alcohol, salt and fruit. The imposition of some of these taxes led, occasionally, to strong popular reactions from those taxed, as happened in America in the 18th century with the taxes on tea, and in the Kingdom of Naples in the early 17th century with taxes on fruits (see Adams, 1998). Some of these taxes, such as those on salt and tobacco, were at times collected by government monopolies. There were also presumptive taxes on vendors in local markets, and on the transportation of some products within countries, especially when goods entered towns. In medieval European towns, doors in city walls provided convenient points to tax some products before they were allowed inside.

6.5 Taxes on foreign trade

Other important revenue sources were taxes on imports, collected when ships reached national ports, or when foreign goods crossed national frontiers. Import taxes raise the domestic prices of imported products for domestic consumers and provide implicit subsidies to the local producers of similar products – the higher the duties, the greater the implicit subsidy to local producers. Therefore, import duties make it possible for less efficient domestic activities to operate by reducing the foreign competition that they face. They also encourage smuggling activities.

In *Fiscal Systems*, Richard Musgrave (1969) referred to import duties as convenient "tax handles" that governments often use because these taxes are easy to collect. This facility often invited their use. They have remained important revenue sources in many countries. For much of the 19th century they provided significant shares of the revenue of the US federal government. They were also adopted as policy instruments to provide protection to favored domestic activities. These taxes were widely used even at a time when economists advocated, and countries claimed to be following, *laissez faire* policies.

In the 1950s and 1960s, in Latin American and other developing countries, import duties became important tools for promoting industrialization, through "import substitution policy". That policy was then promoted by Raul Prebisch, an influential Argentine economist. It aimed at replacing imported products with locally produced industrial products. It was a popular policy, adopted by many developing countries. Unfortunately, it often failed to deliver on that objective. Enterprises got used to the protection and the government subsidies that they often received. The subsidies contributed to the creation of large fiscal deficits, which were often financed by money creation ("inflationary finance").

"Inflationary financing" led to high inflation, balance of payment difficulties and other economic problems for several countries, including

Argentina (see Tanzi, 1991, part 3; Tanzi, 2018e). Today, many developing countries continue to impose import duties for both protection and revenue reasons (see Tanzi, 1991, chapter 14, for earlier data on many countries). Throughout the 19th century, starting with the tariff of 1789, the USA used import duties to both raise revenue and provide protection to "young industries". This protection conflicted with the theory of free exchange, but had the backing of some economists, including the father of John Stuart Mill, in the UK, Friedrich List in Germany and many industrialists. The manufacture of cotton, woolen-based products, iron, and some others, received significant protection at various times. Several tariffs were imposed in the USA during different periods of the 19th century, some as war tariffs (see Taussig, 1892).

Some countries have used export taxes on some products over which they believed that they had some market power, as, for example, Brazil did on the export of instant coffee, or Argentina with soya. These taxes are also imposed to get revenue from the export of some agricultural exporters when it is not easy to tax them with income taxes. Export taxes *reduce* domestic prices of exported products, thus stimulating their *domestic* consumption. By *taxing* the exportation of the products, they reduce exporters' earnings, leading to lower production and exports (see Tanzi, 1991, chapter 15).

6.6 Taxes on events and legal documents

In the past some countries imposed taxes on special events, such as weddings, funerals and the receiving of nobility titles. These events created "financial illusions", using Puviani's term, and made it easier for governments to impose some taxes (see Puviani, 1973 [1903]). Also, some countries have used and continue to use stamp taxes on particular legal documents (passports, licenses, formal contracts, official documents, etc.).

6.7 The ecology of taxation

Various developments (some political, some structural), over many decades, have changed the socio-economic *ecology* within which countries' tax systems operate. This change made it easier for governments to increase tax revenue and to introduce new forms of taxation (see Tanzi, 2018b). The first of these developments was an increase in the share of the adult population that acquired the right to vote. In the 20th century that right was extended to most adult populations, including women, making it easier for democratic governments to gain popular support for higher tax revenues, when the higher revenues collected from progressive taxes and spent on social programs benefited most citizens. Therefore, the *demand* for higher tax revenue was increased.

A second development was the structural changes that took place in the real economies of many advanced countries, enabled by the Industrial Revolution, that led to the creation of large enterprises that hired thousands of workers and produced a large output and sales of goods, concentrated in a few places (see Ashton, 1948; Weber, 1961 [1923]). As a consequence of these developments, in the 20th century, *comprehensive* income taxes and *general* sales taxes became possible tax bases.

A third development was the combination of better-trained and better-paid public employees, with the increasing use of modern accounting methods, which became necessary to control activities within large enterprises. For governments, this facilitated the introduction of modern taxes, such as the personal income tax, the tax on the *profits* of enterprises, and *general* sales taxes. It would have been difficult to use these taxes before the advent of modern accounting and of large enterprises. Income and sales taxes would become the "work horses" of modern tax systems (see Tanzi, 2011a). In the USA, the creation of modern bureaucracies, especially in the federal government, would come later than in Europe, mostly in the 1930s (see Fogel, 2000).

With larger tax revenue and better bureaucracies the economic role of governments could evolve and become a modern one (see Hicks, 1947; Colm and Helzner, 1961; Rolph and Break, 1961). In the USA there was a big jump in public spending, from less than 10 percent of GDP in 1929 to 28 percent in 1958, largely due to defense spending. That spending, as a share of GDP, would fall after World War II, leaving more space for higher social spending, especially in the 1960s (Rolph and Break, 1961, p. 19). Over the next half century, there would be relatively little further increase in the share of taxes and spending in the USA, compared to European countries.

Another important change in the USA was the increasing use of taxes in promoting some "meritorious spending". Since the 1960s, "tax expenditures" and other forms of tax preferences were provided to taxpayers to promote some socially desired objectives (house buying, contributing to charities, educational expenses, and many others). Stanley Surrey, a Harvard lawyer at the US Treasury, was partly responsible for this change, which promoted social objectives with less use of public spending and more use of tax expenditures. The net result has been that some tax systems, especially in the USA, have been made increasingly complex. And complexity has introduced other problems by making the system more difficult to comprehend and more costly to comply with (see Tanzi, forthcoming).

6.8 Essential tax statistics

It would be useful, at this point, to provide some statistical information on the changes in tax levels and tax structures during the 20th century. These statistics convey a more precise idea of how much the world of public finance changed over the long run. Some of the data provided might not be strictly comparable over long time periods because they originate from different sources. However, what is of interest at this point is to convey the broad order of the magnitude of the changes. The source for the data that start in 1965 is the OECD (2019). Those for the earlier period come from Tanzi and Schuknecht (2000).

We start with some data borrowed from Tanzi and Schuknecht (2000, table III.1, pp. 51–2) for the period 1870–1960. Around 1870 the tax levels of advanced countries (for which data are available), were generally under 10 percent of GDP. Only three countries had levels that exceeded this. These were countries facing special situations, including wars. The average tax level remained largely unchanged until 1913, during a period of intense globalization and economic development. It increased to about

14 percent by 1920, partly due to the impact of World War I, and rose to about 17 percent by 1937, partly due to the fall in GDPs in some countries.

In those years the ideology of *laissez faire* was still dominating the thinking of many economists and the policies of several governments, but it had started to be challenged by the New Deal in the USA and with related policies in other countries during the depression years. By 1960, the tax levels for the countries for which data are available, rose to 29 percent of GDP. By this time, *laissez faire* ideology had been abandoned by many governments and economists, the economic role of the state had expanded and it required more public revenue and increasing use of regulations.

During the 1960s and until the end of the 20th century, tax levels would continue to rise, but the rate of increase would slow down in the 1980s and 1990s, when "market fundamentalism" and some attempted return to a lighter version of *laissez faire* would become popular with some economists and governments, especially in Anglo-Saxon countries. By and large, the tax increases came to an end in the new century, with very few exceptions. The data reported below are for a larger group of OECD countries, the available data set being larger than used above. During later years, the countries included some lightly taxed ones, such as Singapore, Korea and Mexico, which pull down the average for the group.

The average tax to GDP ratios for the whole OECD group was, in 1965, 24.9 percent. The highest ratios were those of France, 33.7 percent; Austria, 33.5 percent; Germany, 31.6 percent; and Sweden, 31.4 percent. The average ratio for the six Anglo-Saxon countries was almost the same as that for the whole OECD, about 25 percent of GDP. Twenty years later, in 1985, the average for the OECD countries had risen by six points, to 31.5 percent of GDP, but the addition of Korea and Mexico to the group, both low-tax countries, again biases the average downward. By this time six OECD countries had tax ratios that exceeded 40 percent of GDP. They were: Austria, 40.4 percent; Belgium, 43.5 percent; Denmark, 43.6 percent; Norway, 41.9 percent; France, 42.0 percent; and Sweden, 44.8 percent. The average for the six Anglo-Saxon countries in 1985 had also increased to 30.4 percent, a level well below that of several European countries.

By the late 1980s, economic thinking connected with supply-side economics, market fundamentalism and the Laffer Curve had acquired many converts among both economists and politicians, especially in the Anglo-Saxon countries. Prime Minister Thatcher in the UK, and President Reagan in the USA, had embraced this new thinking, giving it a lot of political traction. By 1986 the conservative ideas had inspired the US "Fundamental Tax Reform" of the Reagan administration, a tax reform that, in the USA, would dramatically reduce *marginal* tax rates and expand the tax base by eliminating many special treatments in an attempt at tax simplification, while sustaining the tax revenue because of fiscal imbalances. That reform influenced, or pushed, other countries to reduce *their* marginal tax rates in a clear and early example of global tax competition or, perhaps, of US ideological dominance at the global level (see Tanzi, 1987; 2014b).

The upward trend in tax levels by most OECD countries was reduced by the US 1986 reform. However, market fundamentalism would prove to be more successful in reducing *marginal* tax rates than *average* tax rates; and even less public spending, which continued to rise in many countries, proving that it is easier to cut taxes than public spending. These trends would lead to significant increases in public debt. Between 1985 and 2005, the *average* tax ratios for the OECD countries rose only marginally, from around 32 percent in 1985 to around 33 percent. There were no further increases after 2005 for the whole group. But the *average* tax rates in a few individual countries continued to rise. For most countries the highest average tax rates had been reached before the end of the 20th century.

The countries with tax burdens above 40 percent remained the same, and the average tax ratio for the six Anglo-Saxon countries also remained the same, at about 31 percent of GDP in 2005. The USA in 2005, with a tax ratio of about 25 percent of GDP, had become an outlier among advanced countries. Only a few emerging and transition countries within the OECD had lower tax ratios. Remarkably, the USA had not experienced any significant increase in its tax burden in half a century. Wagner's Law (state spending increases in proportion to income growth) did not operate in the USA, especially on the tax side.

In spite of the above, complaints about high taxes and their impact on economic freedom intensified among American politicians, economists and many US citizens. These complaints would lead to statutory tax reductions in the "Tax Cut and Job Act" of 2017, the recent law that reduced the US tax to GDP ratio. Some other countries had reduced the marginal tax rates but not tax revenue by introducing *dual income taxes*. Dual income taxes tax income from capital sources at flat rates, without providing those incomes with a personal deduction allowance against tax payment, or any other deductions (see Muten et al., 1996; Sorensen, 1998a).

The highest tax levels had been experienced by Sweden in 1987 (50 percent of GDP), Denmark in 2005 (48 percent of GDP), Belgium in 2013–14 (44 percent of GDP), France in 2014 (45 percent of GDP), Finland in 1994 (46 percent of GDP) and Norway in 1986 (44 percent of GDP). Remarkably, the economies of these countries had survived, and their labor force participation had remained high, challenging some of the conclusions from tax theory. However, these countries had made changes to their tax systems, aimed at reducing the highest marginal tax rates and making their tax systems broader-based and simpler (see Sorensen, 1998a; Tanzi, 2011a, table 1.5, p. 21).

6.9 Tax bases and tax structures

As tax levels have increased over recent decades, the tax bases that countries relied on in the past to collect most taxes have also changed. Taxes on specific items of consumption have become relatively less important and, with time, more focused on just a few items, such as tobacco, alcohol and petroleum products. Some of these taxes can be justified by health, environmental or benefit-received considerations. In recent years, these taxes have accounted for about 10 percent of total tax revenue. They have remained more important in the USA, which does not have a value added tax, but where many states have taxes on final sales, which may be as high as 10 percent. A good part of the revenue from these taxes comes from petroleum products, justified on environmental grounds and the benefit-received principle, and from so-called "sin taxes".

Taxes on real properties have also lost their relative importance in most countries over the long run. However, they have remained important in a few countries, especially in the USA, where they help finance local governments. These taxes are justified on the ground that property owners receive benefits from various free services provided by local governments, especially the urban properties. These benefits include, for example, city streets, street lighting and cleaning, garbage collection, city parks, and police and fire protection. In the USA revenues from these taxes have remained important and have continued to finance local public schools and some other services. The implication of this use is that lower property values in poorer areas often lead to lower tax revenues and, consequently, to poorer public schools and local services perpetuating disparities in economic opportunities among children.

The use of these taxes suffers from the fact that the market values of the real properties are known only when the properties are sold. However, the tax is levied annually, *ad valorem* and proportionally, with the consequence that it is applied only on estimated or "assessed" values. These values can be wrong, especially in times of inflation or when there are major urban developments and changes in particular areas. Furthermore, the tax becomes a kind of poll tax on property owners, because it does not fall in times of economic crises. It is no surprise that it has remained unpopular and relatively unproductive in most countries. As a student of this tax in the USA put it:

> During the past century, no major fiscal institution, here or abroad, has been criticized at such length and with such vigor; yet no major fiscal institution has changed so little in modern times. There is a vast literature on the property tax; yet less is known about its overall impact, its incidence, and its effects, than is known about any other major tax. (Netzer, 1966, p. 1)

Taxes on general wealth have also been used by various countries but they have remained relatively unimportant in terms of revenue in most of them. In recent years their use has been recommended by some economists and politicians. They have been endorsed to reduce the growing concentration of wealth that has taken place in recent decades. However, the fact that, today, wealth ownership is much more individually concentrated but its allocation more globally spread, and that it has become much less "real" and more "liquefied" in the forms of shares, bonds, works of art, and other less tangible and visible assets, raises question as to whether wealth taxes could prove to be effective revenue sources. Gabriel Zucman (2015) has estimated that many trillions of dollars, a not insignificant percentage of the world's wealth, are now stashed in "offshore accounts" under fake names. It would be difficult to tax this wealth without a high degree of international cooperation and exchange of information among tax administrations, cooperation that is unlikely to happen any time soon. It would also violate constitutional rules in some countries.

Most of the increase in tax levels over recent decades has come from taxes on the incomes of individuals and on the profits of corporations (and from separate taxes on wages, such as payroll taxes). Wages have provided a convenient tax base, including individual income taxes, social security contributions, and payroll taxes, but their share of national incomes has been falling in recent years. Taxes on the profits of corporations are now also threatened by globalization and by the growth of technologically based corporations with global scope. Individual income taxes and corporate profit taxes have been used as *general revenue*, available for any use, while the other taxes on wages have often been earmarked for special programs, including retirement pensions and public health programs that benefit workers and their families.

In many countries, some of the taxes on wages are paid by both employees and employers, often making the cost of labor, for employers, more expensive, and reducing demand for labor, unless the taxes that employers pay reduce before-tax nominal wages (that is, are shifted to the workers), as they would be in a truly competitive market (see Van der Ploeg, 1998). To some extent taxes on incomes have retained and, in recent decades, have increased some of the "scheduler" characteristics that they had had in some countries a century earlier. Therefore, comprehensive individual income taxes have tended to become less comprehensive. Different incomes have also been subject to different rules and rates, making income taxation increasingly complex. The spreading of the income of some individuals and corporations among different countries has also contributed to the growing difficulties that governments are having in taxing the incomes of the rich and the profits of global corporations.

No country has introduced a truly *comprehensive* income tax, one that would aggregate *all* sources of incomes, and would tax the total, aggregated income of taxpayers with uniform rates, rates that could be proportional or progressive. Such a tax could include also corporate profits in the incomes of shareholders, in addition to unrealized capital gains. Some countries have financed pensions and other general benefits with general taxes, avoiding the negative impact of high taxes on the demand for labor, and considering *social* pensions as a right of citizens, a right not linked to the tax contributions of workers out of wages.

Because of the change in the ecology of taxation now underway, as for example the growth of corporations that sell Internet services globally, the taxation of global profits has been creating growing difficulties. Some of the largest global corporations have been paying little taxes, given their global profits. They have been shifting their profits to places where they are taxed minimally. Clearly these trends need to be studied and new thinking needs to be developed to deal with them. Inaction is not likely to be an attractive option.

The other major tax development in the past century was the introduction of *non-cascading*, general sales taxes and, especially, of value added taxes. These taxes were first introduced in France, in the mid-1950s and have spread globally, becoming the second most important revenue source and, in many developing countries, even the first. Because these taxes are calculated on the *value added* by enterprises and not on the total value of their gross sales, they are not cumulative. They do not distort relative prices and do not encourage vertical integration of enterprises. The basic assumption is that taxed enterprises shift the value added taxes they pay on to the consumers of their products or services by increasing the price of what they sell. Therefore, these taxes are assumed to be borne by those who consume the final, taxed products.

These taxes are imposed on imports when the imported goods enter a country, and they exempt exports when goods leave a country. They are not supposed to distort trade relations among countries and cannot be used by countries to promote import substitution. In many countries, value added taxes have replaced turnover or general sales taxes that had existed before. By being cumulative, or cascading, those taxes had distorted relative prices. The use of value added taxes has improved the allocation of resources, both within and across countries. Their introduction has been an important technical innovation in taxation over past decades, and most countries were wise to make use of them.

The USA has remained an outlier with respect to this tax. It is now the only OECD country, and one of the few remaining countries in the whole world, not to have value added taxes. There are also no general sales taxes levied by the US federal government, but many sub-national governments have used taxes on final sales. Many US states use these less productive taxes that encourage tax competition among American states. In the USA, consumers often cross state lines to buy taxed products in states where the sales taxes are lower or zero. Some sellers of particular products (especially alcoholic beverages and tobacco) intentionally place their selling outlets near the borders of states where the taxes on those products are higher (see Tanzi, 1995).

Value added taxes can be levied as a uniform tax rate on all products and services, or they can be levied with differentiated rates, including a zero rate, among different categories of products and services. Generally the more basic, or more necessary, the products are, the lower the rates are for equity reasons. A statistic that measures the share of a country's total consumption (what each 1 percent unit of the general value added tax rate generates in revenue), provides an estimate of the *revenue efficiency* of the tax. Empirical studies have indicated that this statistic ranges from as low as 0.2 percent in some countries to a high of about 0.8 percent elsewhere. A country that wishes to obtain high tax revenue with a relatively low general rate must tax a wide base. Some European countries use rates as high as 25 percent on very wide bases, generating large revenue with relatively few distortions in relative prices and few administrative complications.

Many governments use multiple rates, including a zero rate, on products considered necessities (medicines, newspapers, etc.). They do so in the belief that this rate differentiation makes the incidence of the tax more equitable. Some empirical studies have disputed that conclusion and have concluded that multiple rates do not necessarily make a value added tax more equitable. However, the belief that they do makes many governments continue to use multiple rates, claiming that they are more caring of those on lower incomes. It is one of the many illusions that affect tax policies – one that few governments are capable of resisting.

Value added tax has proven to be an important revenue source in both advanced and developing countries, and a source that, broadly, respects a principle promoted by several leading economists of the past (including Thomas Hobbes, J. S. Mill, Alfred Marshall, A. C. Pigou, Irving Fisher and Luigi Einaudi) that taxes should be imposed on *consumed* income rather than on *received* income. Value added taxes exempt saving and tax directly things and not persons. They do not take into account the personal situations of individuals and families.

Value added taxes do not answer a fundamental question often asked: What should be taxed: income or expenditure? Putting it differently, is it possible to tax differently spending units (households, families or individuals) and not just categories of products, and base the tax on how much the spending units spend? This discrimination would leave a free choice among different products and would not interfere with the market allocation of what to produce, but it would discriminate between spending and saving, favoring saving. Such a tax would focus on the spending level of taxpayers, making it a sort of direct tax.

Nicholas Kaldor (1955) made a strong case that taxes should discourage unnecessary consumption and promote saving and capital accumulation, especially in poor, developing countries. In a book that attracted much attention at that time, he proposed an *expenditure tax*, a direct tax on personal expenditure. Such a tax could be proportional or progressive. It could replace personal income taxes by shifting the tax base from income to consumption. Such an expenditure tax was recommended to India, Sri Lanka and other developing countries. It would make the tax system more equitable with respect to consumption, more pro-growth and more efficient in market allocation. The tax would not discriminate between different products, leaving to the market the function of allocation, and to consumers the choice of what to buy. The expenditure tax proved to be administratively too complex and did not survive the test of time.

The personal income tax has also not been as successful in developing countries as it has been in advanced countries. The reasons range from structural, political and administrative obstacles, to the use of personal exemptions that are often too high, thus eliminating much of the potential tax base, and to the low rates used, especially on capital incomes that in developing countries are a much larger share of total national incomes than in advanced economies. The personal income tax may also have a greater negative impact on reported income, especially when applied with high progressive rates (see Tanzi and Zee, 2000).

The value added tax has been more successful than the personal income tax in developing countries. Some of these countries now collect large revenues from that tax. It can also be successfully used for stabilization purposes because of its immediate impact on consumption when tax rates are changed, and short collection lags compared with income taxes.

6.10 Marginal rates in income taxes

Over the years that followed World War II, there were large increases in the highest marginal tax rates of personal income taxes. In some countries those rated reached or exceeded 90 percent, on high incomes. In those years, few concerns were expressed by economists about potential negative effects on the economic performance of those who paid the high marginal rates, amounting to relatively few people overall. In the 1980s and 1990s, because of the popularity of the Laffer Curve, there were strong pressures on governments to reduce the highest rates.

Pechman (1987, table 1 A-1, p. 313) provides a history of Federal Individual Income Tax Exemptions, and First and Top Income Bracket Rates until the Fundamental Tax Reform of 1986 for the USA. When the personal income tax was first introduced in the USA in 1913, the first rate, applied on incomes over what was then a very large personal exemption of $4000, was only 1 percent. The top rate, applied on incomes over half a million, was only 7 percent. The marginal tax rate was sharply increased during World War I, to 77 percent on incomes over $1 million, a level that was indeed very large, and that only very few individuals reached. The marginal tax rate fell back to 24 percent by 1929.

The highest rate started rising rapidly after 1931 and reached 79 percent in 1936–39, and 94 percent in 1944–45, and on much lower marginal real incomes. It remained at 91 percent in the 1950s until 1963, when, in 1964, it was reduced to 70 percent, but on a lower level of marginal income. It stayed at about that level until 1981. During the first Reagan administration in 1981, an early reform reduced the rate to 50 percent and the major reform of 1986 reduced it to 28 percent, effective from 1988. This was indeed a very large fall, from the pick of 94 percent. The 1986 reform also reduced the number of income schedules to three, making the tax far less progressive than it had been. Through demonstration effects, this reduction led to significant reductions in the rates of several other countries. The highest rates on the profits of corporations had remained low until World War II. They generally increased in later years, until the 1980s, when they were also sharply reduced in many countries.

Tanzi (2011a, table 1.5, p. 21) provides data on the top marginal personal income tax rates for many OECD countries until the financial crisis of 2008–09. These rates had been high until 1981, when they had started to fall and fell at an accelerating pace after the US Fundamental Tax Reform of 1986. In 1981 the average for the highest marginal rates for the OECD countries had been about 70 percent. By 1992 it had fallen to 31 percent. Obviously, the then popular views about supply-side economics and the Laffer Curve had an important impact on thinking about tax policy.

The above dramatic reductions in marginal tax rates had been widely advertised and were expected by their promoters to lead to higher growth rates with benevolent equity effects because of expected *trickle down effects* that would increase the wages of average workers. There has been little evidence of trickle down, and a continuous debate among experts on whether growth rates were actually increased by the rate reductions. There has been less of a debate that the tax reductions on high incomes contributed to making income distribution less even. The increased unevenness in income distribution has promoted populist reactions in several countries. In the 1990s several countries introduced flat-rate taxes. Several of them, especially “transition economies”, have also experienced significant increases in their Gini coefficients. It is reasonable to assume that the tax rate reductions were major contributors to the increases in the Gini coefficients.

The tax rates on the profits of corporations also received increasing attention by economists during the 1980s. Some influential economists, including Robert Lucas (1990) and Laurence Summers (1985), had argued in theoretical papers that corporate income taxes have a strong negative impact on economic growth because they, presumably, reduce capital accumulation. Some economists also asked for the abolition of corporate income taxes, questioning the rationale for their existence. Lucas had argued that the elimination of these taxes would lead to an increase in the capital accumulation of countries, and in the capital to labor ratio, which would in turn lead to faster growth of the economies, and to the growth of real wages. Unfortunately, these desirable developments did not happen.

A simple rationale for imposing taxes on corporations is that they require government spending for the building of roads, airports, ports, and so on, for the education and the training of future workers, for R&D, and for other government expenses that benefit them. Therefore, they should pay some taxes, on a benefit-received principle, by contributing to the need for public spending. Another rationale is that, if corporate taxes were abolished, the owners of the corporations would need to be taxed on the dividends distributed and on the increase in the value of their shares in corporations. Today, unrealized capital gains are not taxed, and realized capital gains are often taxed at reduced rates. If the owners of the corporations were fully taxed on a personal basis for corporate earnings, there could then be some rationale for abolishing taxes on the profits of corporations. However, the need to contribute to the costs that the corporations impose on governments would remain.

Finally, on the issue of the impact that the elimination of these taxes would have on capital accumulation, economic growth and the level of workers' wages, there is, inevitably, the question of timing and short-run effects. As is often the case in economic analyses, the impact that time lags can have on results tends to be ignored, or given little weight. There could be very long lags between the time when corporate income taxes were removed and an increase in the real capital stock, due to tax removal, affected economic growth and wages. In the meantime governments would lose tax revenue and might experience larger fiscal deficits and higher financing costs. Also, many other things might happen. Corporations might simply buy companies' shares rather than acquire new capital stock, as many did in the US after the 2017 US tax reductions.

In many countries since the 1980s, corporate income tax rates have been significantly reduced, from 50–60 percent to 20–30 percent. This trend has also been promoted by globalization and by the increasing tax competition that it stimulates among countries. Given that corporations can now choose more easily the countries in which they operate and where they report profits, *ceteris paribus* they prefer to locate their headquarters or to report their profits in countries where corporate tax rates are low or in tax havens where there may not be any taxes. This encourages other countries, and especially some small countries, to lower their corporate income tax rates to attract tax bases.

Through "tax planning", corporations, and especially technologically based corporations, have been allocating increasing shares of their world taxable profits to countries that have low tax rates or offer tax holidays. This profit shifting and base erosion (PSBE) trend has become a major global problem because it has led to tax evasion estimated to run, annually, in the hundreds of billions of dollars. This trend has started to promote some international attempts at tax harmonization (see Pogge and Mehta, 2016; OECD, 2019). It remains to be seen how far this harmonization process will go in a world that seems to be increasingly disharmonized and not much interested in international cooperation, and where tax issues have become increasingly complex.

In conclusion, policymakers should be skeptical of magical formulas in taxation, as they should be skeptical of similar formulas in other areas, such as use of public debt and negative interest rates. Theoretical results may at times conflict with common sense. Tax systems cannot lose sight of revenue needs of countries, and of administrative and equity considerations that may complicate and restrain the adaptation of reforms that may be suggested by pure tax theory. Tax reforms should never lose sight of the importance of tax simplicity, a factor that should always be an important objective. Taxes should be understood by most taxpayers, and they should not create asymmetry in their use by different taxpayers. When tax systems become too complex, it becomes difficult for policymakers and even for economists to predict their short-run and, especially, their long-run effects, which may be important.

Finally, complexity in taxation and global tax competition has been responsible for creating a new “ecology” for tax systems. It is an ecology that is challenging the ability of many governments to raise taxes in an equitable and efficient way. To deal with this emerging problem, it may require the creation of a World Tax Organization or Authority, and increasing cooperation among countries (see Tanzi, 2016).

7 Tax choices and tax techniques

7.1 Tax choices

The literature on tax policy is enormous and it would be impossible to summarize it in a few pages. Much of it is country specific. When it is not, there are often conclusions, beside the ones linked to the general principles listed in Chapter 6 that are not broadly shared by experts. This is so for the impact of taxes on the actions of individuals and enterprises; for the performance of countries; and for the shifting of the tax burden from official bases to other, real bases. That shifting often depends on how efficient a country's economy is.

As in some other areas of public finance, value judgments and countries' specific conditions often drive the analysis, and they largely determine the conclusions. Therefore, what might be assumed to be *universal* truths often turn out to have less general, empirical support than one would like to have. At times, or even frequently, if one knows the biases of an analyst, one can predict the results that he or she will obtain from an analysis. This is the reason why public finance is no longer the *Science* of Public Finance but the *practice* of it, and why some conclusions keep changing with the passing of time.

The almost inevitable conflict that exists in policy between the pursuit of equity, to be promoted through taxes, and that of neutrality or efficiency in their use is almost always present in taxation. This conflict was much less of an issue in the distant past, when the distribution of income was not assumed to be a government goal; when taxation could be more focused on narrowly defined efficiency; and when it could be based on principles that were assumed to be "value free" and, therefore, "scientific".

This was the approach that had made public finance the *Science* of Public Finance. Those times no longer exist, except in the imagination of some economists.

In this chapter we shall go over some literature on the choice of taxes, and on the technics of taxation. It should be acknowledged that other authors might give importance to different issues, or might reach different conclusions, on some of them. It should also be added that the conclusions reached in this chapter are based as much on the direct, practical and academic experience of the author, over many years of professional activity in teaching, doing research and in giving advice to the governments of many countries, as much as on the armchair theorizing of tax experts available from the academic literature.

7.2 Tax analysis

The analysis of taxation can focus on issues concerning: (a) the choice of tax bases. What should be taxed: income, expenditure, wealth, or what? (b) The economic efficiency of the taxes chosen and their potential, or probable, impact on growth. (c) The equity aspects of different taxes. (d) The capacity of different taxes to generate needed government revenue. (e) The facility of tax administration. (f) Tax shifting aspects. (g) The complexity of the taxes used, and its impact on tax evasion and tax avoidance. (h) Issues related to international tax competition, which have become more important in recent decades. In addition, discussions of tax rates are always important because of the impact that they might have on the behavior of particular taxpayers, on the incidence of the taxes and, inevitably, on tax revenue.

Tax analysis is, in some way, always partial because it ignores the use to which the tax collected will be put by a government. That use is obviously important and it may also influence the taxpayers' reactions to particular taxes and tax reforms, unless public spending is assumed to be fixed, both in size and in composition, and is thus not assumed to be affected by the amount and structure of the taxes collected. This had been believed to be largely the case in the distant past. We shall go over only some of the above issues, focusing on aspects considered more important.

We start with the *choice of tax bases*. Should income, expenditure or wealth be taxed, as Joseph Pechman (1980) asked? A government can choose to tax (a) income, in its entirety; or different income *sources* separately; (b) the total wealth of individuals; or various components of that wealth separately; (c) transfers of wealth, *ad mortem*, or *inter vivos*; (d) general sales, or sales of specific products (excises); (e) foreign trade (imports and exports); (f) citizens' heads, with poll taxes; (g) *personal* expenditure (as distinguished from taxes on sales); (h) the gross assets of enterprises; or (i) special events (e.g. marriages, funerals, inaugurations). All the above taxes have been used, or proposed, at some point in time, and in a number of countries. Taxes can also be based on precise values, or on estimated, presumptive, or forfeit values.

The choice of the tax, or the tax bases to be used, will depend on revenue needs, political considerations, concerns for the impact of the taxes on the standards of living of particular groups, the expected impact of the taxes on the behavior of taxpayers, administrative considerations and, more recently, tax competition from other countries and environmental or health considerations. The existence of high or low inflation may also suggest that some taxes should be preferred over others. During the peak years of the Keynesian Revolution, in the 1950s and the 1960s, the *built-in flexibility* of taxes also became an important consideration in the choice. In developing countries, the ability of a tax to accompany the growth of the economy (called "tax buoyancy") was considered an important characteristic.

In today's world, there is fairly broad, though not universal, agreement among experts and the public that a tax on personal income: (a) can be a good tax; (b) that it can generate much revenue and do so equitably; and (c) that income should be taxed with progressive rates, to respect some criterion of vertical equity; (d) that it would be wise to keep the tax base as wide as possible to collect needed revenue with lower rates; and (e) that it may be better to avoid using *very* high tax rates that are more likely to encourage stronger reactions by at least some taxpayers at the high end of income distribution, those who may have more options for tax avoidance.

There seems to be less agreement today than in the 1960s that a *comprehensive income base* is necessarily preferable to some alternative, for example *dual income taxes*, that are now used by several countries; or some *scheduler taxes* on particular forms of income (capital gains, rental incomes, dividends). These *scheduler taxes* had been used before comprehensive income taxes became more popular.

While the above guidelines for income taxes are fairly straightforward and are broadly, though not universally, shared, the reality is often more complicated when decisions must be made in the contexts of specific countries. Then questions arise, such as: Should all income be aggregated and taxed comprehensively? Some successful tax reforms (by Scandinavian and other countries) have chosen to use *dual income taxes*, which make an important distinction between *normal* income derived from *active* activity by the taxpayer (income from labor and from other normal economic activities), and *passive* income received from capital sources, without the active participation of the taxpayer. Dual income taxes tax the *gro*ss incomes from capital sources with proportional rates that are different from the progressive rates on active income, and with different rules. They do not allow personal exemptions and deductions from passive capital incomes, thus achieving considerable administrative simplicity.

Some tax economists have argued in favor of *flat taxes*, that is, proportional taxes on income above a personal exemption, arguing that this approach makes the income taxes simpler, less damaging to personal incentives, and also reduces political pressures for special tax privileges (see Hall and Rabushka, 1995). Pressures for special tax treatments are assumed to be stronger when income tax uses high marginal tax rates. Several "transition countries" and a few others have chosen flat taxes.

The determination of the *taxing unit* for the use of an income tax is also a separate and important decision for governments to make. Should individuals be taxed separately, in their individual capacity? Or should the incomes of families, or households, be aggregated and taxed jointly? Or should it be divided among the family's components, and each part taxed separately? And what constitutes a family or a household? Should the tax take into account the size of the family and the ages of its components? If yes, how? By splitting the total income among family members, as France does? Or by aggregating the income, but giving different personal deductions for each family member? Different countries have chosen different alternatives and there are no clear guiding principles.

How high should the *personal exemption* for each family member be? Should it be adjusted to reflect age and other characteristics, such as potential disabilities? How many schedules should exist for the progressive part of the income tax? How wide should the schedules be? And what should be the level of the tax rates at each schedule? Obviously the income schedules and the tax rates that apply on each of them, and especially those that cover most workers, are important in determining the impact of the rates on the incentives of individual taxpayers. Because they affect many individuals, these marginal tax rates may, perhaps, be more important than the highest marginal tax rate, the one that attracts most of the attention of economists but which is important to only a few taxpayers. For these very high-level taxpayers, factors other than financial incentives (such as e.g. professional status and standing, reputation) may be as important, or in some cases more important, than income.

Another important issue in the past in several countries has been the *presence of high inflation*. Inflation has a significant impact on nominal income schedules, and also on other aspects of tax bases (determination of capital gains, profits, interest, measurement of depreciation allowances and/or inputs, etc.). That impact should be taken into account. For example, should capital gains and interest income be adjusted for the impact of inflation on them? Changes in these "incomes" may not reflect any change in real income. If yes, which index of inflation should be used? (See Tanzi, 1980a.) Also the treatment of losses may be important. Should losses be carried forward?

Some experts have argued that in the presence of high inflation, the tax base for income taxes should be adjusted (indexed) and several countries did try to adjust the tax liabilities for the impact of high inflation in the 1970s and 1980s. However, there are great difficulties in doing it correctly. Some related issues would also arise in the presence of significant deflation that might also require some adjustment of taxable bases.

Legal enterprises are subjected to taxes on their incomes or profits. As for the tax on the income of individuals, there are many issues that arise from these taxes, relating to the level of the rates, the determination of the tax base, the territory to be covered by the tax, the treatment of debt versus equity, and others. There has been some debate among tax experts on whether corporations should be taxed separately from the individuals who own them. Some have argued that corporation profits could be allocated, on an annual basis, to the individuals who own them, so that the latter could be taxed instead of the corporation itself. Major problems would arise by adopting this strategy as some shares are owned by other corporations, some by pension funds, some by university endowments, some by foreigners, and so on.

Should corporate income tax be based on income earned in the primary country of its operation, or on its global income? If the latter, the allocation of taxable income of multinationals in different jurisdictions will raise major difficulties, unless full and accurate, country by country, disclosure is made, or some *formula apportionment* is used. Formula apportionment is supported by some experts and opposed by others, because of difficulties in the choice of the criteria that determine the formula (employment, sales, assets, etc.).

The above issues have become increasingly important in recent years because of the growing role of global corporations, tax havens and electronically based corporations that sell services rather than products worldwide. Some very large and very profitable multinational corporations have been able to pay low levels of taxes by exploiting existing laws. Other issues of interest to corporate income taxes are the treatment of debt and the rules about depreciation allowances. Relying on debt, rather than equity, can reduce corporate taxes, and debt can be obtained from countries that have very low taxes. And the determination of depreciation allowances, or of costs to be allocated to headquarters or to intellectual capital, are difficult issues.

Should deductions from gross taxable income (tax expenditures, tax incentives, and others) be allowed for particular personal expenses and some corporate expenses? Or should the tax base be kept as wide and clean as possible? These and many other questions are faced in real-life tax reforms. Often there are no truly objective and universally shared criteria to guide those who make these decisions. Each of the above questions has been the subject of debates among tax experts, and some of the answers to them have differed in the tax decisions made by different countries. Some answers have also changed over the years.

Some brief comments are made in the following paragraphs on some (but not all) of the above questions, related also to bases other than income. The choice of the tax base depends in part on what the author of this book has called *the ecology of taxation*, that is, on the economic and social environment in which tax systems operate. This *ecology* is different at different times and in different places. It depends on the structure of the country's economy, on the attitude of the electorate, on the kind of government that a country has, and on the global environment (see Tanzi, 2018b).

A country that is little globalized and that has large enterprises accounting for a significant share of the country's production and sales will have more freedom in choosing a comprehensive income tax and in using higher tax rates. Much of the tax collection will come from few, large enterprises. That country will also be able to pay more attention to equity objectives, through the size of personal exemptions, the treatment of the family, the use of tax expenditures, and in some other ways. The size of the personal exemption would be important for equity reasons, but it will also play a role in determining tax revenue. It must bear a close link to the per capita income of the country because, given the country's per capita income, the larger the exemption, the larger the share of total income exempted from taxation. Also the structure of tax expenditures must be well modulated, not favoring excessively either some income groups or some actions over others.

Developing countries often choose personal exemptions that are too high given their per capita incomes. In some cases they are many times the size of a country's per capita income. Therefore, they end up collecting little revenue from personal income taxes. Generally they collect more revenue from corporations than from individuals.

The more generous the tax expenditures allowed against taxable income, the lower the tax revenue. Tax expenditures for individuals and tax incentives for corporations, at times, dramatically reduce actual tax payments. Tax incentives and other deductions have become a kind of proxy welfare system for the middle classes in some countries, especially the USA. Welfare is provided through the tax system and not through public spending. These incentives benefit less any taxpayers at the low end of income distribution, who often do not pay income taxes and benefit more from means-tested spending programs, such as food stamps. For them the personal exemption component is important.

In recent years the rate of inflation has been low in advanced countries, so that the impact of inflation on taxes and on tax burdens has largely disappeared as a current policy issue. Exceptions have been a few developing or emerging countries, such as Venezuela, Zimbabwe, Argentina and Turkey. However, from the 1970s to the 1990s, the rate of inflation in many countries, including several advanced nations such as the USA and the UK, reached higher or very high levels. In some developing countries (e.g. Argentina, Brazil, Bolivia, Peru and Mexico) and, in the 1990s, in some transition economies (Russia and several others) inflation rate reached hyper-inflation levels. In those years, the impact of inflation on taxes (and also on fiscal deficits) became a hot public finance issue.

The impact of inflation on taxes was different in advanced and developing countries, partly because of the taxes used and partly because of different inflation rates. In advanced countries, taxpayers were being pushed by higher inflation rates, toward higher income tax brackets, taxed at higher marginal tax rates, even when the *real*, *inflation-adjusted* incomes of taxpayers had not increased, or might even have fallen. Also, some tax bases (interest incomes, inflated by the Fisher effect), capital gains and profits were artificially inflated by inflation (unless compensated by use of high debt, which was a deductible expense at its nominal value). This led to higher real tax burdens on them and to higher tax revenue for governments, called the "fiscal drag". Fiscal drag was the automatic increase in *real* tax revenue for governments, which helped some advanced countries to contain fiscal deficits that were also being distorted and inflated by the high inflation (see Tanzi, 1980a; 1980b; 1980c).

In those years, economists debated the need for some automatic adjustments to statutory tax systems to correct for the impact of inflation. Some countries indexed parts of their tax systems, while others did not (see Aaron, 1976). By increasing nominal interest rates (through the "Fisher effect"), high inflation also inflated taxable interest incomes, leading to higher taxes on those incomes and on the individuals who received them, and to higher implicit subsidies to those who could deduct inflated interest payments from their taxable incomes, including highly indebted corporations and individuals who had borrowed to buy houses (see Tanzi, 1980a). The high inflation also led to distortions in the measurement of fiscal deficits, complicating stabilization policy decisions (see Tanzi, Blejer and Teijeiro, 2011).

In some developing countries, in those decades, and in several transition countries, in the 1990s, the combination of very high inflation rates and significant lags in tax payments led to large falls in *real* tax revenues and growing fiscal deficits, which were financed by monetary expansion, making the rates of inflation even higher. The effect caused by the fall in tax revenues (caused by high inflation and large collection lags) came to be called “the Tanzi effect” (see Tanzi, 1977). That fall was a function of three variables: the rate of inflation, the length of the collection lag and the initial tax to GDP ratio. The higher these three variables were, the larger was the absolute revenue loss that governments experienced (see Tanzi, 1978b).

In some countries, such as Mexico, the large increase in nominal interest rates, due to the Fisher effect, combined with thin capitalization, led to very large reductions in the taxable incomes of borrowing corporations and to large revenue losses for governments. This happened even when corporations had remained profitable. This experience led to the use, by Mexico, of a “gross assets tax”, a tax for which the base was the gross assets of enterprises (see Sadka and Tanzi, 1993 for a description).

Taxes on the sale of specific items of consumption have been used by governments for a long time. In the distant past, these taxes were on items easy to tax, regardless of who used them. The objective of these taxes was exclusively that of generating revenue. With time more items came to be taxed (such as cars and other durables) and more goals were added to reasons for taxing them. Some of these taxes were used to make particular categories of citizens pay for benefits that they presumably received from the government for the use of particular products or services, as for example with gasoline taxes associated with the use of free roads. Other specific taxes were imposed to reduce, or to discourage, the consumption of goods and services associated with “sins” (e.g. tobacco, alcohol, gambling), or that created negative externalities.

Excise taxes can be levied *ad valorem* or at fixed, specific rates. *Ad valorem* taxes have the advantage of adjusting revenue automatically for the impact of inflation. They do not require discretionary policy changes. They are also neutral among different qualities used of the same taxed products, say between cheaper and higher quality cigarettes, or alcohol. The specific excises are simpler to use, but their value falls during inflation. The incidence of excise taxes is assumed to fall on the users of the taxed products.

With the passing of time, and with the introduction of better accounting systems, the use of general sales taxes became possible. Originally they were of a turnover or cascading type. As a consequence they distorted relative prices, because each stage of the transaction was taxed on its *total* value, which contained the tax imposed in previous stages. These taxes encouraged the formation of vertically integrated monopolies to reduce the turnover stages, and accentuated the impact of these taxes on the final sale price. These taxes were common until after World War II. Some US states use general sales taxes levied only at the final, consumption stage. They do not distort the relative prices of products; however, they may promote more tax competition among states, especially when tax rates are high and not uniformly applied (see Tanzi, 1995).

In the mid-1950s, value added tax (VAT) was introduced in France by Maurice Lauré. VAT taxes all the stages of a transaction but only on the *value added* at each stage. Therefore, it avoids the problem of becoming cumulative. It is collected on imports, on arrival, and exempts exports. Its incidence is on consumption. This tax moved first from France to the French colonies in Africa, and then to the early members of what would become the European Union, before crossing the Atlantic. By now it has become a widely used tax. All advanced countries, with the exception of the USA, use it, as do most developing countries. It has become the second most important source of revenue in the world after income tax.

Value added tax works best when it is applied with one rate on all the goods and services consumed in a country. It has the advantage of not taxing savings and exports, but, in the mind of some economists and policymakers, it has the disadvantage of not distinguishing between high-income and low-income taxpayers. Therefore, in terms of equity, it may not be seen as equitable a tax as personal income tax. However, it can make distinctions based on the presumed necessity of the commodities bought. Many countries have introduced value added taxes with rates that differentiate between necessities and less essential products. Some, including the UK, exempt (i.e. zero rate) some essential products, to make the tax more equitable. This approach reduces its revenue, given the basic rate, and generally complicates the administration of the tax. VAT has proven to be particularly productive in countries that apply it with one rate on the widest range of consumption.

Over the long run, several important economists, including John Stuart Mill, Luigi Einaudi, and, later, Nicholas Kaldor, had expressed the view that personal savings should not be taxed, because the money had already been taxed at income stage and because it contributed to capital accumulation. In the 1950s, Nicholas Kaldor proposed a *direct* tax on personal consumption that would exclude personal savings and be based on the total consumption of families – more capital creation. After some initial interest, this tax disappeared from the attention of tax experts.

Taxes on *real property* have been an important revenue source in the past, and are still important today in several countries. They are generally levied on land and buildings. Because of the increasing concentration of total wealth in fewer and fewer hands in recent decades, there have been recent calls for use of taxes on the *total* wealth of individuals. A book by Thomas Piketty – *Capital in the Twenty-First Century* (2014) – made a strong case for taxing the total wealth of individuals because of the role that it played in creating and perpetuating uneven income distribution. Taxes on wealth are likely to continue to attract attention because of the growing concentration of wealth and the fall in the share of national income going to workers. When used, wealth taxes have generally generated little revenue, except when they were limited to real properties.

In today's world, where the wealth of rich individuals has become spread over many countries and is less concentrated in real property, there are obvious questions as to how feasible a tax on total wealth would be. Wealth can be taxed on its ownership, or on its transfer, when the transfer is through *official* channels and, thus, does not take place through money laundering or in other anonymous ways, which have become common. The real estate market and the art market have lent themselves to some of these anonymous wealth transfers. The transfer of wealth, especially in the form of inheritance, had attracted the attention of economists for a long time because it perpetuated the existing distribution of wealth and because it created "rents" for those who received it.

In recent years there have also been proposals to tax the transfer of financial assets, to reduce the volatility of the financial markets. One such proposal that received some attention two decades ago was made by James Tobin, and was referred to as the "Tobin tax". It attracted the attention of some governments, and the opposition of some economists, who saw it as interfering in the, presumably efficient, work of the financial market.

Given the size of daily transactions in the financial market, a very small such tax would generate large revenue. In primitive forms, some Latin American countries (e.g. Argentina) have used it on occasion.

8 From *laissez faire* to welfare states

8.1 The *laissez faire* period

In the distant past regulations were used by governments that were neither necessarily benevolent nor economically sophisticated. They had often been used to promote the private, economic interests of some individuals, by creating "rents" for some favored ones. Regulations attracted the early attention of some economists, especially when commercial activities were becoming more important. An early example was an economist from the Kingdom of Naples, Antonio Serra. In 1613, in a book that Schumpeter (1954) considered the first technical book ever written on economics, Serra recommended to the King of Naples that regulations be imposed on the import of goods into the Kingdom, aimed at restricting their inward flow. Serra argued that the restrictions would make the kingdom richer because, by restricting imports, they would lead to a trade surplus and the accumulation of gold and silver. The book title was *Breve Trattato delle Cause che Possono far Abbondare l'Oro e l'Argento dove non ci sono Miniere*.

More than a century later, regulations would attract the attention of Adam Smith. Smith criticized government policies that interfered with the work of the private market calling them *mercantilist policies*. These policies allocated privileges and patronage rights to particular individuals, creating de facto monopolistic power in some economic activities, and rents for some individuals. Mercantilism had been a practice frequently used by governments in the *ancient regimes*. It interfered with market decisions. Some of these policies made little or no sense, as indicated in a long citation by a French economist (Charles Dunoyer), describing regulations used in France. The citation was reported in J. S. Mill (2004 [1848], p. 863).

Laissez faire would be, in part, a reaction by Adam Smith and, after him, other economists (including especially the French, e.g. J. B. Say, Frederic Bastiat and Gustave de Molinari) to the use of bad regulations and other restrictive policies used by governments. Smith, and the ideology of *laissez faire* that would follow him, would criticize interference by governments in market decisions and introduce the concept of the efficiency of free markets. *Laissez faire* argued that free markets could be efficient and would promote growth. That view would be reaffirmed, especially during the second half of the 19th century, by classical economists and would become almost a religion for many of them.

Naturally, not all economists would share the *laissez faire* view, a view that was the antithesis not only of mercantilism but also of socialism, at a time when various forms of socialism were becoming popular (see Ashley, 1904; Nitti, 1971). Ashley wrote that, in Germany, "the largest numerically of all the political parties [was the Socialist party, which] . . . had practically won the cities" (pp. 66–7). In a long, later book, assembled from various writings published toward the end of the 19th century, Nitti made a distinction between *religious* socialism, *anarchic* socialism and *state* socialism. He stressed that *catholic* socialism was not new and not necessarily opposed to a market economy. However, it required income transfers from those who had much, toward those who had little. Such transfers should be spontaneous, and not forced by governments. If the transfers were truly spontaneous, and if they gave satisfaction to those who made them, they could be "Pareto efficient", in the sense later theorized by Hockman and Rogers (1969). Nitti was a liberal economist who became, first, finance minister and, later, prime minister of Italy.

Laissez faire aimed at sharply limiting a government's role in economic matters, and at giving the market more, or complete, space in economic decisions. It wanted the market to determine what to produce and how to distribute the income generated. Especially policies that would aim at changing, by force or by regulations, the established social order were regarded with suspicion, and those who advocated them were criticized or, occasionally, even punished. For example, in 1863, the socialist economist Ferdinand Lassalle was sentenced to four months in jail by a German court for a lecture that he had given in Berlin, in which he argued that indirect taxes that fell more heavily on the masses should be replaced by direct taxes paid more by individuals with higher wealth. The accusation against Lassalle was "incitement against better to do citizens". Lassalle's trial became a cause célèbre, and indicates the extent to which *laissez faire* had become a cult (see Majorana, 1923 for an account of the trial). Similar reactions would at times meet the creation of labor unions or the promotion of strikes (see Loria, 1903; Perlman, 1949).

Some important economists of the 19th century, such as James Mill (the father of the more famous John Stuart Mill), David Ricardo, Thomas Malthus and others, ". . . although suspicious of state interference, recognized the limits of private action, and the need for equality of opportunity . . ." (Woodward, 1962, p. 445). Malthus believed that "the state could . . . prevent the exploitation of the labor of children, assist in education, and even help families with more than six children" (Woodward, 1962, p. 445). At that time it was normal and legal to make young children work for up to 12–14 hours a day, in mines and in other unsafe occupations (see Ashton, 1948). The economist "Maculloch had included . . . housing and health among the justifiable [government] regulations" (Woodward, 1962, pp. 444–5). Earlier, Adam Smith had warned about the propensity of private operators to create cartels and thus, implicitly, recognized the need to prevent such actions.

In the late 19th and early 20th centuries, *laissez faire* evolved as a more precise, scientific and conservative doctrine, promoted by able economists, especially at the Lausanne School in Switzerland, and by Alfred Marshall and his followers in the UK. Those views maintained that the free market system, when not interfered with, had a tendency to move toward a *long-run* equilibrium, one that would maximize the welfare of citizens. At times, economists recognized the existence of short-run problems, such as business cycles, very uneven income distributions and monopolies, but they focused on the long run, and on the progressive increase in living standards that a free market was capable of generating by promoting progress.

These doctrines did not contemplate, or they chose to ignore, the possible existence of differences between individual and collective interests. They maintained that an efficient, free and private market, with competition, would inevitably promote an economic equilibrium consistent with the social interest *in the long run*. This was an evolutionary view of the economy, one that allowed for and accepted the existence of short-run imperfections and problems. That view was partly influenced by the Darwinian view of evolution, which had become popular in those years. Promotion of the long-run equilibrium required few, essential, government functions.

8.2 Doubts about *laissez faire*

However, business cycles were becoming more frequent and more intense and, at times, of longer duration, and World War I generated high and, in some countries such as Germany, unsustainable debts and other problems (see Keynes, 1920; Dabla-Norris, 2019). Monopolies and other market distortions and abuses had been growing in the late 19th and early 20th centuries, and had become increasingly difficult for governments to ignore. Instances of workers' strikes and the influence of socialist parties were also on the increase in several European countries. The existence of monopolies clearly challenged the assumption of a perfect market that would maximize welfare. Some of these problems would become more pronounced in the "roaring twenties".

The existence of monopolies had been attracting the attention of both policymakers (e.g. Theodore Roosevelt in the USA) and some economists, including Keynes. In an article on Keynes, Joseph A. Schumpeter (1965 [1951], p. 268), suggested that for Keynes:

> Laissez faire capitalism, [had been] an "extraordinary episode" [that] had come to an end in August 1914 . . . The conditions were rapidly passing in which entrepreneurial leadership [had been] able to secure success after success, propelled as it was by rapid growth of population, and by abundant opportunities to invest, that were incessantly re-created by technological improvements and by a series of conquests of new sources of food and raw materials. Under these conditions, there had been no difficulties about absorbing the savings of a *bourgeoisie* that kept on baking *cakes* "in order not to eat them" . . . But now (1920) those impulses were giving out . . .

To some extent, conditions in the 1920s bear a resemblance to those that exist today, in that a small proportion of citizens of some countries, such as the USA, receive a very large share of the total income and as a consequence generate large savings that somehow have to be absorbed by high investments or by the consumption of those who receive smaller shares of the total income. This leads to much debt creation, with inevitable long-run consequences. In the 1920s the future consequence would be the Great Depression. At this time the future consequences of current developments are not known, but could be equally as grave.

In *The End of Laissez-Faire*, a short book that he published in 1926, Keynes stressed the need for change. He, and some other economists in those years, "emphasized the unrealistic nature of an analysis based on the assumption of perfect competition and a perfect market" (see the Introduction by C. W. Guillebaud to E. A. G. Robinson's *Monopoly*, 1946, p. viii, in which he wrote that there was "a growing feeling of impatience with the economics of the long run", and for the anticipation of, and demand for, "a much greater measure of conscious public control over many aspects of economic activity than ha[d] existed in the past": p. ix). In some countries the greater control would come with authoritarian (fascist) governments. In many countries the greater measure of control over the market would come in the years after World War II. However, greater government controls had started, to some extent, in the early decades of the 20th century.

Greater public control would be exercised in several ways, including through higher tax and public spending levels, and through more use of public monopolies and regulations. The regulations would first be used to control monopolies, cartels and other monopolistic practices; and then to limit negative externalities. In the following chapter we shall discuss regulations, an instrument that has received mostly negative attention by economists, and less attention than it deserves by public finance economists.

8.3 The coming of the welfare states

The 1940s and 1950s would see a dramatic change from policies that had been guided by *laissez faire* to policies, in several important countries, that would create more social or welfare state economies. Most of the important changes would come between the 1950s and the 1970s. To a large extent, the UK would be an early leader, with its welfare reforms introduced in the late 1940s, and based on the 1942 proposed Beveridge model. In the words of a British policymaker, Clement Attlee (in 1945), the British welfare reforms would aim to slay five giant evils in society: *disease*, *want*, *ignorance*, *squalor* and *idleness*. To do this, higher levels of taxes and public spending, and a growing use of regulations, would be needed. While most advanced countries would experience these changes, not all would become full-fledged welfare states. As we shall see later, different countries would choose different paths to social protection.

9 On the growing use of regulations

9.1 Introduction

Given the importance that regulations have acquired in the modern world, it is surprising how little attention they have continued to attract in *public finance books* that no longer focus exclusively on *finance* but deal with the full economic activities of governments. A leading financial economist and Nobel Prize winner has commented that regulations are also often "omitted from discussions of financial markets" (Shiller, 2012, p. 94). The attention on regulations has been left mostly to those who are critical of them for ideological reasons, or for motives arising from vested interests, either their own or those of the industries that hire and finance them, to criticize the regulations that reduce their profits.

Many orthodox economists continue to see regulations mainly as reducing the *personal liberty* of individuals and the economic freedom of enterprises. They pay little attention to the potentially positive impact that *good* regulations can have on general welfare and continue to dream of a world without regulations. Another reason may be that many economists consider taxation and public spending as theoretically superior ways of dealing with some of the issues that regulations attempt to deal with (such as environmental controls), even when replacing regulations with taxes or spending may be too complex or impractical.

A quick survey of some major public finance books since the end of World War II confirms the scarce attention that public finance economists have paid to regulations. Hugh Dalton's influential 1954 book had no references to them. Richard Musgrave's 1959 article had only one reference, and it was to what he called regulatory taxation. Earl Rolph and

George Break's 1961 book had no reference to regulations and neither did Ursula Hicks's 1968 book. Harold Groves and Robert Bish's 1973 book had a short chapter that dealt with "Tax Policy for Pollution Control", but, again, the emphasis was on taxation. The same lack of attention is evident in Rosen's 2005 book and other more recent textbooks.

9.2 Regulations as useful tools

A book that broke the mold, even though it did it in just a couple of pages, was Davie and Duncombe's 1972 textbook. The section on regulation (pp. 29–31) recognized that regulations are often imposed to replace government spending or taxes, and that they affect the allocation of resources. They also recognized that "regulatory activity is a direct infringement of personal freedom". For individuals who operate within a community and not in isolation, this is not necessarily, or often, the big problem it is assumed to be, when the regulations clearly take *community* interests into account. This is what a benevolent and efficient government should be expected to do.

Regulating gun use in the USA would clearly reduce the personal freedom of gun owners. However, it would also reduce thousands of annual deaths, and the fear of many schoolchildren of being shot. The *social* cost–benefit result of such a policy should be obvious to any person with a bit of common sense and a minimum community interest. Individuals living in other civilized countries, where the use of guns is strictly regulated, do not feel less free than those living in the USA. Restricting speed limits for cars reduces the personal liberty of drivers, but it also reduces accidents and saves lives. Restricting drinking while driving also reduces the personal freedom of drinkers, but it reduces casualties. It should not be too difficult to decide which is more important, even in a society that gives great importance to individual freedom and that values the time saved, on the basis of the income levels of individuals who save time by driving faster. Many regulations are similar to speed limits. They limit the personal freedom of some individuals, but they may promote important community goals.

Societies without speed limits and other regulations, such as those on the financial or energy markets, might provide more personal freedom to some individuals, and might, conceivably, generate higher profits and faster economic growth. However, they may also generate more accidents, more deaths, or other social costs. A financial market without regulations might promote faster growth and more frequent financial crises, some similar to the recession that began in 2008–09, which generated huge social and economic costs. The lack of environmental regulations may increase short-run economic growth and create more employment for coal miners, but it may also lead to more deaths and other problems over the long run due to pollution, and perhaps more serious problems associated with global warming, as Australia has experienced recently.

9.3 Regulations and individual freedom

The use of regulations requires choices by individuals versus choices of a community. A well-working and caring community would not necessarily always choose less or more regulations, as some argue. Different governments and different communities may have different priorities. In the USA, California is a highly regulated state, while Texas is a lightly regulated state. Some have pointed to differences between California's more expensive housing market (where the sector is more regulated) and the housing market in Texas, which is cheaper and less regulated. But wages and incomes are higher in California, and schools are definitely better. Many Californian housing regulations have to do with safety standards to minimize the effects of earthquakes and guard against excessive environmental damage. It is not obvious that individuals *as a group* would like to have less regulations in these areas.

Regulations inevitably interfere with some personal and market decisions. That is the whole point of them; and they can definitely be damaging and costly. Therefore, *unnecessary* regulations, at times defined as "red tape", should be fought and avoided. But the fight should be against *bad* regulations, not against *regulations*. Regulations tend to be cumulative over the years and there is no automatic and effective mechanism that eliminates the ones introduced in the past that may have become unnecessary. New activities may be less regulated than old activities, and at times less regulated than they should be. It is easy to find examples of useless and annoying regulations imposed in the past, which are no longer needed but still exist. This also applies the other way around, such as in the failed regulation of plastic products.

Regulations that affect market and personal decisions are, for example, those that restrict trade, and "occupational requirements". In the USA, many regulations are imposed by state governments. Regulations are often justified, such as those that establish working hours; set safety standards (in particular for dangerous occupations); set speed limits for cars; require drivers to obtain driving licenses; relate to drinking while driving; and regulate child labor. Occupational requirements for doctors and pilots are clearly justified; those for barbers and beauty parlors are probably not. Some of these regulations exist to create rents for some categories of workers, and are pushed by those who benefit from them.

Many citizens would see some (though not all) regulations as necessary and beneficial, and as improving the welfare of communities. Many regulations are requested by groups of citizens and are not imposed arbitrarily by bureaucrats. Most citizens would see the infringement of the personal freedom of *some* individuals as being balanced by benefits to the community. But mistakes are clearly made by over-zealous regulators, and some regulations go farther than they should. However, it is wrong to focus exclusively on the cost side of the regulations, as conservative think tanks do in the USA, while ignoring the actual or potential benefits derived from them.

9.4 Opposition to regulations

The evaluation of regulations imposed on energy, industrial, health, pharmaceutical, and financial enterprises has become a hot issue. The issue became particularly hot in the debate on the role that regulations, or their lack, played in the financial crisis of 2008–09, and in the regulations introduced in the years that followed the crisis. The recession that followed imposed enormous fiscal costs on many governments, and great economic costs on millions of workers who lost their jobs, and on enterprises that lost sales. These costs would have consequences for years to come.

Financial market operators have continued to complain that regulations that have been imposed on them have increased their costs and reduced their profits, and have also reduced economic growth. That might even be true but, hopefully, the regulations have also reduced the probability of new recession. Some highly informed observers maintain that the regulations that were imposed would not be sufficient to prevent future crises. Debt burdens have continued to rise, for both governments and the private sector and for some vulnerable groups (students, credit card users and businesses), and so have interbank connections that played a significant role in the recession and, in the 1920s, contributed to the Great Depression.

9.5 Good and bad regulations

The increasing complexity of financial markets has made it more difficult to choose the right regulations and to avoid mistakes. In the USA, the Trump administration has declared war on regulations and it has been removing many of those imposed by previous administrations. It has been following a kind of "regulatory rule" broadly described as "one in and two out". Each new regulation introduced has to be balanced by the removal of two existing ones. This rule may have political appeal for some, but it is hardly one reflecting a rational, or a scientific, approach. Conservative think tanks have been reporting large financial savings from the elimination of many regulations.

In recent decades, the literature on public choice (see e.g. Buchanan and Flowers, 1987, chapter 13; Mueller, 1989, pp. 215–18; Tullock, Seldon and Brady, 2000) and produced by Chicago School scholars (e.g. Posner, 1975; Stigler, 1975; Peltzman, 1976) and others, has shone a spotlight on some negative aspects of regulation, and on the relation that may exist between some regulations and "rent seeking" that exists when some interest groups push for the introduction of particular regulations that restrict access to some legitimate activities to competitors, benefiting the insiders. Articles by Gordon Tullock (1967), and by Anne Krueger (1974), may have been the first to recognize the rent-seeking aspect of some regulations.

This literature has focused on one potentially bad side of regulations, a side that has led many economists to minimize or to ignore the positive impact of many regulations. It may thus have created a case of misplaced attention. The existence of rent seeking should raise questions about the benevolence and/or the competence of governments that allow these regulations to be imposed. In particular cases, the need to improve the status of some very low-income groups may even justify the use of rent seeking, on redistributive grounds, as is at times the case with rent controls and some tariffs. Rent-seeking regulations to favor very poor groups may have a desirable redistributive function that might justify some allocation distortions and that may be justified when there are no better instruments to help those groups.

The bias against regulations may lead to the questionable conclusion that a world without them (a libertarian dream world) would be a better place to live in, because it would maximize "personal freedom". Such a world would be the best world to live in, *if everyone behaved responsibly; had empathy for others; and if the market* (and one should add the *justice system*) *worked perfectly*. Unfortunately, this is not the world in which we live. Edmund Burke, undoubtedly a conservative thinker, reminded us centuries ago that: "Men are qualified for civil liberty in exact proportion to their disposition to put moral chains upon their appetite" (1899 [1790]). We have ample evidence from the daily press that many individuals do not put those chains upon their appetite (see Shiller, 2012, p. 88; Stenfors, 2017).

As cities became larger and more crowded in modern times, and as enterprises became more polluting, potential negative externalities grew. Just think of the implications of driving too fast in crowded streets, of not stopping at traffic signs, of throwing garbage into the street, of making excessive noise, of setting fires in parks, of generating unpleasant smells, of producing cement or gasoline in enterprises located near large cities, and so on. These are all activities that require some community controls and that, by so doing, inevitably restrict the personal freedom of *some* individuals, or the actions of *some* enterprises.

The regulations that today attract much attention in the media are those placed on the energy, pharmaceutical and financial sectors. There are few complaints about traffic regulations. The regulated sectors have created powerful and well-financed lobbies to fight the regulations imposed *on them*, and the lobbies have attracted very talented individuals to do the fighting. Some of these individuals have held high government positions in the past, and continue to have access to government officials.

Some limited environment-related regulations are now imposed on enterprises in particular sectors, even though growing evidence from global warming indicates that these regulations are far from sufficient to arrest increasingly clear and dangerous trends of damage to the natural world. The regulated enterprises look at the regulations mainly from the point of view of the additional costs that they impose, or will impose, on them, and from the reduction that they bring to *their* profits. They ignore the benefits that the regulations are expected to bring to the *general* public and to the world at large.

Regulated enterprises often have strong political power, ample financial resources and more ability to organize, compared with the general public. Therefore, they have more power in raising objections to regulations, or in lobbying politicians against them. They can finance lobbies and influential think tanks, and can subsidize experts who defend their positions and question the need for specific regulations. These experts often maintain that the regulations are not justified by *definitive* scientific results; or that the costs that the regulated activities impose on the world are minor, while the regulations reduce employment and growth. Growth is always seen in a positive and important light, even when its distributional results and its environmental costs may be far from desirable.

9.6 Short- versus long-run effects

A major difficulty with the evaluation of some regulations is that their beneficial impact is often not immediately or precisely known, while their presumed costs are. This uncertainty creates grounds for disagreements between the regulators and the regulated. The more aggressive are the regulators, the greater may also become the ground for mistakes by them in overregulating. The less aggressive are the regulators, the greater are likely to be the mistakes made by being too accommodating. Sometimes these human mistakes may be large, but they may become evident only in the long run.

This was the case in delaying regulation in the use of tobacco. The delay led and will continue to lead to millions of premature deaths globally. Delay in dealing with environmental problems could be even more disastrous. The same debate is now underway in the use of excessive sugar in drinks, or excessive use of plastic products. If the science behind global warming is right, as many leading scientists believe that it is, the risk of not regulating (or not taxing) carbon emissions might become the *mother of all risks* in the long run (see Wallace-Wells, 2019). The fight against regulations has become in part a fight against scientific evidence and against science itself.

It would be nice to have *definitive* scientific answers to some potential dangers, and to be able to make competent, objective and timely, *social* cost–benefit analyses of new regulations. Unfortunately, this is not always possible. There may also be cases, some reported in the literature on corruption, where, corrupt public employees may introduce or interpret regulations in ways that give them power to extract bribes from citizens for minor or trivial infractions. Some regulations, as for example those on land use, are generally imposed by local governments. In democratic societies, they are assumed to reflect the preferences of the citizens in those jurisdictions. They inevitably affect the kind of houses that are built, the amount of land that the houses require, and the price of the housing units that are built. And they lend themselves to corruption.

Housing costs tend to be high in some cities (e.g. London, Tokyo, San Francisco, New York) and much less in others (e.g. Houston, Dallas). Often, the availability of land and esthetic considerations, or the need for publicly provided infrastructure, play a role in the regulations used. Paris is a beautiful city because of the strict regulatory controls that were exercised over its buildings in the long run. Houston will never look like Paris, but it has cheaper housing. Some regulations give more importance to esthetic considerations; others to the market value of what is built. These presumably reflect or should reflect community choices.

The value of houses built affects future property taxes, which in the USA finance local spending for public education. The higher are the taxes, the better are the public schools. Still, presumably, the outcome reflects popular and democratic preferences, as they are seen by the governments that represent them. Some economic historians have argued that in the UK, when there was a demographic explosion between 1750 and 1850, relaxed rules on building generated good, affordable results (see Davis, 2010). Even if that conclusion were correct, it would be easy to find places where the results were less desirable. The relaxed rules also contributed to poor hygiene and frequent epidemics. A problem with zoning laws is that, in environments where the builders and the regulators know one another, corruption may influence choices and regulations may create rents for some and costs for others.

Like any other instrument, regulations are policy instruments that can be used to achieve desirable and less desirable goals. They can be used wisely, or they can be abused. The result depends on the users and on the controls that exist on the regulators and, thus, on the quality of the government. However, the debate should be directed at *specific* regulations and not at the *concept* of regulation in general. Regulations are and must be considered important instruments of public finance, and should not be vilified a priori, as they have been by some economists. It is also important to do periodic pruning of regulations introduced in the past that may have become obsolete but that continue to be applied.

9.7 Regulations as quasi-fiscal tools

If a government wants to encourage a given activity, it can normally do so by subsidizing that activity through a budget. This can be done by giving it a direct subsidy, or by allowing it to benefit from a "tax expenditure" or "tax incentive" that reduces the cost of the activity to the recipient. If it wanted to discourage an activity it would normally tax it, or forbid it. This would be the orthodox, or the Pigou way of dealing with positive or negative externalities. The reality is often more complicated. Countries often deal with externalities by using *quasi-fiscal regulations*. These are fiscal actions executed through non-fiscal tools. They remain outside the budget (see Tanzi, 1998).

In a well-functioning market economy, the use of regulations should be limited mostly to the setting of "rules of the game" and to the protection of citizens against potential risks. Therefore, governments could regulate the merger of firms and the profits of natural monopolies; require child vaccination to prevent infectious illness; and regulate the sale of pharmaceutical products and the activities of banks, and so on. All these regulations would be considered legitimate and could not be replaced by a tax or by a subsidy.

Assume, however, that a government wants to subsidize the rental costs of housing for poor families, and is short of money to do it with a direct housing subsidy. Then, it could impose rent controls on landlords, which would fix the price that property owners could charge tenants. The use of rent controls can be decomposed in an implicit tax on the owners of the properties, and an implicit subsidy on those who rent them. Rent-control regulation has replaced two potential budgetary actions – a tax on owners and subsidies to renters.

There are many regulations that, de facto, play the role of replacing subsidies and taxes. The two aspects of this *trade-off* that are worth emphasizing are, first, that the use of regulations is generally simpler and less directly costly to governments, both in administration and in financial expenses. All that governments need to do is to issue a directive. The second is the long-run, negative impact that these regulations have, for example, on the housing market.

The owners of rented properties will lose interest in their upkeep, and new houses will not be built if they will be subject to rent control. Therefore the quality and the supply of the housing stock will progressively deteriorate. Housing shortages will increase with time. Those who have been lucky to get the rent-controlled apartments or houses will be advantaged over others. Individuals or families that are looking for rental units will have more difficulties in accessing rental properties. Over the longer run, this policy will have high and increasing costs on the housing market, as the experiences of some cities has shown.

Other areas where quasi-fiscal regulations have been used are foreign exchange and financial systems. In some cases a government may wish to subsidize particular imports, say medicine, and it does not wish to do so with direct subsidies to importers. It can, thus, use an appreciated exchange rate for the import of medicines. The government compels exporters to sell to the central bank their foreign exchange earnings, for which they receive smaller amounts of domestic currency than they would have received if they had been free to sell their foreign exchange in the free market. Then the government provides the foreign exchange to importers of medicines, who can buy foreign medicines more cheaply in domestic currency because of the preferential rate at which they can buy foreign exchange.

Quasi-fiscal activities are often carried out through the financial system in various forms. For example, until the 1980s, Italian banks were forced to allocate some of their funds to buy government bonds that paid low interest rates. Therefore the banks and the private savers helped finance the Italian fiscal deficit. In the USA buyers of houses have often received implicit subsidies that reduced their net mortgage costs. The results are essentially the same: implicit taxes on some individuals and implicit subsidies to some others.

Some recent forms of monetary policies, such as quantitative easing, can be interpreted as indirect forms of regulation. They subsidize some sectors, including government securities, at the expense of others (say older people who have accumulated financial savings) (see Tanzi, 2015b). The share of interest income in national income in the USA and in other countries has fallen significantly in the past couple of decades because of these monetary policies (Tanzi, 2015b). Those who had relied on those incomes have lost out, or have been forced to put a larger share of their financial assets in riskier equities, in the stock market, or in junk bonds. Pension funds in recent years are likely to have shifted the allocation of their assets from high-quality bonds to riskier equities or to junk bonds. When stock markets face significant declines, as they will, many pension funds and senior citizens will face major difficulties. It will be discovered that cheap money comes with long-run risks.

9.8 Concluding comments

This chapter has dealt with regulation, a policy instrument that has grown in importance in the arsenal of policies that governments use. If one believes that the market operates efficiently and that it is capable of correcting occasional but minor market failures on its own, and if the allocation of income that the market generates is considered adequate and not in need of change, then there should be little scope for the use of many regulations that governments use. The above assumptions are implicit in the criticisms of regulation that libertarian economists and regulated activities advance against many of them.

Unfortunately, markets do not operate as efficiently as some believe that they do. And the distribution of income is often not what the majority of the citizens would consider desirable in a democratic country. These realities justify the use of some regulations. Whether those used improve the situation or not, depends on how well a government performs its task. The debate should be on how well a government does it, and not on whether regulations should be used. The focus should be on specific regulations, not on the concept of regulations. Whether economists like it or not, regulations will become increasingly important in the future.

10 Fiscal deficits and public debt

10.1 Past views on public debt

In 2019, the world's total debt was reported by the Institute of International Finance to have reached 322 percent of global GDP, an achievement shared by both private and public sectors. Debt has become popular, although in the past it has not enjoyed a good reputation. Over the years, several famous historical figures (e.g. George Washington and Napoleon) had warned about the dangers of financing public spending with borrowed money, and economists had shared those concerns.

The views of two famous economists, David Hume and Adam Smith are worth reporting. Hume wrote:

> It is very tempting to a minister to employ such an expedient [i.e. public borrowing], as it enables him to make a great figure during his administration without overburdening the people with taxes, or exercising immediate clamors against himself. The practice, therefore, of contracting debt will almost infallibly be abused in every government. (Hume, 1970, p. 92)

Adam Smith was equally critical of governments that relied on debts. In *The Wealth of Nations* he wrote:

> When national debts have . . . been accumulated to a certain degree, there is scarce . . . a single instance of their having been fairly and completely paid. The liberation of public revenue . . . has always been brought by bankruptcy . . . (Smith, 1999 [1776], p. 883)

Smith was therefore concerned with both the issue of sustainability of debt and the fairness for creditors of its redemption. This view was later shared by J. S. Mill, who also dealt at length with public debt.

There are, of course, situations that make it difficult for governments to avoid borrowing or justify the "expedient" of public borrowing. These situations include major wars and catastrophes. In the past, governments did not have the sophisticated tax administrations that they have now; and they did not face the accommodating "tax ecologies" that they have faced in recent decades, ecologies that have made it far easier for them to collect higher tax levels when needed (see Tanzi, 2018b).

In the past, in the face of sudden revenue needs, it was easier for governments to rely on loans rather than to increase taxes. Therefore, in spite of opposition to public debt, past governments borrowed and, at times, they borrowed more than they should have. Data on public borrowing in the distant past are available in Leroy-Beaulieu (1888). A great deal of information was also collected more recently by Reinhart and Rogoff (2009).

Past experiences with large public debt have been repeated by many countries in recent years, when the supply of loanable funds much increased the facility of borrowing because of the globalization of the financial market and the behavior of central banks. Both of these developments made it easier, and generally cheaper, for many governments to borrow at times even at very low or even negative rates. The result has been that, since the 1980s, the share of public debt in GDP has exploded for many OECD countries (see Tanzi, 2019).

10.2 The Keynesian Revolution

In recent times, many economists would not have opposed public borrowing during bad times, such as recessions and depressions. The Great Depression in the 1930s led John Maynard Keynes to write *The General Theory of Employment, Interest, and Money*, a seminal book that introduced stabilization policies among a government's economic responsibilities. Keynes, and later the Keynesian Revolution, changed the attitude of many economists toward public borrowing, making them more tolerant of it. The essence of the Keynesian contribution was that recessions are caused by deficient aggregate demands, and that aggregate demand could be increased by the use of fiscal deficits, assisted by "*fiscal multipliers*".

The size of the multiplier is important in determining how much initial fiscal deficit is needed to fight a recession. That size depends on the *saving rate* and on the share of the additional demand that is dissipated in imports (the *import rate*) – the higher the rate of saving and import, the lower the multiplier; the smaller the multiplier, the smaller the impact that a given fiscal deficit will have on income. The time that the multiplier needs to have its full effect on demand and output is also important. The expansionary impact of the multiplier should not come when it might no longer be needed, making it pro-cyclical. This time element has received little attention in fiscal policy discussions.

The basic, original, Keynesian view was that fiscal policy would be symmetric in its impact on the accumulation of public debt over the long run. Fiscal deficits would be needed during recessions, increasing public debt, and fiscal surpluses would be experienced during good years, to keep the level of public debt at a manageable and stable level over the long run. Public debt would not become a significant player in the determination of countercyclical policies, and the main actor would be the fiscal balance. A less manageable and higher public debt level would require a more conservative fiscal policy over the long run, to bring the debt level to a comfortable position. The original Keynesian economics also did not contemplate an active role for monetary policy – it considered monetary policy ineffective during recessions.

In the years following World War II, some *development economists* argued that the financing of *major* public infrastructure in developing countries (in what were called "big push" policies) could be added to the list of actions that could be financed by public debt. The argument was that the building of needed public infrastructure would make the developing countries' economies grow at faster rates. That growth would increase tax revenue and would facilitate the repayment of public debts. This was a supply-side argument and not a Keynesian one. Some economists also argued that, in the absence of a developed financial market in developing countries, government borrowing from central banks, called *inflationary financing*, could be used to finance the building of infrastructure. These views were advocated by some development economists specifically for developing countries. They were not part of mainstream Keynesian economics.

10.3 The golden rule

Another view that has received support from a few economists and which, at times, has been adopted by some countries, is the "golden rule". That rule states that public investment ought to be excluded from public spending in the calculation of fiscal deficits. The reason given is that public investment makes an economy more productive and makes it grow faster. Future generations will be the beneficiaries of the investment and should, therefore, be made to pay for it by inheriting the cost of financing the higher debt.

Some objections have been and can be raised to this rule. *First*, there is no firm agreement among accounting experts on what spending constitutes a public *investment*. Different countries have different accounting rules. The more important the rule becomes, the more likely it is that it will be abused. *Second*, a lot of what is called public investment is highly unproductive because public projects are often adopted for political or rent-seeking reasons. *Third*, some non-investment spending that promotes productive human capital also contributes to future growth. By giving preference to public investment, the golden rule is likely to distort the choice of spending, making it less optimal. *Fourth*, while the debt contracted to finance the public investment must be serviced immediately, the supply-side impact in the economy of the investment may not be felt for several years. *Finally*, when a golden rule is introduced in a country, the current generation has already inherited a capital stock that had been financed by previous generations. The introduction of the golden rule would create a windfall for the current generation and create inequity between past and future generations.

10.4 Other reasons for public borrowing

In recent years, some economists have argued for more public spending financed by borrowing, using a combination of supply-side and demand-side arguments. Some have argued that the USA and perhaps other advanced countries, are now facing *secular stagnation* due to excessive saving and a permanent lack of demand. This is not a new argument. Alvin Hansen (1941) had argued that the USA was then facing "secular stagnation". Hansen's argument was that, in the absence of productive investment opportunities, the countries' high saving would depress aggregate demand and justify expansionary fiscal policies. Of course, it could also be argued that if such policies could not generate *productive* investments, policies that made income distribution more equal would solve the problem of too much saving. Furthermore, why would a higher fiscal deficit generate more productivity growth over the long run, when very low interest rates had not done it in past years? And how can you have a huge accumulation of private and public debt in the face of deficient aggregate demand?

Some vocal macroeconomists, with easy access to the media, have argued that if the financing cost of public spending (the rate at which funds can be obtained) remains low, and if a country's rate of growth is increased in the long run by expansionary fiscal policies, the increase in public debt will not create economic difficulties for governments, because *the debt will not grow as a share of GDP*.

In favor of the above argument, some economists have pointed out that the *recent* experience of the USA and of some other countries has indicated that growth rates for economies exceed the interest rate, thus making public debt manageable. Furthermore, the current relatively low rates on long maturity securities (say on 30-year mortgages) suggests that the cost of borrowing is likely to remain low for many years to come. The conclusion is that public debt is not and will not be a problem.

10.5 The New Monetary Theory

Some of the above arguments are part of what in recent years has been called the *New Monetary Theory*. This "theory" maintains that (a) where inflation has been low and is no longer seen as a problem; (b) the current growth rate of a country has been lower than the long-run trend (presumably indicating that there are under-utilized resources in the economy, such as a low labor force participation); and (c) where the country's government can borrow its own money, at low rates, the country should borrow, without limits, to stimulate growth by eliminating deficiencies in infrastructure and for other needs. The additional borrowing would have no effect on future prices and borrowing rates, and would promote economic growth.

This theory presents a pleasant new world, one in which the age-old "economic problem" ("too many needs, too little resources") magically no longer exists. It is the New World promised by the *New Monetary Theory*. The elegant and technical justifications that have been used by some economists to promote and package this theory have reminded the author of this book of a Spanish saying: "even if you dress a monkey in silk, it is still a monkey". The "silk dressing" that has covered New Monetary Theory has not made it any prettier. But only time will tell.

As mentioned, this theory may not be as new as its proponents have implied. Seven decades ago, it was held by a few extreme Keynesians, Alvin Hansen, Abba Lerner and others, at a time when memories of the Great Depression (falling prices and a large unemployed workforce), were still fresh in the mind of economists. Lerner (1948) had argued along similar lines, as had Hansen (1941). For them, at that time, public debt could finance any needed public spending without undesirable consequences.

10.6 Other considerations

A few additional comments on fiscal deficits and public debts are appropriate.

(1) In the real world, public investment is not always, or often, as productive as some economists assume it to be. The experiences of many countries indicate that it is often inflated by politically promoted but unproductive projects, defined as "white elephants", "cathedrals in the desert" or "roads to nowhere". Even when the projects chosen have merit, the actual spending may be inflated by expenses that reflect rent seeking, and by acts of corruption by others (see Tanzi and Davoodi, 1998). This kind of "public investment" spending contributes neither to economic

growth nor to future public revenue, even though it may still increase aggregate demand in the short run.

All public spending financed by debt, whether productive or not, increases the level of public debt, and thus increases the future costs of its servicing. The amount of those future costs can never be known at the time when the borrowing is made, unless all is financed by very long maturity debt, which is never the case. If the current borrowing were done at long-run maturity, its rate would increase significantly.

(2) Fiscal deficits that arise from "built-in stabilizers" during economic slow-downs should be financed by debt. However, many economists would disagree with the view that, when, for a variety of reasons, including the existence of high public debt that causes concern and makes private investment fall (as has happened in Italy and Greece), this fall justifies a *sustained* fiscal injection, one that likely would make the debt an ever greater concern. The debt level as a share of GDP remains an important variable.

(3) Economic growth rates that may have prevailed in several countries before the financial crisis of 2008–09 may not have reflected long-run trends. Those rates had been artificially inflated by easy monetary policies and by the bubbles that they had created (see Tanzi, 2013; 2015a). Nobody really knows what the potential growth rate of a country is. Demographic changes, environmental problems and changes in investment opportunities inevitably influence future growth rates.

A country that in the past has kept its public accounts in good order would find it easier and be more justified in borrowing when that need arises. Therefore, the *initial macroeconomic conditions* (largely the status of the fiscal accounts) at a given moment in time, must be important in determining the effectiveness of a fiscal policy.

There is another important *initial condition* in determining the likely impact of fiscal expansion. It is the structural obstacles that exist in a country's economy. A fiscal expansion is likely to have less of a stimulating effect when there are significant structural obstacles that limit and reduce the productive use of capital and labor. This should be an obvious conclusion. Strangely, it continues to be ignored by macroeconomists when they argue against what they call "austerity".

11 Public spending

11.1 Public spending: past and present

The analysis of public spending in most public finance textbooks is generally related to the spending programs and the experiences of particular countries, especially the USA's Social Security and Medicare, Medicaid, and Food Stamp Program, or the UK's National Health Service. As we saw in earlier chapters, the general rule on public spending that had prevailed in the distant past had been that it should be kept as low as possible to minimize the negative impact that the taxes to finance it could have on a country's economy.

While public spending was considered largely unproductive, it was recognized that some was needed to finance necessary public goods, especially for defense and for the protection of citizens and property. It was also recognized that these public goods needed to be financed collectively in order to be provided. There was no rule that indicated how much spending should be allocated to that objective, and the amount could vary significantly. Nonetheless, the general rule was: the less spending, the better, to keep potentially damaging taxes at a low level.

Keynesian countercyclical fiscal policy created a different and new reason for *temporarily* increasing public spending, *in some periods*. However, the original Keynesian policy did not promote *permanently higher* public spending, although many Keynesians (though not Keynes himself) later came to believe that a higher share of public spending into GDP would provide more protection against feared depressions.

Public finance theory has not provided any general rule that indicates how much a country's government should spend, except for the rather general advice that, whatever spending is chosen, it should be used efficiently and should not create macroeconomic difficulties. The share of public spending into GDP in different, advanced countries now varies a great deal, from as low as 20 percent to about 60 percent of GDP. The choice on the spending level has been largely guided by political pressures and by policymakers' perceptions of what citizens want or need. Some governments prefer to spend more than others, and some high-spending governments today are even accused of pursuing what some call "austerity", even when they are spending close to half of their country's GDP.

This chapter will report on some spending trends, focusing mainly on the decades after World War II, when spending grew at a fast pace in many countries. Some general observations will be made on major public spending choices. Good recent sources for spending statistics in advanced countries can be found in Schuknecht (forthcoming). For earlier periods, see Tanzi and Schuknecht (2000) and Tanzi (2011b).

A prominent Italian economist of the 19th century, Augusto Graziani, wrote that "[t]he increase in public spending is a phenomenon so constant and so characteristic of modern States that cannot be attributed to some accidental, or pathological, reasons" (1897, p. 171, own translation). He added that he could not agree with J. B. Say (1886), who had argued that that increase could be mainly attributed to the prevalence of democracy because it was taking place in all kinds of political regimes, both democratic and non-democratic. Graziani referred to the writings of Adolph Wagner and Paul Leroy-Beaulieu in support of his observation. Clearly pressures for higher spending were already visible at that time.

Wagner had affirmed that "in the more developed countries, public services were in continuous extension, and this extension finds its basis and explanation in the development of social life . . . Financial difficulties might slow down this tendency but not stop it" (cited in Graziani, 1897, p. 172). Leroy-Beaulieu (1888) had advanced six causes for the growth in public spending, two that he considered "necessary" and of "economic and administrative nature", and four "political" and somewhat "optional".

The two necessary causes were (a) increases in the salaries of public employees; and (b) the extension of public services, such as public education and public works. Some of these services were the direct result of the technological developments that were being created in those years by the Industrial Revolution.

11.2 Causes for public spending growth

The two causes suggested above for public spending growth would not be the main drivers of public spending in the 20th century. The main drivers would be factors that neither Wagner nor Leroy-Beaulieu could have taken fully into account: the large increase in life expectancy that would increase the share of older citizens in populations, and the politically driven need to promote some income redistribution toward those at the lower end of income strata.

The increase in life expectancy, together with a shrinking in the size and concept of what constituted a "family", would create a need for large transfers of incomes between generations to support individuals in their old ages who, no longer being able to work, would require transfers or the accumulation of assets during their working life to sustain themselves in their retirement years. These transfers could no longer come from other members within large families.

The accumulation of assets to sustain the old could rely on both the rationality of the individuals themselves, if they saved large proportions of their working-life incomes, and on the efficiency of the private market in investing those savings at reasonable rates of return. Otherwise government transfers (or transfers from charities) would become necessary. Implicit in Leroy-Beaulieu's view was a hypothesis that would be developed more fully in 1972 by William Baumol, that (real) public spending, as a share of GDP, tends to grow in modern societies because productivity growth is lower in activities promoted by the government (education, health, support for culture, etc.) than in activities that remain in the private sector and that can benefit from innovation and competition.

Neither *income redistribution* nor *income maintenance* were listed as necessary reasons for the growth of public spending by Leroy-Beaulieu, or assumed to be important by Baumol. These reasons would play a role mainly in the decades after World War II when they would become major reasons for much of the future spending growth. In the future, the *real*, or *consumption* spending by governments (the part that *directly* absorbs resources) would grow less than *cash* spending. Furthermore, regulations would become more important in promoting various aspects of social, or community, living. Some of these regulations would compel citizens to buy insurance from the private sector to protect themselves against various risks, including in some countries those of getting old or ill.

For the group of the 20 most-advanced countries, the share of total public spending in GDP would grow from about 13 percent in 1913 to about 43 percent in the most recent years. Much of the growth would take place in the two decades between 1960 and 1980, and much would be connected with *cash* transfers (payment of pensions, subsidies to large families and public enterprises, and others) rather than with actual, direct, government consumption. In recent decades the number of public employees would even fall in some countries. After the 1980s there would be little growth in average public spending for the whole group, in spite of the continuing aging of the population.

11.3 Different paths in social programs

The highest spending levels as shares of GDP would be reached by the Scandinavian countries and by a few other, European, countries, including Austria, Belgium, France and Italy. By and large, as a group, spending in the Anglo-Saxon countries would lag significantly behind that of the high spenders, the former having chosen a different social model. The European countries would create a number of *universal programs* accessible by the whole population, financed mostly by *general* taxes. These programs significantly reduced some important financial risks faced by whole populations, such as those associated with getting ill and old, being unable to work, or lacking education and training required for modern jobs.

The Anglo-Saxon countries would follow a different path. They would give priority to *means-tested*, *government* programs, aimed at protecting *only* specific categories of “deserving” citizens that satisfied specified conditions. The universal programs would, naturally, be more expensive and require higher tax levels.

Government *direct consumption* would grow less than total spending. It would grow by about 6–7 percent of GDP between 1937 (or 1960) and the most recent years in advanced countries taken as a group (more in some countries). A large share of the growth in spending would be in cash payments. The growth in government *consumption* would come mainly from higher spending on education (about 2–3 percent of GDP) and in public health (about 5 percent), while public investment would fall as a share of GDP following completion of major infrastructure projects (railroads, airports, ports, school buildings, etc.); spending on defense would also fall.

The aging of the population would, increasingly, become the main driver of the rise in total spending (for general discussions, see Tobin and Wallis, 1968; Aaron, Bosworth and Burtless, 1989; Costabile, 2008). Aging would require increased spending for public pensions, public health and for other age-related expenditure. Some countries would rely more than others on private sectors arrangements, but the need to pay more attention to income distribution, especially to raise the spending power of the old and the young, would put limits on these private possibilities. The ratios of retirees to those of working age (the old-age *dependency ratios*) have increased and have been projected to continue to rise significantly in future years, putting further pressures on government spending to finance public pensions and public health. Some of the assets accumulated in the past to finance future pensions are being exhausted in several countries, including the USA, shifting some problems to the future.

It is questionable whether private sector arrangements can offer reliable alternatives for the future, because those arrangements (pensions and health insurance) would require very high saving rates by workers during their working life, and also high and risk free rates of return on the amounts saved. If these arrangements are not compulsory, they would also require a lot of rationality and lack of myopia on the part of workers. The growth of self-employed occupations in recent years (the gig economy) is not likely to help. Recent operational changes by central banks that have reduced interest rates on safe savings investments and simultaneously increased those on equity markets, are also not helping in this direction. A stock market crash, as in October 1929, would create major difficulties.

Money for assisting retirees must come either from accumulated assets, from taxing the wages of the (fewer) workers during their working lives, or from taxing accumulated wealth and the incomes of non-dependent workers. The fact that the share of wages in national incomes has been falling in important countries, and that many countries are already running fiscal deficits and already have high levels of public debt, implies that the taxation of private wealth, accumulated in the hands of a small share of the population, will have to play a growing role in financing public spending in the future. Income and/or wealth taxes on those who own that wealth will need to go up. Recent political developments in France and Chile, related to pensions, are vivid indications of things to come for other countries.

Educational spending has been affected by two trends. On the one hand, there is a need to provide literacy and modern, more advanced, education and human capital to everyone, for competitive reasons vis-à-vis other countries in a globalized world, and an attempt to equalize economic opportunities for *all* children, regardless of their social background in a world in which life incomes depend more and more on the quantity and the quality of the human capital that is received from a formal education. On the other hand, there has been a decline, experienced by many advanced countries, in the number of births and of children attending school. That decline must have contributed to reducing the growth of educational spending.

Even in the distant past, most governments had played some role (often assisted by private and religious charities) in providing support to individuals who were clearly unable to support themselves, such as orphans and those physically and mentally invalided and without family support (see Zamagni, 2000). When the objective of redistributing income became an accepted goal for societies, a simple policy that could have been followed by governments was that of creating a *floor* for the spending power of all citizens by raising the general tax level and distributing part of the higher tax revenue *equally to everyone*, rich and poor (see Atkinson, 1995; Stern, 2016). This *minimum*, *vital income* would have been more valuable to those with the lowest incomes. No country chose this rational, but radical, route. Countries generally opted for the “deserving route”, by extending the range of the “deserving individuals” who could benefit from specific government social programs directed to them.

There were a few exceptions, such as the UK's National Health Service, introduced in the late 1940s and that was intended from the very beginning to be a universal, tax-financed, public program. That program was copied by several other countries, but not by the USA. In the years that followed, some countries extended universal coverage to encompass, among other things, education at all levels, social pensions, assistance to the very old and asylums for the young. This assistance was provided free (or was highly subsidized) to everyone. The programs were usually financed by general taxation.

Some of the countries that chose the *means-tested* route, such as the USA and several other Anglo-Saxon countries, accompanied the programs with the growing use of "tax expenditures" which provided deductions against income tax payments to taxpayers, and who acquired particular goods, assumed to have some social value, called "merit goods" which included *interest payments* for home mortgages and for money spent on health, education, training, donations to charities and religions, and many others. This approach, which helped many middle-class citizens, had a side-effect of reducing tax revenue and public spending. Unfortunately, it also significantly increased the complexity of tax systems, making them more opaque and less transparent, creating new problems (see Tanzi, forthcoming).

11.4 Benefits from public spending

Public spending can have several effects on citizens and societies. It can reduce financial risks for individuals, increasing their sense of safety, especially when spending is associated with efficient *universal* public programs that reduce risks and create better opportunities for all citizens. Or, it can benefit only those citizens who qualify as a "deserving" group when the spending is done through *means-tested* programs. Public spending can also aim at promoting better socio-economic indicators (literacy, life expectancy, employment, low corruption, better income distribution, low crime rates, etc.) (see Tanzi and Schuknecht, 1997; Afonso, Schuknecht and Tanzi, 2005).

On the negative side of spending, public programs must be financed through taxes; taxes may create distortions and dead weight costs; and the programs may be executed inefficiently. While some literature on these issues, over the years, has provided conflicting results, some studies have reported negative effects coming from high tax rates (see Tanzi, 2011b, p. 287). It has also been argued that spending programs can create "poverty traps" and promote less risk-taking attitudes in citizens, which libertarian economists associate with the existence of what they call "nanny states". As a television documentary on Adam Smith has reported (Curiosity Stream, 2016), the effect may be that of feeding animals in parks – they may become lazy and lose the ability to hunt for food on their own.

The relevant literature is extensive and generally country specific; lack of space prevents its coverage in this short book. However, several European countries, including Scandinavian countries, which have high tax levels and universal public programs that reduce some important risks for all citizens, and where the programs are financed by relatively broad-based and non-complex taxes, including VAT, do not seem to have paid a steep price for the high tax and public spending levels. They have continued to be highly competitive, in spite of earlier warning by economists (see e.g. Thakur et al., 2003; for a more complete discussion of this issue, see Tanzi, forthcoming).

12 Fiscal federalism

12.1 Unitary and federal countries

Most modern, independent countries were born with either a unitary, centralized government, responsible for all or most tax collection and important public spending decisions and regulations for the whole country (e.g. France), or with a decentralized, federal government structure (e.g. the USA, Canada, Switzerland, India). In the latter countries, a central, nationwide government is responsible for satisfying nationwide collective needs, and several, often many, sub-national governments (called regions, states, provinces, counties, and municipalities) were given responsibility for some localized needs.

Historical or political reasons and, to some extent size, were the major determinants of whether a country became unitary or a federation. Several modern countries (especially in Africa and the Middle East) were assembled by combining separate and often diverse territories. Size had often contributed to create greater cultural, religious and economic differences among parts of large countries. Before modern technology became available, communication between the distant parts had required much time and, often, had faced problems. This had made it difficult for representatives of distant regions to communicate with central government officials, who resided in the capital city, and vice versa. Inevitably, distance led to some de facto, if not always legal, independence for some parts of large countries, as in China. In some cases it also contributed to the development of different languages and cultures.

Today, physical distance is no longer a major problem for communication because it is now almost instantaneous due to modern technology, and large distances can be covered in less time. However, significant cultural, religious, linguistic and economic differences may still exist among different parts of, especially, large countries. These differences may make different groups of the population desire or favor different levels and/or different combinations of public goods. Consequently, they may prefer to have different revenue levels and sources, and different regulations. The variations may justify some administrative or legal decentralization, which can be a factor in whether a country chooses a federal rather than a unitary structure. Such decentralization may lead to frictions or even conflict with the *national* government. This happens, for example, when similar minimum standards for certain outcomes may be desired nationally, but they may be opposed by sub-national governments.

Not surprisingly, the largest countries in the world (e.g. Russia, India, the USA, Canada, Australia, Brazil, Indonesia, Argentina) tend to have federal governments. These countries have a *national* government and, often, two or even three other tiers of *sub-national* governments, which, in turn, may include a very large number of jurisdictions. Some sub-national governments are expected to deal with larger territories, called regions, provinces, or states, such as California or Texas, and some with smaller territories, such as cities, municipalities or counties.

Historically, cities always had some degree of fiscal, or at least administrative, independence, because they have specific, local needs that can be dealt with more easily and more quickly when decisions and actions can be taken locally. In some unitary states, as in France, this local independence is achieved administratively by having representatives of the national government at the local level (called e.g. prefects). In some cases (e.g. the USA, Brazil) a high degree of fiscal independence has existed from the beginning, for both cities and larger territories. For example, Texas was an independent country before it became part of the USA.

From the beginning, sub-national governments may have needed, and may have had, their own revenue sources and budgets. They may also have had discretion over many regulatory decisions. Historically, municipalities, or cities had existed before modern nations or countries were created. It was the inability of cities to satisfy certain collective needs (especially protection against foreign invasions) that, in some cases, led to the creation of countries (see Flora, 1909, p. 620). Because of their smaller sizes, city states were less capable of defending themselves against powerful foreign invaders. This happened in Italy in the 16th century.

Sub-national jurisdictions may have some, or considerable, political power to raise their own revenue sources and to collect fees and fines from local activities and populations. They can also have considerable discretion over spending decisions and the use of regulations within their territories. This, for example, has been the case with the use of "occupational requirements" for workers to operate in some categories and in some areas, and zoning regulations for the use of land. At times, their political power may not be matched by their administrative capacity to raise taxes, leading to inefficiencies and fiscal difficulties. Because of size, national governments normally have more capacity to collect taxes.

Some sub-national governments are allowed to issue public debt, as did several states in the USA in the early part of the 19th century, and as they have continued to do for capital spending in recent times, even in the presence of balanced-budget rules. The sub-national governments of some countries, such as those of Brazil and Argentina in the 20th century, borrowed on a large scale. At times, they went as far as to issue short-term bonds used as money. This power can make the budgets of sub-national jurisdictions relatively "soft", because, using the political power that they may have, they may tend to rely on revenue assistance from the national government. This is likely to lead to macroeconomic difficulties for whole countries (see Tanzi, 2016). To some extent this problem has been faced in recent years by that pseudo federation that is the European Monetary Union, where some member countries (e.g. Greece, Italy, Portugal) acquired large public debts. This situation has led some economists and politicians to call for "socializing" the countries' collective debt, that is, for the collective sharing of the responsibilities for the debts of the various parts. That situation has even led some economists to calls for printing a parallel money by the high-debt countries.

"Soft budgets" shift the costs of public spending from some parts of a federation to the rest, thus allowing the governments of some sub-national governments to promote their own political agenda by financing some of their politically favored spending through revenue transfers from the rest of the country. This has happened in several federations. Therefore, fiscal federalism without truly *enforced* rules (such as *effective* balanced-budget rules) can easily lead to macroeconomic difficulties. In spite of this, this approach has continued to have some strong proponents, especially those who believe in the magic of public spending and criticize what they call *austerity*. These individuals ask for *solidarity* in federations, or in quasi-federal systems, such as the European Monetary Union.

Solidarity would require that some parts of a federation willingly subsidize other parts, or that they assume responsibility for the latter's spending actions or public debt. In some countries, such as Australia, there are agreed rules that allow for some, regular transfer of revenue from richer to poorer regions, recognizing the need for some income redistribution across different parts of the country. The rules may be revised occasionally to recognize changing needs.

As a general rule, the *national* government of a federation has, or should have, a monopoly over the relations that the country has with other countries (including trade relations), matters of national defense, diplomatic relations, immigration policies, the financing of *nationwide* infrastructure and public goods, dealing with national crimes, setting national standards in weights and measures, and in other decisions that have national relevance. However, there remain many other responsibilities, some created by new technologies or social and economic developments, in which decisions have to be made but may not be made, or may be delayed, because there are no obvious, agreed rules to determine which government is responsible for them. This has become a problem for some countries.

In the economic literature of the distant past there were relatively few discussions about questions of fiscal federalism, because political constitutions, such as that of the USA, had assigned specific responsibilities to national and sub-national governments, and spending was strictly limited. Generally, in the past the US federal government had few functions and spent only 2–3 percent of GDP in non-war years.

In his *Principles of Political Economy*, John Stuart Mill (2004 [1848]) made a distinction between government functions "that are inseparable from the idea of government" and those that he considered "optional". He commented that continental European countries seemed to be more inclined to expand the latter than did the UK (p. 728). It is especially in these "optional" functions that disagreements are likely to have arisen between central and sub-national governments because they are the ones that have grown in importance in most countries. That growth has been promoted by economic, technological and social changes, some connected with globalization. Different federal countries have made different decisions (or, at times, have failed to make the needed decisions) in clearly assigning these new responsibilities to specific parts of federations.

While there is only one *national* government in a federal country, there may be thousands of *sub-national* governments, including those of regions or states, and municipalities or counties. This fragmentation inevitably raises questions about the impact of size and economies of scale on the productivity and efficiency of some decisions, including those related to the collection of taxes. Size may become important in areas, such as the efficiency of tax administrations and the extent to which the action of a local jurisdiction (in matters of e.g. educational spending, assistance to those with low incomes and other social programs) may create incentives for free riders to move in from other jurisdictions. Recently, free riders can be immigrants from other countries who may be attracted by generous welfare benefits.

It can be generalized that the smaller is a government within a federal country, the narrower should be its area of responsibility, to minimize spillover effects and inefficiencies, given its small size or scale. The number of jurisdictions in a federation raises questions also about competition that may develop among them, which can have positive or negative effects. 15th-century Italian city states, with their strong competitive spirit, may have generated the positive phenomenon of the Renaissance, but they may also have invited invasions by more powerful foreign countries, which led to the economic and political decline of Italy in the centuries that followed.

Among its many insights, John Stuart Mill's *Principles* also commented on the fact that there may be excessive fragmentation of what he called the "public business". In other words, there may be too many jurisdictions. He wrote: "there are few countries in which a greater number of functions are discharged by public officers, than in some states of the American Union, particularly the New England States . . ." (2004 [1848], p. 861). It is obvious that he considered this fragmentation excessive and not optimal.

As a general observation, in countries where the function of the government has grown over the past century, especially in the advanced countries of Europe, that growth took place mainly, or more often, at the *national* level, thus changing the past order of importance of the different government tiers. Therefore, “Wagner’s law of the growth of public spending” seemed to characterize more closely the behavior of central governments than that of sub-national governments over the past century. This trend may have been in part the consequence of greater limitations in accessing fiscal revenue that exist at the sub-national level, because of size and administrative difficulties in raising tax revenue, and increasingly because of tax competition from national and other sub-national governments, and because of factor mobility (see Tanzi, 1995; Wildasin, 1998).

Tax competition increasingly exists also for national governments. However, it is less intense (see Buchanan, 1997). The growth of the central government was also due to the fact that citizens have wanted growing and different government roles, and that central governments were more efficient in managing the needed programs. Therefore the changing views of what citizens expect their governments to do must have played a role in transferring functions from local to national governments. Citizens also seem to want more “optional” interventions and, for some social objectives and outcomes, more implementation of minimum standards within countries. These results can be achieved more easily and successfully by national governments.

The above conclusion seems to be in line with the essence of Mancur Olson’s (1969) *equivalence principle*. That principle states that the *spatial* benefits of a given government’s public policy should be equivalent to the administrative boundaries of the government that manages and finances the policies. The benefits should not spill outside the borders of the jurisdiction because of free riding and factor mobility. In a world where the mobility of individuals has increased significantly, that principle also implies that a government should be able to contain free riding by individuals who live outside the jurisdiction, and also outward mobility of some (high-income individuals) who live within the jurisdiction. The outward move of a billionaire from a local jurisdiction can create large gaps in that jurisdiction’s budget.

When thousands of jurisdictions (municipalities, counties, states or regions) can make policy decisions, as happens with many federations, and when many individuals have become more mobile, it is easy to see how often Olson’s principle will be, or can be, violated. Some important functions will not be performed, while others will be over-performed, and efficiency problems will become common. Gramlich (1997, p. 74) reported that in the USA “there were 7500 local governments and special taxing districts that have a large degree of autonomy . . .”.

Considerations connected with equity, the fight against poverty and the creation of national minimum standards in some areas (e.g. education, access to health services, results in health outcomes) have become more important in the modern world than they were in the past. In these areas the results, or the policy outcomes, cannot be completely left to the market, or to the actions, or inactions, of sub-national governments, on the grounds of preserving individual freedom for individuals and certain groups, which is the main rationale for federal structures. For example, the very wide differences in educational standards, life expectancy, access to healthcare, or per capita incomes within a federal country, say within the USA, are less acceptable today than a century ago.

These wide and, at times, extreme differences cannot be justified or tolerated by the political independence of sub-national governments, or by the different desires or preferences of different groups. For example, data published by Centers for Disease Control and Prevention (2018) have shown that, in the USA, life expectancy for large groups (identified by different zip codes) may vary by as much as 30 years between areas that are as distant as nine miles (e.g. Chevy Chase and Anacostia, both in the Washington DC metropolitan areas). Educational levels can also vary enormously across areas, at a time when education largely determines the life incomes of many individuals. A modern society within a democratic country with a market economy is less likely to accept these differences, and they can be reduced mainly by some actions of *national* governments.

At the time when many of the now-federal countries became independent, governments had not been expected to have economic responsibilities that extended much beyond the allocation of resources, necessary to provide a few essential public goods. Public resources had been used mainly to pay salaries for the small number of employees in public administrations, for expenses related to national defense and for fighting occasional wars, for building essential public roads and other essential infrastructure, and for expenses connected with the pursuit of domestic justice and protection. While a few of the above responsibilities were assigned to *national* governments, there were other functions (such as the provision of a publicly financed police force, garbage collection services, street lighting, the provision and maintenance of local roads, water provision), that were left to the sub-national governments, and especially to the cities' governments, to deal with. Rural areas received very few government services.

As discussed previously, in the closing decades of the 19th century several economists were commenting, mostly negatively, about the high and growing public spending that was taking place at the local (and mostly city) level. That spending was leading to higher taxes. As Leroy-Beaulieu put it:

> One cannot have a good idea of the fiscal system of a country by paying attention to only national taxes. The budget of local governments reaches one third or often one half of the national budget . . . the establishment of a local tax system is a difficult problem. (1888, volume I, p. 708, own translation)

See also the interesting discussion of similar issues by Mill:

> Those . . . who have discussed any particular question of government interference, such as state education . . . , regulation of hours of labor, a public provision for the poor, etc., have often dealt largely in general arguments, far outstretching the special application made of them, and have shown a sufficiently strong bias either in favor of letting things alone, or in favor of meddling . . . (2004 [1848], chapter XI, pp. 856–7)

The cities and provinces, or regions (states in the USA and Brazil) had some rudimentary, local tax administrations that collected some revenue, and some rudimentary budget offices. In some countries the local spending could be partly financed by negotiated transfers from the national government. Occasionally the transfers could go in the other direction, as happened under the 1777 article of confederation of the USA and also in China (see Mihaljek, 1998, p. 193). Both the assignment of taxes and the specific decisions of the regulatory and spending responsibilities of national and sub-national governments, initially made, would in more modern times, when the economic role of the state had grown, create difficulties. The past role would become progressively more anachronistic in several of the federal countries. However, it was not easy to change age-old arrangements, which were often codified by the countries' constitutions. However, economic arguments should not be used to justify the content of constitutions.

Until the Great Depression of the 1930s, in the USA about 70 percent of all *general* taxes collected, and similar shares of public money spent, took place at the sub-national level. That was the level responsible for most educational, security and infrastructure spending that absorbed much of the revenue raised. Only about 30 percent (out of a total tax burden that was then only about 10 percent of US GDP) was spent by the federal government. Around the year 1900, total US public sector employment had been only about 4 percent of the working population, mostly at the local level. That share would rise to over 12 percent after World War II.

As mentioned earlier, Wagner's "law of increasing public sector's activities" has proven to be a more accurate description of the behavior of the national government than that of sub-national governments. Between the beginning of the 20th century and the 1990s, the share of total US government expenditure, accounted for by the federal government, rose from around 30 percent to close to 60 percent. The share accounted for by states rose from less than 10 percent to close to 20 percent. A large fall took place in the share of counties and municipalities, falling from around 60 percent to under 30 percent. This fall occurred in spite of the fast growth of cities (see Rosen, 1995, p. 509).

In the next section we discuss, briefly, how the changes reported above match some of the theories on fiscal federalism that have dominated thinking in recent decades.

12.2 Theories of fiscal federalism

Some of the arguments in favor of fiscal federalism have been largely political. They are often based on the belief that governments' activities inevitably reduce the personal and economic freedom of citizens, and that centralized governments that ignore the specific preferences of different groups reduce the freedom of the individuals in those groups. The more decentralized a country is, the more personal and political freedom is supposed to have been preserved by its political constitution. This must have been the thinking that drove the writing of some of the constitutions of countries born as democratic. (For some historical experiences with constitution, see Mihaljek, 1998.)

More recent, economic arguments for decentralization have been based on *ex ante* and *ex post* theoretical views. The *ex ante* theoretical case is the one made most clearly by Wallace Oates in his influential 1972 book. The *ex post* case is the one made earlier in 1956, by C. M. Tiebout.

The case made by Oates is based on the realization that different public goods have different spatial characteristics. Some are supposed to benefit a whole country, such as defense spending. Some, such as regional transportation systems, forestry services, draining of swamps, and others, benefit specific regions. Still others, such as street lighting, street cleaning, garbage collection, and others benefit only particular districts and cities. This differentiation requires that the supply of public goods is fitted to the different areas' and groups' requirements.

When public goods are supplied by a centralized government, there is the likelihood, or the greater probability, that the government might ignore the various areas' needs, or the preferences of the groups in them; or that the government will not be well informed of the differentiated needs and, therefore, it will supply a uniform package which will not be optimal for all groups. As Oates put it, when ". . . the jurisdiction that determines the level of provision of each public good includes precisely the set of individuals who consume the good" there will be "perfect correspondence" in the provision of public goods (1972, p. 34). The supply will be optimum for the groups.

In Oates's normative model, if the spatial characteristics of public goods differ, one might need to have a different jurisdiction in charge of each public good. In theory, one would need a highly decentralized public sector with as many sub-national jurisdictions of varying sizes as there are public goods. In this theoretical world, "each level of government, possessing complete knowledge of the tastes of its constituents and, seeking to maximize their welfare, would provide the Pareto-efficient level of output . . . and would finance this through benefit pricing" (Oates, 1972, pp. 32–4). Oates's basic message is that centralization is costly if it leads the government to provide a fixed bundle of public goods that differs from the preferences of the citizens of particular regions, provinces or municipalities.

The *ex post* case for fiscal differentiation was made by Tiebout, in a much-cited 1956 paper. That paper was published shortly after Paul Samuelson had published his two influential articles on the characteristics of public goods, which had explained why public goods should be provided by the government. Tiebout's argument was different from Oates's. It was that a decentralized government system can become a surrogate for competition and can bring to the action of the public sector some of the benefits, in terms of allocation of resources, that competitive markets are assumed to bring (see Israel, 1992). A decentralized system will generate different bundles of public goods by its governments. The bundles will reflect the preferences of the populations of different jurisdictions and will offer choices to the country's population. Each citizen will be able to "vote with his/her feet" and move to the jurisdiction that provides the bundle that more closely reflects that citizen's preference. Conservative economists saw this as a significant merit of fiscal decentralization.

When modern governments assumed the new, modern functions of *stabilization of the economy* and *redistribution and maintenance of incomes*, especially in the decade immediately following World War II, the new government functions, which required increased public revenue, could be pursued more efficiently at the higher, national levels. For this reason, in *The Theory of Public Finance* (1959), Richard Musgrave assigned the two relatively new government roles (stabilization and redistribution) to the *national* government, in what he called *multilevel* finance (pp. 179–82). He allocated very little space of his long book to questions of fiscal federalism. He must not have considered the topic particularly important. As mentioned earlier, until the 1950s, local government activities had attracted little attention and the importance of local governments had been declining (see also Johansen, 1965, chapter 8 for statistical information on several European countries).

Adam Smith hardly mentioned local governments in *The Wealth of Nations*, and neither had David Ricardo in his 1823 book. Ahmad and Brosio (2014) stated that it was John Stuart Mill who provided ". . . the first complete analysis of the economies of local government . . . that informs the assignment of policies between levels of governments . . .". They added that ". . . for Mill [local governments] were not appendices to central government but had a distinct role to play, one independent of the central government" (p. 6). These authors may have been too generous regarding Mill's discussion of local governments. A close reading of Mill's writing indicates that it was less complete and specific than implied by Ahmad and Brosio.

However, there is little doubt that when the role of the government started becoming more important, especially in the later part of the 19th century, it was at the local (city) level that it first grew, probably because of the fast growth of cities in those years. In his remarkable, encyclopedic, two-volume (1500 page) 1888 *Traité de la Science des Finances*, Paul Leroy-Beaulieu had dedicated about 40 pages to the local governments of several countries. The focus of these pages had been on the taxes to pay for the higher spending, with hardly any discussion of the spending itself. These pages included also the interesting prediction that *in the future the taxes of local governments would become less important*. Therefore, centralizing trends must already have been visible at that time to informed authors. Of course Bismarck would soon accentuate this trend with his pension reforms in Germany.

At the beginning of the 20th century, the growing popularity of socialism in continental European countries had created pressures for a kind of "municipal socialism" by pushing for the "municipalization" (that is, for the nationalization of enterprises on the part of local governments) of enterprises engaged in providing services to local populations. These enterprises tended to be "natural monopolies", so they needed to be either regulated, or made public. In the USA some of these enterprises had started to be regulated, while in Europe they were being "municipalized" (see Montemartini, 1902). The Scienza delle Finanze had shown more interest in sub-national governments than had the foreign literature, even though Italy was born with a unitary government (see Tanzi, 2018d).

In most federal states the assignments of traditional responsibilities among different levels of government had been established by the countries' constitutions. These legal documents had generally been written in the distant past, at a time when the governments' responsibilities had been limited. The constitutions established political limits to the power of governments, and especially to national governments. They could not set an agenda for the *future* unknown needs and responsibilities of governments. The consequence has been that, at times, there have been no clear rules to determine which government level was responsible for new activities, or for decisions, that had not existed, or had not been needed, in the past. Economic development and new technologies have created many new such needs over the years.

The above developments have often led to difficulties and conflicts, not easily solved by judicial systems (Supreme Courts) of countries. Furthermore, it has become increasingly difficult to determine what is, or should be, "rule of law". Constitutional guidelines are at times not very specific or helpful, while the decisions made by Supreme Courts have become ideologically more questionable and more "politically influenced". Supreme Courts' judges are increasingly chosen for their a priori political views rather than for their legal acumen. This has become especially evident in recent years in the USA.

The literature on fiscal federalism has been dominated by American scholars and American thinking. Its main selling point has been that the populations of different parts of a country's territory may have different preferences for *different bundles* of public goods, taxes and regulations. Therefore, the uniform packages that a unified government offered would be too constraining and too limiting to the personal liberty of individuals in different groups that made up a country. Fiscal federalism was seen as a way of increasing choices by giving individuals in sub-national jurisdictions some discretion over public goods packages. This policy was seen as being welfare enhancing, compared with that of countries where the national government made all the decisions. This position was endorsed, with few qualifications, by some international institutions, mainly the World Bank. Federalism would make the *heavy hand* of government less heavy.

In 1961, the National Bureau of Economic Research organized a conference that included the major public finance scholars at that time. They discussed fiscal federalism, within the context of the then growing demands for a larger economic role by governments. The published volume (NBER, 1961) included several papers that would help set the stage for future thinking and writing on the matter. Among the papers there was one by Charles Tiebout that summarized his influential views on fiscal federalism at that time, contained in his 1956 paper. That paper had attracted much attention and had been much cited.

Until recent decades, fiscal federalism has remained dominated by North American thinking and institutions (both US and Canadian). In that thinking the conclusion that it increased personal freedom was given much weight. In more recent years, that literature has become more cosmopolitan and has expanded to cover issues and views common in other federal countries – it has become also more realistic. This more recent literature has increasingly shown that difficulties that arise from federalist structures, especially in meeting some minimum basic standards, such as life expectancy and educational standards, have grown in several important countries. Some of the assumptions in the fiscal federalism literature, which had been accepted with few, if any, questions, are now challenged. It is also realized that, in some cases, a federalist structure can easily lead to highly questionable social results.

Tiebout (1956) had made the case that fiscal federalism provided a kind of revealed preference for public goods and for a government's economic role, an issue that, after the publication of the two Samuelson papers (1954; 1955) on public goods, had attracted a lot of attention from public finance experts. Tiebout's argument was that by offering different combinations of taxes and public goods within a country, fiscal federalism offered a choice among different public goods packages. Therefore, citizens could choose the government roles they liked, and could express a *revealed preference* by "voting with their feet". The implication was that federalism gave individual citizens more freedom than in "unitary countries". For economists that continued to regard the role of governments with suspicion, this was an important advantage for "federations".

Tiebout's model was criticized by Samuelson and others, who were more sympathetic to the growing role of government, and by several European economists who were skeptical about its premises and assumptions. One of these assumptions was the assumed knowledge on the part of normal citizens of the policies of different jurisdictions. A second was the lack of transaction costs associated with the move from one jurisdiction to another. These costs, both financial and psychological, could be very high. A third point was that many local jurisdictions had restrictions on access to public benefits by those who moved in to an area, including occupational requirements. A fourth was the likely presence of free rider problems. Individuals that expect to receive welfare from more socially generous jurisdictions are more likely to move to them, while those with high taxable incomes may move to jurisdictions where taxes are lower.

This latter problem has become more serious today because of the greater mobility of high-income individuals, who may move to low tax or zero income tax jurisdictions, such as Florida in the USA, or even Singapore, leaving large holes in the budgets of the governments from which they move out, say New Jersey. This problem may also exist when free and better education, or free health services, make some individuals want to move to particular jurisdictions and these services have to be financed.

13 Concluding remarks

This short introduction to public finance cannot claim to have done justice, in any adequate or satisfactory way, to a field that has become immense, increasingly complex and diversified, both in techniques and in thought. Public finance is now far less unified in approach than it used to be when it was considered a “science”. This book has focused on ideas rather than on techniques, questioning the view that economics has become “scientific”. Giving some mathematical symbols to some variable that cannot be measured does not make it scientific.

The unifying paradigm that had characterized public finance in the distant past evaporated during the Great Depression and especially after World War II. It had been a paradigm that had seen the free market as an *efficient* allocator of economic resources and an *ethical* distributor of incomes. The market was assumed to need only a few simple rules and little assistance in performing its tasks. It could be trusted with both the task of allocating scarce resources and that of generating deserved, earned incomes to those who provided the needed resources (land and natural resources, capital, labor, and ideas) to the market. It was a simple, transparent, efficient and optimistic world.

It was realized that a group of individuals living in a community might have some needs that could be better pursued collectively. This required some coordination, and the coordinating task was delegated to a central authority called the government. The government was assumed to reflect the interests of individuals in the community, and was expected to act on behalf of the whole community. It would guarantee and protect property rights, establish a few essential rules, and provide some needed public goods. Its role would be limited, keeping low the taxes needed to finance its activities. Public finance could be focused on minimizing the burden that the payment of taxes imposed on citizens. There was little to say, or to theorize, about public spending, or about regulations, and public debt was to be avoided. Certain *basic* individual rights (such as property rights, freedom of expression and of religion, and others) were to be protected by constitutions, even against the decisions of the majority. Rule of law would prevail.

In the above world, the free market would reign supreme. It would promote exchanges of goods and services, encourage specialization by individuals, and promote productivity and, in the long run, general welfare. Economic exchanges would be beneficial to both sides of the exchanges. Therefore, the more exchanges there would be, the greater would be public welfare. In this world, citizens would have the interest, incentive and freedom to specialize and to find their own most economically attractive niche, or occupation, in that market. Each would pursue his/her freely chosen interest, and an "invisible hand" would provide the needed coordination for the whole market. There would be no need for planning by a central authority and progress and economic growth would be the spontaneous and natural outcome of this natural organization, as Adam Smith had eloquently and beautifully explained in *The Wealth of Nations*. The role of the government, in this world would be largely that of an objective, fair and efficient referee. That role would require little spending, low taxes and few regulations.

While the esthetic beauty and the potential efficiency of this scheme has remained largely unchallenged in theory, and the fundamental role of the market has not been, and cannot be, challenged by any other feasible alternative scheme, its application to the real world, and not just to the world of theorists, has come under increasing challenges, and not only those of socialist thinkers, which will be ignored here. We shall mention some of these challenges.

Governments are not run by robots who faithfully follow simple and clear rules. Policymakers also do not have the wisdom of Solomon, the knowledge accumulated by Google, and the compassion and empathy of Mother Teresa. They are run by human beings with all the virtues, defects, vices and irrationalities that make them human. Some of them realize that the power and the tools of governments can be used to promote their *personal* goals and the interests of their families, tribes and followers, rather than the abstract interests of the community. "Leviathan" and "monopolistic" governments, at times, acquire control of the government apparatus and they are the ones that make the policy decisions even in countries that may superficially remain democratic. As governments grow in scope and size, "principal–agent" problems develop within them when policymakers are no longer able to supervise the daily activities of public employees who, in their functions, have acquired discretion, or monopoly power, on some operations that affect individuals and markets.

The number of more varied and complex goods and increasingly services (including finance, health, insurance, touristic and educational) provided by suppliers who are unknown and distant, have changed, in some fundamental ways, the character of the market that Adam Smith knew and described. The complexity and the distance that now exists between suppliers and consumers have created increasing opportunities to manipulate market exchanges and, at times, also to raise transaction costs. A large and increasingly complex market provides some opportunities for exploitation. Various market failures (e.g. monopolies, monopolistic competition, asymmetry in information, fake goods) have created increasing opportunities for some market participants to exploit other market participants, especially in recent years. In some sectors, and especially in the financial sector, transaction costs have risen, providing high returns to those who operate those sectors. In this sector the savings of savers are not smoothly and cheaply transferred to the borrowers as they might have been in the past. Those who handle the transactions take large cuts, and earnings in the financial market as a whole have increased enormously.

Over the longer run business cycles have become more frequent and have led to unemployment for workers who no longer have the safety nets that had been provided in the distant past by large family units and religious or other charitable institutions in the communities where they lived.

More democratic governments, in which most now have the right to vote, have made citizens less tolerant of very uneven income and wealth distributions, especially when they are connected with inheritance, monopolies, luck, or government rules (such as monopoly protection of intellectual property through patents), than with the ability and the work input of a baker or butcher to produce better bread or meat to known customers.

All the above factors, over the years, have pushed for a greater regulatory or spending economic role by governments. That role grew during the Great Depression and continued to grow after World War II, in some countries more than in others. That growth had a great impact on public finance, a field that ceased to claim to be a science in which value judgments could be excluded and scientific truths could be derived to guide policies that would not disturb the equilibrium of the market. These developments made public finance messier, more realistic and more complex. Complexity increased exposure to errors and exploitation. Attempts in the 1980s and 1990s to bring back an approach that would give a larger role to the market and reduce that of the government lacked realism. They could not have survived the test of time.

Fundamental questions remain unanswered: Has the larger role that the government has assumed *necessarily* contributed to the improvement of the welfare of citizens, given the real-life shortcomings and some inevitable problems in that role? And would a more limited role, given abuses and distortions in the market, and the mistakes that governments make, have generated a better world? On these questions the jury may still be out. It is impossible to state what would have happened if the role of government had remained limited while the market was becoming more complex. Would the market have regulated itself better? Or would the abuses have grown? Different economists would probably answer that question differently.

Finally, the author of this book has become convinced that the way in which governments intervene in the economy may be more important than the size of their intervention, the aspect that often attracts more attention. Interventions focused mainly on eliminating or reducing *universal risks for all citizens*, using *transparent and broader-based taxes and programs*, are likely to achieve better results than those promoted with means-tested programs financed by taxes that rely more on tax expenditures. These programs create more complexity and more possibilities for errors and abuses.

In conclusion, the objective of *simplicity* ought to be a fundamental input in policy determination. Unfortunately, it has taken a back seat in many countries, and in the work of most economists, compared with other objectives.

Bibliography

Aaron, Henry, ed., 1976, *Inflation and the Income Tax* (Washington, DC: The Brookings Institution).

Aaron, Henry, Barry P. Bosworth and Gary Burtless, 1989, *Can America Afford to Grow Old?* (Washington, DC: The Brookings Institution).

Adams, Charles, 1998, *Those Dirty Rotten Taxes* (New York: The Free Press).

Afonso, A., L. Schuknecht and V. Tanzi, 2005, "Public sector efficiency: an international comparison", *Public Choice*, 123, pp. 321–47.

Ahmad, Ehtisham and Giorgio Brosio, 2006, *Handbook of Fiscal Federalism* (Cheltenham, UK and Northampton, MA, USA: Edward Elgar Publishing).

Ahmad, Ehtisham and Giorgio Brosio, 2014, *Handbook of Multilevel Finance* (Cheltenham, UK and Northampton, MA, USA: Edward Elgar Publishing).

Akerlof, George, 1970, "The market for lemons: quality, uncertainty and the market mechanism", *The Quarterly Journal of Economics*, 84 (3), pp. 488–500.

Akerlof, George A. and Robert Shiller, 2015, *Phishing for Phools: The Economics of Manipulation and Deception* (Princeton, NJ: Princeton University Press).

Albi, Emilio and Jorge Martinez-Vazquez, 2011, *The Elgar Guide to Tax Systems* (Cheltenham, UK and Northampton, MA, USA: Edward Elgar Publishing).

Alesina, A., G. Favero and F. Giavazzi, 2019, *Austerity: When it Works and When it Doesn't* (Princeton, NJ: Princeton University Press).

American Economic Association and Royal Economic Society, 1965, *Surveys of Economic Theory, Volume I, Money, Interest and Welfare* (London and New York: Macmillan and St. Martin's Press).

Ariely, Dan, 2008, *Predictably Irrational: The Hidden Forces that Shape our Decisions* (New York: Harper).

Arrow, Kenneth J., 1951, *Social Choice and Individual Values*, rev'd edn 1963 (New York: John Wiley and Sons).

Ashley, W. J., 1904, *The Progress of the German Working Class: In the Last Quarter of a Century* (London, New York and Bombay: Longmans, Green and Co.).

Ashton, T. S., 1948, *The Industrial Revolution, 1760–1830* (London: Oxford University Press).

Atkinson, A. B., 1973, "How progressive should income tax be?", in M. Parkin and A. R. Nobay, eds, *Essays in Modern Economics* (London: Longman), pp. 90–109.

Atkinson, A. B., 1995, *Public Economics in Action: The Basic Income/Flat Tax Proposal*, The Lindahl Lectures (Oxford: Clarendon Press).

Atkinson, A. B. and G. V. Mogensen, eds, 1993, *Welfare States, Taxes and Work Incentives* (Oxford: Oxford University Press).

Barker, Sir Ernest, 1947, *Social Contract: Locke, Hume, Rousseau* (Oxford: Oxford University Press).

Bator, Francis M., 1958, "The anatomy of market failure", *The Quarterly Journal of Economics*, 72 (3), pp. 351–79.
Bator, Francis M., 1960, *The Question of Government Spending: Public Needs and Private Wants* (New York: Harper).
Baumol, William J., 1967, "Macroeconomics of unbalanced growth: the anatomy of urban crisis", *American Economic Review*, 57, June, pp. 415–26.
Bird, Richard, 1986, *Federal Finance in Comparative Perspective* (Toronto: Canadian Tax Foundation).
Black, Duncan, 1958, *The Theory of Committees and Elections* (Cambridge: Cambridge University Press).
Boadway, Robin, 2012, *From Optimal Tax Theory to Tax Policy* (Munich: CES and MIT Press).
Boardman, A. and A. Vining, 1989, "Ownership and performance in competitive environment: a comparison of the performance of private, mixed, and state-owned enterprises", *Journal of Law and Economics*, 32 (1), pp. 1–33.
Break, G. F., 1957, "Income taxes and incentive to work", *American Economic Review*, 47 (5), pp. 529–49.
Brennan, Geoffrey and James M. Buchanan, 1980, *The Power to Tax: Analytical Foundations of Fiscal Constitutions* (Cambridge: Cambridge University Press).
Breton, A., 1996, *Competitive Government: An Economic Theory of Politics and Public Finance* (New York: Cambridge University Press).
Brownlee, O. H., 1961, "User prices versus taxes", in *National Bureau of Economic Research's Conference on Public Finances: Needs, Sources and Utilization* (Princeton, NJ: Princeton University Press), pp. 421–38.
Buchanan, James M., 1960, "La Scienza delle Finanze: the Italian tradition in fiscal theory", in James M. Buchanan, *Fiscal Theory and Political Economy: Selected Essays* (Chapel Hill, NC: University of North Carolina Press), pp. 24–74.
Buchanan, James M., 1963, "The economics of earmarked taxes", *Journal of Political Economy*, 71 (5), pp. 457–69.
Buchanan, James M., 1968, *The Demand and Supply of Public Goods* (Chicago, IL: Rand McNally and Company).
Buchanan, James M., 1970, *The Public Finances: An Introductory Textbook* (Homewood, IL: Richard Irwin).
Buchanan, James M., 1997, "Who should redistribute what in a federal system", in Dick Netzer and Matthew P. Drennan, eds, *State and Local Public Finance* (Oxford: Blackwell Publishers), pp. 55–73.
Buchanan, James M. and Marilyn Flowers, 1987, *The Public Finances: An Introductory Textbook*, 6th edn (Homewood, IL: Richard Irwin).
Buchanan, James M. and Richard Musgrave, 1999, *Public Finance and Public Choice: Two Contrasting Views of the State* (Cambridge, MA: MIT Press).
Burke, Edmund, 1899 [1790], "Reflections on the Revolution in France", in *The Works of the Right Honorable Edmund Burke*, vol. 3 (London: John C. Nimmo).
Centers for Disease Control and Prevention, 2018, "U.S. small-area life expectancy estimates project", available at https://www.cdc.gov/nchs/nvss/usaleep/usaleep.html.
Chamberlin, E. H., 1948, *The Theory of Monopolistic Competition*, 5th edn (Cambridge, MA: Harvard University Press).

Clark, Colin, 1964, "Taxmanship", Hobart Paper 26 (London: Institute of Economic Affairs).
Cnossen, Sijbren, 2011, "The economics of excise taxation", in Emilio Albi and Jorge Martinez-Vazquez, eds, *The Elgar Guide to Tax Systems* (Cheltenham, UK and Northampton, MA, USA: Edward Elgar Publishing), pp. 278–99.
Coase, R. H., 1960, "The problem of social cost", *Journal of Law and Economics*, 3, pp. 1–44.
Colborn, Jamison E., 2018, *The Scale of Weighing Regulatory Costs, Technology and Time* (Cheltenham, UK and Northampton, MA, USA: Edward Elgar Publishing).
Collison Black, R. D., A. W. Coars and Craufurd D. W. Goodwin, 1973, *The Marginal Revolution in Economics: Interpretation and Evaluation* (Durham, NC: Duke University Press).
Colm, Gerhard and Manuel Helzner, 1961, "Financial needs and resources over the next decade: at all levels of government", in NBER, *Public Finances: Needs, Sources and Utilization* (Princeton, NJ: Princeton University Press), pp. 3–22.
Costabile, Lilia, ed., 2008, *Institutions for Social Well-Being* (London: Palgrave Macmillan).
Cowen, Tyler, 1992, *Public Goods and Market Failure* (New Brunswick, NJ and London: Transaction Publishers).
Curiosity Stream, 2016, "The real Adam Smith", available at https://curiositystream.com/video/1751/ideas-that-changed-the-world.
Dabla-Norris, E., ed., 2019, *Debt and Entanglements between the Wars* (Washington, DC: IMF).
Dalton, Hugh, 1954, *Principles of Public Finance*, 4th edn (New York: Augustus M. Kelley Publishers).
Davie, Bruce and Bruce Duncombe, 1972, *Public Finance* (New York: Holt, Rinehart and Winston).
Davis, Stephen, 2010, "Pianificazione urbanistica di laissez faire", in David T. Beito, Peter Gordon and Alexander Tabarrok, eds, *La Citta volontaria* (Catanzaro and Bergamo: Rubettino/ Leonardo Fracco), pp. 31–60.
De Viti De Marco, Antonio, 1936, *First Principles of Public Finance* (London: Jonathan Cape).
Dnes, Antony W., 2018, *Principles of Law and Economics*, 3rd edn (Cheltenham, UK and Northampton, MA, USA: Edward Elgar Publishing).
Down, Anthony, 1957, *An Economic Theory of Democracy* (New York: Harper and Row).
Erdogdu, Mustafa M., Larissa-Margareta Batrancea and S. Cevik, eds, forthcoming, *Behavioral Public Finance: Individuals, Society and the State* (London: Routledge).
Estrin, Saul, Zhixiang Liang, Daniel Shapiro and Michael Carney, 2018, "State capitalism, economic systems and the performance of state-owned firms", *Acta Oeconomica*, 69 (1), pp. 175–94.
Evans, C., 2003, "Studying the studies: an overview of recent research into taxation operating costs", *eJournal of Tax Research*, 1 (1), pp. 64–92.
Evans, C., P. Lignier and B. Tran-Nam, 2016, "The tax compliance costs of large corporations: an empirical inquiry and comparative analysis", *Canadian Tax Journal*, 64 (4), pp. 751–93.

Fasiani, Mauro, 1951 [1941], *Principi di Scienza delle Finanze*, Vols 1 and II (Turin: Giappinelli).
Federal Reserve, 2020, *Distribution of Household Wealth in the US since 1989* (Washington, DC: Federal Reserve).
Flora, Federico, 1909, *Manuale di Scienza dell Finanze* (Livorno: Raffaello Giusti).
Fogel, Robert William, 2000, *The Fourth Great Awakening and the Future of Egalitarianism* (Chicago, IL: University of Chicago Press).
Friedman, Milton, 1962, *Capitalism and Freedom* (Chicago, IL: University of Chicago Press).
Galbraith, John Kenneth, 1958, *The Affluent Society* (Boston, MA: Houghton Mifflin).
Graff, J. de V., 1957, *Theoretical Welfare Economics* (Cambridge: Cambridge University Press).
Gramlich, Edward M., 1997, "The economics of fiscal federalism and its reform", in Dick Netzer and Matthew P. Drennan, eds, *State and Local Public Finance* (Oxford: Blackwell Publishers), pp. 74–94.
Graziani, Augusto, 1897, *Scienza delle Finanze* (Turin: Fratelli Bocca Editori).
Green, Christopher, 1967, *Negative Taxes and the Poverty Problem* (Washington, DC: The Brookings Institution).
Groves, Harold M. and Robert L. Bish, 1973, *Financing Government*, 7th edn (New York: Holt, Rinehart and Winston).
Hall, Robert E. and Alvin Rabushka, 1995, *The Flat Tax*, 2nd edn (Stanford, CA: The Hoover Institution Press).
Hansen, Alvin, 1941, *Fiscal Policy and Business Cycle* (New York: W.W. Norton and Company).
Hansen, Alvin, 1953, *A Guide to Keynes* (New York: McGraw-Hill Book Company).
Harberger, Arnold C., 1964, "Taxation, resource allocation and welfare", in *The Role of Direct and Indirect Taxes in the Federal Revenue System: A Conference Report of the National Bureau of Economic Resources and the Brookings Institution* (Princeton, NJ: Princeton University Press), pp. 25–70.
Head, John G., 1974, *Public Goods and Public Welfare* (Durham, NC: Duke University Press).
Hicks, John, 1981, *Wealth and Welfare* (Cambridge, MA: Harvard University Press).
Hicks, Ursula, 1968 [1947], *Public Finance* (Cambridge, at the University Press: James Nisbet & Co. Ltd).
Hinrichs, Harley II, 1966, *A General Theory of Tax Structure Change during Economic Development* (Cambridge, MA: Harvard Law School).
Hobbes, Thomas, 1963 [1651], *Leviathan* (New York: Meridian Books).
Hockman, Harold H. and James R. Rogers, 1969, "Pareto optimal income redistribution", *American Economic Review*, 59 (4), pp. 542–57.
Hoffman, Philip T., 2017, "Public economics and history: a review of fiscal regimes and the political economy of premodern states", ed. Andrew Monson and Walter Scheidel (Cambridge: Cambridge University Press), *Journal of Economic Literature*, 55 (4), pp. 1556–69.
Holcombe, Randall G., 2002, "The Ramsey Rule reconsidered", *Public Finance Review*, 30, November, pp. 562–78.

Hume, David, 1970, *Writings in Economics*, ed. Eugene Rotwein (Madison, WI: University of Wisconsin Press).

IMF, 2019, *Fiscal Monitor, April* (Washington, DC: IMF).

Isaac, T. M. Thomas, R. Mohan and Lekha Chakraborty, *Challenges to Indian Fiscal Federalism* (New Delhi: Left Word Books).

Israel, Arturo, 1992, "Issues for infrastructure management in the 1990s", World Bank Discussion Paper, 171 (Washington, DC).

Johansen, Leif, 1965, *Public Economics* (Amsterdam: North Holland).

Jomo, K. S., 2008, "A critical review of the evolving privatization debate", in G. Roland, ed., *Privatization: Successes and Failures* (New York: Columbia University Press), pp. 199–212.

Kahneman, Daniel, 2011, *Thinking, Fast and Slow* (New York: Farrar, Straus and Giroux).

Kaldor, Nicholas, 1955, *An Expenditure Tax* (London: George Allen and Unwin).

Kalecki, M., 1944, "Professor Pigou on the 'Stationary State': a comment", *Economic Journal*, 54 (213), pp. 131–2.

Kaul, Inke, Pedro Conceicao, Katell Goulven and Ronaldo Mendoza, 2003, *Providing Global Public Goods: Managing Globalization* (New York: Oxford University Press).

Keane, M. P., 2011, "Labor supply and taxes: a survey", *Journal of Economic Literature*, 49 (4), pp. 961–1075.

Keynes, John Maynard, 1920, *The Economic Consequences of the Peace* (New York: Macmillan Press).

Keynes, John Maynard, 1926, *The End of Laissez-Faire* (London: Hogarth Press).

Keynes, John Maynard, 1936, *The General Theory of Employment, Interest and Money* (London: Macmillan; New York: Harcourt, Brace and Company).

Kirzner, Israel M., 2001, *Ludwig von Mises: The Man and his Economics* (Wilmington, DE: ISI Books).

Krueger, Anne O., 1974, "The political economy of rent-seeking society", *American Economic Review*, 64 (3), pp. 291–303.

Laffer, Arthur B., 1979, "Statement prepared for the joint committee, May 20", in Arthur B. Laffer and Jan Seymour, eds, *The Economics of the Tax Revolt: A Reader* (New York: Harcourt Brace Jovanovich), pp. 75–9.

Le Grand, Julian, 1991, *Equity and Choice: An Essay in Economics and Applied Philosophy* (London: HarperCollins).

Lerner, Abba P., 1943, "Functional finance and the federal debt", *Social Research*, 10, pp. 38–51.

Lerner, Abba P., 1948, "The burden of the national debt", in *Income, Employment and Public Policy: Essays in Honor of Alvin H. Hansen* (New York: W.W. Norton and Company), pp. 255–75.

Leroy-Beaulieu, Paul, 1888, *Traité de la Science des Finances*, 2 vols (Paris: Guillaumin).

Levitsky, Steven and Daniel Ziblatt, 2018, *How Democracies Die* (New York: Random House).

Levitt, Raymond E., W. Richard Scott and Michael J. Garvin, 2019, *Public–Private Partnership: Finance, Stakeholders, Alignment, Governance* (Cheltenham, UK and Northampton, MA, USA: Edward Elgar Publishing).

Lewis, Stephen R. Jr, 1963, “Government revenue from foreign trade: an international comparison”, *Manchester School of Economics and Social Studies 31*, January.
Lindert, Peter H., 2004, *Growing Public: Social Spending and Economic Growth since the Eighteenth Century* (New York: Cambridge University Press).
Loria, Achille, 1903, *Il Movimento Operaio* (Milan, Palermo and Naples: Remo Sandron Editore).
Loria, Achille, 1913 [1886], *Le basi economiche della Costituzione Sociale* (Milan, Turin and Rome: Fratelli Bocca Editori).
Lucas, Robert, 1976, “Econometric policy evaluation: a critique”, Carnegie-Rochester Conference Series on Public Policy, *Elsevier/Science Direct*, 1, pp. 19–46.
Lucas, Robert, 1990, “Supply-side economics: an analytic review”, *Oxford Economic Papers*, 42, pp. 293–316.
MacLean, Nancy, 2017, *Democracy in Chains: The Deep History of the Radical Right’s Stealth Plan for America* (New York: Viking).
Majorana, Salvatore, 1923, *Le imposte indirette e un processo celebre* (Catania: Francesco Glati).
Malabre, Jr, Alfred, 1994, *Lost Prophets: An Insider’s History of the Modern Economics* (Boston, MA: Harvard Business School Press).
Mallock, W. H., 1908, *A Critical Examination of Socialism* (London: John Murray).
Malloy, Robin Paul, 1990, *Law and Economics: A Comparative Approach to Theory and Practice* (Saint Paul, MN: West Publishing Company).
Mankiw, N. Gregory, Matthew Weinzieri and Danny Yagan, 2009, “Optimal taxation in theory and practice”, *Journal of Economic Perspective*, 23 (4), pp. 147–74.
Marx, Karl, 1906 [1867], *Capital* (New York: The Modern Library).
Messere, Ken, 1993, *Tax Policy in OECD Countries: Choices and Conflicts* (Amsterdam: IBFD Publications BV).
Mihaljek, Dubrovko, 1998, “Theory and practice of confederate finances”, in Peter Birch Sorensen, ed., *Public Finance in a Changing World* (London: Macmillan Press), pp. 193–220.
Mill, J. S., 2004 [1848], *Principles of Political Economy* (Amherst, NY: Prometheus Books).
Mirrlees, James and Peter Diamond, 1971a, “Optimal taxation and public production I: production efficiency”, *American Economic Review*, 61 (1), pp. 8–27.
Mirrlees, James and Peter Diamond, 1971b, “Optimal taxation and public production II: tax rules”, *American Economic Review*, 61 (1), pp. 261–78.
Mishan, E. J., 1965, “A survey of welfare economics, 1939–59”, in *Surveys of Economic Theory*, Volume 1, American Economic Association and Royal Economic Society, (London: Macmillan; New York: St. Martin’s Press), pp. 154–222.
Monson, Andrew and Walter Scheidel, eds, 2016, *Fiscal Regimes and the Political Economy of Pre-Modern States* (Cambridge: Cambridge University Press).
Montemartini, Giovanni, 1902, Municipalizzazione dei Pubblici Servizi (Milan: Societa’ Editrice Libraria). [Partly extracted in Richard Musgrave and Alan Peacock, 1958, *Classics in the Theory of Public Finance* (London: Macmillan).]

Mosca, Gaetano, 1938 [1896], *Elementi di scienza politica* (Rome: Fratelli Bocca).
Mueller, Dennis E., 1989, *Public Choice II: A Revised Edition of Public Choice*, Cambridge Surveys of Economic Literature (New York: Cambridge University Press).
Musgrave, Richard A., 1959, *The Theory of Public Finance* (New York: McGraw-Hill Book Company).
Musgrave, Richard A., 1969, *Fiscal Systems* (New Haven, CT: Yale University Press).
Musgrave, Richard A. and Alan Peacock, 1958, *Classics in the Theory of Public Finance* (London: Macmillan).
Musgrave, Richard A. and Carl S. Shoup, 1959, *Readings in the Theory of Taxation* (Homewood, IL: Richard D. Irwin).
Muten, Leif, Peter B. Sorensen, Kare P. Hagen and Bernd Gensen, 1996, *Toward a Dual Income Tax? Scandinavian and Austrian Experiences* (London, The Hague and Boston: Kluwer Law).
Namier, Lewis, 1964 [1848], *The Revolution of the Intellectuals* (Garden City, NY: Doubleday and Company).
NBER, 1961, *Public Finances: Needs, Sources and Utilization* (Princeton, NJ: Princeton University Press).
Netzer, Dick, 1966, *Economics of the Property Tax* (Washington, DC: The Brookings Institution).
Netzer, Dick and Matthew P. Drennan, eds, 1997, *State and Local Public Finance* (Oxford: Blackwell Publishers).
Nitti, F. S., 1971, *Il Socialismo cattolico: scritti di economia e finanza* (Bari: Editori Laterza).
Nordhaus, William, 2019a, "Climate change: the ultimate challenge in economics", *American Economic Review*, 109 (6), pp. 1991–2014.
Nordhaus, William, 2019b, "Can we control carbon dioxide?", *American Economic Review*, 109 (6), pp. 2015–35.
Oates, Wallace, 1972, *Fiscal Federalism* (New York: Harcourt Brace Jovanovich).
OECD, 2019, *Revenue Statistics of OECD Countries* (Paris: OECD).
Okun, Arthur M., 1970, *The Political Economy of Prosperity* (New York: W.W. Norton and Company).
Okun, Arthur M., 1975, *Equality and Efficiency: The Big Tradeoff* (Washington, DC: The Brookings Institution).
Olson, Mancur, 1965, *The Logic of Collective Action* (Cambridge, MA: Harvard University Press).
Olson, Mancur, 1969, "The principle of 'fiscal equivalence': the division of responsibilities among different levels of government", *American Economic Review*, 59 (2), pp. 479–87.
Olson, Mancur, 1999, "An essay on fiscal federalism", *Journal of Economic Literature*, 37, September, pp. 957–71.
Padovano, Fabio and Alessandro Petretto, eds, 2016, *Public Choice and Political Economy* (Milan: Franco Angeli).
Pareto, Vilfredo, 1953 [1896–97], *Corso di economia politica*, Vol. II (Turin: Edizioni Scientifiche Einaudi).
Pareto, Vilfredo, 1964 [1916], *Trattato di sociologia generale*, Vol. II (Milan: Comunita).

Peacock, Alan, 1992, *Public Choice Analysis in Historical Perspective* (Cambridge: Cambridge University Press).
Pechman, Joseph A., ed., 1980, *What Should be Taxes: Income or Expenditure?* (Washington, DC: The Brookings Institution).
Pechman, Joseph A., 1987, *Federal Tax Policy*, 5th edn (Washington, DC: The Brookings Institution).
Peltzman, Sam, 1976, "Toward a more general theory of regulation", NBER Working Paper No. 133 (April).
Peltzman, Sam, 1980, "The growth of government", *Journal of Law and Economics*, 23 (2), pp. 209–87.
Perlman, Selig, 1949, *A Theory of Labor Movement* (New York: Augustus M. Kelley).
Petty, Sir William, 1899 [1677], "A treatise of taxes and contributions", in *The Economic Writing of Sir William Petty*, ed. C. H. Cannan (London: Cambridge University Press), ch. 15.
Pigou, A. C., 1928, *A Study in Public Finance* (London: Macmillan & Co.).
Pigou, A. C., 1932, *The Economics of Welfare*, 4th edn (London: Macmillan & Co.).
Pigou, A. C., 1943, "The classical stationary state", *The Economist Journal*, December.
Piketty, Thomas, 2014, *Capital in the Twenty-First Century* (Cambridge, MA: Harvard University Press).
Piketty, Thomas, 2019, *Capital and Ideology* (Cambridge, MA: Harvard University Press).
Pogge, Thomas and Krishen Mehta, eds, 2016, *Global Tax Fairness* (Oxford: Oxford University Press).
Polackova Brixi, Hana and Allen Schick, eds, 2003, *Government at Risk: Contingent Liabilities and Fiscal Risk* (Oxford: Oxford University Press and the World Bank).
Posner, R. A., 1975, "The social cost of monopoly and regulations", *Journal of Political Economy*, 83, pp. 807–27.
Proudhon, Pierre-Joseph, 2009 [1841], *Qu'est-ce que la proprietè?* (Paris: Flammarion).
Puviani, Amilcare, 1973 [1903], *A cura di Franco Volpi, Teoria dell'Illusione Finanziaria* (Milan: ISEDI).
Ramsey, F. P., 1927, "A contribution to the theory of taxation", *The Economic Journal*, 37 (145), pp. 47–61.
Reinhart, Carmen and Kenneth Rogoff, 2009, *This is Different: Eight Centuries of Financial Folly* (Princeton, NJ: Princeton University Press).
Ricardo, David, 1973 [1817], *The Principles of Political Economy and Taxation*, ed. Donald Winch (London: J. M. Dent and Sons Ltd).
Robinson, Joan, 1963, *Exercises in Economic Analyses* (London: Macmillan and Co. Ltd).
Roche, George, 1977, *Frederic Bastiat: A Man Alone* (New Rochelle, NY: Arlington House).
Rolph, Earl R. and George F. Break, 1961, *Public Finance* (New York: The Ronald Press Company).
Röpke, Wilhelm, 1969, *Against the Tide* (Chicago: Henry Regnery Company).

Rosen, Harvey S., 2005, *Public Finance*, 7th edn (New York: McGraw-Hill/Irwin).
Sadka, Efraim and Vito Tanzi, 1993, "A tax on gross assets of enterprises as a form of presumptive taxation", *Bulletin of the International Bureau of Fiscal Documentation*, 47 (2), n.p.
Saez, Emmanuel and Gabriel Zucman, 2019, *The Triumph of Injustice: How the Rich Dodge Taxes and How to Make them Pay* (New York: W.W. Norton and Company).
Samuelson, Paul Anthony, 1954, "The pure theory of public expenditure", *Review of Economics and Statistics*, 37, pp. 387–9.
Samuelson, Paul Anthony, 1955, "Diagrammatic exposition of a theory of public expenditure", *Review of Economic and Statistics*, 37, pp. 350–56.
Samuelson, Paul Anthony, 1958, "Aspects of public expenditure theories", *Review of Economics and Statistics*, 40, pp. 332–8.
Sandford, C. T., 1969, *Economics of Public Finance: An Economic Analysis of Government Expenditure and Revenue in the United Kingdom* (Oxford: Pergamon Press).
Sax, Emil, 1887, *Grundlegung der Theoretischen Staatswirthschaft* (Vienna).
Say, J., 1886, *Les solutions democratiques del la question des impôts* (Paris).
Scherer, Joseph and James Papke, eds, 1966, *Public Finance & Fiscal Policy* (Boston, MA: Houghton Mifflin Company).
Schiavo-Campo, Salvatore, 2017, *Government Budgeting and Expenditure Management* (New York and London: Routledge).
Schuknecht, Ludger, forthcoming, *Public Spending and the Role of the State* (New York: Cambridge University Press).
Schumpeter, Joseph A., 1954, *History of Economic Analysis* (New York: Oxford University Press).
Schumpeter, Joseph A., 1965 [1951], *Ten Great Economists from Marx to Keynes* (New York: Oxford University Press).
Seligman, Edwin R., 1908, *Progressive Taxation in Theory and Practice*, 2nd edn, American Economic Association (Princeton, NJ: Princeton University Press).
Shiller, Robert J., 2000, *Irrational Exuberance* (New York: Broadway Books).
Shiller, Robert J., 2012, *Finance and the Great Society* (Princeton, NJ and Oxford: Princeton University Press).
Sigg, Roland and Christina Behrendt, eds, 2002, *Social Security in the Global Village* (New Brunswick, NJ and London: Transaction Publishers).
Slemrod, Joel, 1990, "Optimal tax systems", *Journal of Economic Perspectives*, 4 (Winter), pp. 157–78.
Slemrod, Joel and Jon Bakija, 2004, *Taxing Ourselves: A Citizen's Guide to the Debate over Taxes*, 3rd edn (Cambridge, MA and London: MIT Press).
Smith, Adam, 1976 [1759], *The Theory of Moral Sentiments* (Indianapolis, IN: Liberty Classics).
Smith, Adam, 1999 [1776], *The Wealth of Nations* (Harmondsworth: Penguin).
Social Contract, Essays by Locke, Hume, and Rousseau, 1962, with an Introduction by Sir Ernest Barker (Oxford: Oxford University Press).
Sorensen, Peter Birch, ed., 1998a, *Public Finance in a Changing World* (London: Macmillan Press).
Sorensen, Peter Birch, 1998b, *Tax Policy in the Nordic Countries* (London: Macmillan Press).

Stein, Herbert, 1969, *The Fiscal Revolution in America* (Chicago, IL: University of Chicago Press).
Stenfors, Alexis, 2017, *Barometer of Fear: An Insider Account of Rogue Trading and the Greatest Banking Scandal in History* (London: Zed Books).
Stern, Andy with Lee Kravitz, 2016, *Raising the Floor* (New York: Public Affairs).
Stigler, George J., 1973, "The Adaptation of the Marginal Utility Theory", in R. D. Collison Black, A. W. Coars and C. D. W. Goodwin, eds, *The Marginal Revolution in Economics: Interpretation and Evaluation* (Durham, NC: Duke University Press), pp. 305–20.
Stigler, George J., 1975, *The Citizen and the State: Essays on Regulations* (Chicago, IL and London: University of Chicago Press).
Summers, Laurence, 1985, *Taxation and the Size and Composition of the Capital Stock: An Asset Price Approach* (Cambridge, MA: NBER).
Tanzi, Vito, 1972, "Exclusion, pure public goods and Pareto optimality", *Public Finance*, 27 (1), pp. 75–8.
Tanzi, Vito, 1973, "The theory of tax structure change during economic development: a critical survey", *Rivista di Diritto Finanziario e Scienza delle Finanze*, 32 (2), pp. 199–208.
Tanzi, Vito, 1976, "Export taxation in developing countries", *Social and Economic Studies*, 25 (1), pp. 66–76.
Tanzi, Vito, 1977, "Inflation, lags in collection and the real value of tax revenue", *IMF Staff Papers*, 24 (1), pp. 154–67.
Tanzi, Vito, 1978a, "Import taxes and economic development", *Economia Internazionale*, 31 (3–4), reprinted in Vito Tanzi, 1991, *Public Finance in Developing Countries* (Aldershot, UK and Brookfield, VT, USA: Edward Elgar Publishing).
Tanzi, Vito, 1978b, "Inflation, real tax revenue and the case for inflationary finance: theory with an application to Argentina", *IMF Staff Papers*, 25 (4), pp. 417–51.
Tanzi, Vito, 1980a, *Inflation and the Personal Income Tax: An International Perspective* (Cambridge: Cambridge University Press).
Tanzi, Vito, 1980b, "Inflationary expectation, economic activities, taxes, and interest rates", *American Economic Review*, 70 (1), pp. 12–21.
Tanzi, Vito, 1980c, "Inflation accounting and the taxation of capital gains of enterprises", Proceedings of the International Institute of Public Finance (1979, Taormina Congress).
Tanzi, Vito, 1980d, "The underground economy in the United States: estimates and implications", *Banca Nazionale del Lavoro Quarterly Review*, 135, December, pp. 427–53.
Tanzi, Vito, 1987, "The response of other industrial countries to the US Tax Reform Act", *National Tax Journal*, 40 (3), pp. 957–66.
Tanzi, Vito, 1991, *Public Finance in Developing Countries* (Aldershot, UK and Brookfield, VT, USA: Edward Elgar Publishing).
Tanzi, Vito, 1993, "The budget deficit in transition: a cautionary note", *IMF Staff Papers*, 40 (4), pp. 697–707.
Tanzi, Vito, 1995, *Taxation in an Integrating World* (Washington, DC: The Brookings Institution).

Tanzi, Vito, 1998, "Government role and the efficiency of policy instruments", in Peter Birch Sorensen, ed., *Public Finance in a Changing World* (London: Macmillan Press), pp. 51–69.
Tanzo, Vito, 2000, *Policies, Institutions and the Dark Side of Economics* (Cheltenham, UK and Northampton, MA, USA: Edward Elgar Publishing).
Tanzi, Vito, 2008a, "The future of fiscal federalism", *European Journal of Political Economy*, 24 (3), pp. 705–12.
Tanzi, Vito, 2008b, "The future of fiscal federalism and the need for global government: a reply to Roland Vaubel", *European Journal of Political Economy*, 25 (1), pp. 137–9.
Tanzi, Vito, 2011a, "Tax systems in the OECD: recent evolution, competition, and convergence", in Emilio Albi and Jorge Martinez-Vazquez, eds, *The Elgar Guide to Tax Systems* (Cheltenham, UK and Northampton, MA, USA: Edward Elgar Publishing), pp. 11–37.
Tanzi, Vito, 2011b, *Government versus Market: The Changing Economic Role of the State* (New York: Cambridge University Press).
Tanzi, Vito, 2013, *Dollars, Euros and Debt: How We Got Into the Fiscal Crisis and How We Get Out Of It* (London: Palgrave Macmillan).
Tanzi, Vito, 2014a, "The Laffer curve muddle", in F. Forte, R. Mudambi and P. M. Navarro, eds, *A Handbook of Alternative Theories of Public Economics* (Cheltenham, UK and Northampton, MA, USA: Edward Elgar Publishing), pp. 104–16.
Tanzi, Vito, 2014b, "The challenge of taxing the big", *Revista de Economia Mundial*, 37, pp. 23–40.
Tanzi, Vito, 2015a, "Hayek and the economic role of the state: some comparison with Keynes' views", in Konrad Hummler and Alberto Mingardi, eds, *Europe, Switzerland and the Future of Freedom: Essays in Honor of Tito Tettamanti* (Turin: IBL libri), pp. 465–82.
Tanzi, Vito, 2015b, "Fiscal and monetary policy during the Great Recession", *Comparative Economic Studies*, 57, pp. 243–75.
Tanzi, Vito, 2016, "Lakes, oceans and taxes: why the world needs a world tax authority", in Thomas Pogge and Krishen Mehta, eds, *Global Tax Fairness* (Oxford: Oxford University Press), pp. 251–264.
Tanzi, Vito, 2017, "Corruption, complexity and tax evasion", *eJournal of Tax Research*, 15 (2), pp. 144–60.
Tanzi, Vito, 2018a, *The Termites of the State: Why Complexity Leads to Inequality* (New York: Cambridge University Press).
Tanzi, Vito, 2018b, *The Ecology of Tax Systems: Factors that Shape the Demand and Supply of Taxes* (Cheltenham, UK and Northampton, MA, USA: Edward Elgar Publishing).
Tanzi, Vito, 2018c, "Rethinking Keynesianism 10 years after the global crisis", *Acta Oeconomica*, 68 (2), pp. 7–20.
Tanzi, Vito, 2018d, *Italica: L'Unificazione Difficile tra Ideali e Realta'* (Fasano, Br.: Schena Editore).
Tanzi, Vito, 2018e, *Argentina from Peron to Macri* (New York: Jorge Pinto Books).
Tanzi, Vito, 2019, "The irresistible attraction of public debt", in Richard Wagner, ed., *James Buchanan: A Theorist of Political Economy and Social Philosophy* (London: Palgrave Macmillan), pp. 991–1009.

Tanzi, Vito, forthcoming, *The Economics of Government: Complexity and the Practice of Public Finance* (Oxford: Oxford University Press).

Tanzi, Vito, Mario Blejer and Mario Teijeiro, 2011, "Effects of inflation on the measurement of fiscal deficits: conventional versus operational measures", in V. Tanzi and H. Zee, eds, *Recent Developments in Public Finance*, *Volume II, Stabilization and Growth*, The International Library of Critical Writings in Economics, 250 (Elgar Research Collection), pp. 178–297.

Tanzi, Vito and Milka Casanegra, 1989, "The use of presumptive income in modern tax systems", in *Changes in Revenue Structures, Proceedings of the 42nd Congress of the IIPF, Athens* (Detroit, MI: Wayne State University Press), pp. 37–51.

Tanzi, Vito and Milka Casanegra, 1995, *Taxation in an Integrating World* (Washington, DC: The Brookings Institution).

Tanzi, Vito and Hamid Davoodi, 1998, "Corruption, public investment and growth", in H. Shibata and T. Ihory, eds, *The Welfare State, Public Investment and Growth* (Tokyo: Springer), pp. 41–60.

Tanzi, Vito and Hamid Davoodi, 2000, *Policies, Institutions and the Dark Side of Economics* (Cheltenham, UK and Northampton, MA, USA: Edward Elgar Publishing).

Tanzi, Vito and Tej Prakash, 2003, 'The cost of government and the misuse of public assets", in Jorge Martinez-Vazquez and James Alm, eds, *Public Finance in Developing Countries: Essays in Honor of Richard Bird* (Cheltenham, UK and Northampton, MA, USA: Edward Elgar Publishing), pp. 129–45.

Tanzi, Vito and Ludger Schuknecht, 1997, "Reconsidering the fiscal role of government: the international perspective", *American Economic Review*, 87 (2), pp. 164–8.

Tanzi, Vito and Ludger Schuknecht, 2000, *Public Spending in the 20th Century* (New York: Cambridge University Press).

Tanzi, Vito and Howell Zee, 2000, "Taxation and the household saving rate: evidence from OECD countries", *Banca Nazionale del Lavoro Quarterly Review*, 53, No. 212, March, pp. 31–43.

Taussig, F. W., 1892, *The Tariff History of the United States* (New York and London: G. P. Putnam and Sons).

Ter-Minassian, Teresa, 1987, *Fiscal Federalism in Theory and Practice* (Washington, DC: IMF).

Thakur, S. M., V. Cerra, B. Horvat and M. Keen, 2003, *Sweden's Welfare State: Can the Bumblebee Keep Flying?* (Washington, DC: IMF).

Thaler, Richard H., 2015, *Mis-behaving: The Making of Behavioral Economics* (New York and London: W.W. Norton and Company).

Tiebout, Charles, 1956, "A pure theory of local expenditure", *Journal of Political Economy*, 64, pp. 16–24.

Tiebout, Charles, 1961, "An economic theory of fiscal decentralization", in *Public Finances Needs, Sources and Utilization: A Conference of the Universities, National Bureau Committee for Economic Research* (Princeton, NJ: Princeton University Press), pp. 79–96.

Tobin, James and W. Allen Wallis, 1968, *Welfare Programs: An Economic Appraisal* (Washington, DC: American Enterprise Institute).

Tullock, Gordon, 1967, "The welfare cost of tariffs, monopoly and debt", *Western Economic Journal*, 5, pp. 224–32.

Tullock, Gordon, Arthur Seldon and Gordon L. Brady, 2000, *Government: Whose Obedient Servant?* (London: Institute of Economic Affairs).

Van der Ploeg, Frederick, 1998, "Unemployment and public finance in Europe", in P. B. Sorensen, ed., *Public Finance in a Changing World* (London: Macmillan Press), pp. 126–48.

Van Overtveldt, Johan, 2007, *The Chicago School* (Chicago, IL: Agate Publishing).

Veblen, Thorstein, 1948, *The Portable Veblen*, ed. Max Lerner (New York: The Viking Press).

Wagner, Richard E., 1976, "Revenue structure, fiscal illusion and budgetary choices", *Public Choice*, 25 (Spring), pp. 46–61.

Wagner, Richard E., 1988, "The calculus of consent: a Wicksellian retrospective", *Public Choice*, February, pp. 133–66.

Wallace-Wells, David, 2019, *The Uninhabitable Earth: A Study of the Future* (New York: Penguin Books).

Weber, Max, 1961 [1923], *General Economic History* (New York: Collier Books).

Wildasin, David E., 1998, "Factor mobility and redistributive policy: local and international perspective", in P. B. Sorensen, ed., *Public Finance in a Changing World* (London: Macmillan Press), pp. 151–92.

Woodward, Sir Llewellyn, 1962, *The Age of Reform 1815–1870*, 2nd edn (Oxford: Clarendon Press).

Zamagni, Vera, ed., 2000, *Poverta' e Innovazione Istituzionale in Italia: dal Medioevo ad Oggi* (Bologna: il Mulino).

Zucman, Gabriel, 2015, *The Hidden Wealth of Nations: The Scourge of Tax* (Chicago, IL: University of Chicago Press).

Index

Titles in the **Elgar Advanced Introductions** series include:

International Political Economy
Benjamin J. Cohen

The Austrian School of Economics
Randall G. Holcombe

Cultural Economics
Ruth Towse

Law and Development
Michael J. Trebilcock and Mariana Mota Prado

International Humanitarian Law
Robert Kolb

International Trade Law
Michael J. Trebilcock

Post Keynesian Economics
J.E. King

International Intellectual Property
Susy Frankel and Daniel J. Gervais

Public Management and Administration
Christopher Pollitt

Organised Crime
Leslie Holmes

Nationalism
Liah Greenfeld

Social Policy
Daniel Béland and Rianne Mahon

Globalisation
Jonathan Michie

Entrepreneurial Finance
Hans Landström

International Conflict and Security Law
Nigel D. White

Comparative Constitutional Law
Mark Tushnet

International Human Rights Law
Dinah L. Shelton

Entrepreneurship
Robert D. Hisrich

International Tax Law
Reuven S. Avi-Yonah

Public Policy
B. Guy Peters

The Law of International Organizations
Jan Klabbers

International Environmental Law
Ellen Hey

International Sales Law
Clayton P. Gillette

Corporate Venturing
Robert D. Hisrich

Public Choice
Randall G. Holcombe

Private Law
Jan M. Smits

Consumer Behavior Analysis
Gordon Foxall

Behavioral Economics
John F. Tomer

Cost-Benefit Analysis
Robert J. Brent

Environmental Impact Assessment
Angus Morrison-Saunders

Comparative Constitutional Law
Second Edition
Mark Tushnet

National Innovation Systems
Cristina Chaminade, Bengt-Åke Lundvall and Shagufta Haneef

Ecological Economics
Matthias Ruth

Private International Law and Procedure
Peter Hay

Freedom of Expression
Mark Tushnet

Law and Globalisation
Jaakko Husa

Regional Innovation Systems
Bjørn T. Asheim, Arne Isaksen and Michaela Trippl

International Political Economy
Second Edition
Benjamin J. Cohen

International Tax Law
Second Edition
Reuven S. Avi-Yonah

Social Innovation
Frank Moulaert and Diana MacCallum

The Creative City
Charles Landry

International Trade Law
Michael J. Trebilcock and Joel Trachtman

European Union Law
Jacques Ziller

Planning Theory
Robert A. Beauregard

Tourism Destination Management
Chris Ryan

International Investment Law
August Reinisch

Sustainable Tourism
David Weaver

Austrian School of Economics
Second Edition
Randall G. Holcombe

U.S. Criminal Procedure
Christopher Slobogin

Platform Economics
Robin Mansell and W. Edward Steinmueller

Public Finance
Vito Tanzi