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# Tax System Economics

*Konrad Raczkowski, Friedrich Schneider, Joanna Węgrzyn*

# Chapter I

## The role of taxes and tax system in economic science

### Introduction

The institutional structures of the tax system are expected to identify respective social and economic processes leading to a specific government activity, which should contribute to an increased demand (among others, alleviating the consequences of economic crises, bringing economic recovery) and higher supply (among others, long-term economic growth). One should note that further to the accelerating economic globalisation and technological progress, designing a tax system that increases tax revenues while minimising the administrative and economic inefficiencies, maintaining a simple and transparent tax structure, avoiding an arbitrary tax differentiation among private individuals, business entities and economic activities, is becoming a challenge. The limiting factors include the results of the ongoing digitalisation, growing distributional tensions, e.g. between economic powers such as the USA, China, the European Union, tax system models becoming outdated and lack of institutional tools to negotiate a global agreement (Christensen and Hearson, 2019). Tax has become a legally sanctioned form of the state taking over a part of revenue, income and wealth of economic operators legally subordinated to this state. The same type of tax has a varying impact on economies characterised by similar economic, social and political parameters, the same form of taxation may stimulate or hinder long-term development (*Taxing...*, 2008).

Flexibility of taxation in economic integration projects such as the EU and BRICS does not indicate that common tax policy is necessary for the success of integration (Durusu-Ciftci, 2018). The condition for building a global tax system model is an all-or-none consensus of all participating

parties, which is difficult to reach in practice. Therefore, to create such a system, ideal (nearly laboratory-grade) conditions would be required, which are impossible to fulfil since the market is not perfect. It should be pointed out that tax policy is one of many other policies, and in the tax doctrine these policies should be all aligned to ensure proper fulfilment of their objectives.

A current analysis of institutional solutions, a description and explanation of the causes and nature of economic phenomena helps develop a tax policy that takes account of social objectives. One should also reckon with the state's decisions (political decisions) as regards taxation of citizens and enterprises, and with the international tax policy. Tax policy secures funds for maintaining and fulfilling the state's public tasks (fiscal function), determines the taxpayers' disposable income and property (redistributive function) and the adequate social behaviours needed to stimulate the economic development (stimulating function), as well as informs the society of the current condition of the economy (informative function). Tax system plays a crucial role in implementing the national and international economic policy. It finances expenditure on public services and other obligations (e.g. debt), it helps implement capital preferences (e.g. through redistribution of resources), shapes the society's attitudes and behaviours (e.g. voluntary nature of taxation, environmental protection and health-care), and plays an important role in alleviating macroeconomic fluctuation, and supports employment and economic development. Such a broad extent of the subject allows only a general identification of areas of the state it should encompass.

Tax systems evolve in parallel with the changes in the public sector's role in the economy and in the financial needs of the state. When analysing or comparing tax systems from different national economies, it seems important to note that they were shaped by different country-specific economic, social and political circumstances as well international political and economic relations. This multi-aspect trend observed in theories of taxation and in practical systemic solutions alike can or even must be systemised into certain categories. The appropriate assessment of tax is not the only challenge to economic theories, which is why the economic aspect of taxation requires a detailed analysis of the relations at play, with many variables, as presented further in the book.

### 1.1. The tax system as an economic category

All literature on tax theory concurs that tax is one of the oldest economic categories in the world. A systemic perspective on taxation encompasses: 1) a set of taxes applicable in a given time and place; 2) the authorities that create and implement the tax law; 3) the administration that operates the system; 4) current and future taxpayers and their attitudes to taxation; 5) geopolitical situation of the area covered by taxation. The contemporary economic science does not call into question the superiority of the fiscal goal, however, in light of the civilisational changes of the 21<sup>st</sup> century, it is becoming crucial to adapt tax solutions to the fast changing economic conditions related to globalisation and digitalisation, and to the ever growing role of multinational companies in world trade (Persson and Tabellini, 1994; Norregaard and Khan, 2007). The global tax governance faces a challenge of whether and how to adapt sovereign tax systems, most of which were developed in a traditional industrial economy system, to the global economic and political situation. Rasmus C. Christensen and Martin Hearson (2019) talk of obsolescence of the over a hundred year-old global international tax system and of the uselessness of the institutional tools currently in place, as can be observed, for example, in the advanced tax strategies applied by multinational companies such as transfer pricing, hybrid structures and shell companies (Christensen and Kapoor, 2004; Nellen, 2015). The fast aging of new technologies and that of economic models also means that legislators do not have enough time to bring the applicable tax law up to date (Nellen, 2015). Tax systems are confronted with the challenge of adjusting to the global digital service- and knowledge-based economy, where households and firms have an extensive access to cutting-edge telecommunications technology and are not afraid of digitalisation (Gupta et al., 2017).

Hence, tax systems, their origins, evolution and current changes must be seen as a reflection of the ongoing changes in respective countries' economic, social and political life. They are "fine-tuned" as social and economic development proceeds, with respect to the economic process of income generation and use, so tax economics must refer to all those aspects. Tax system economics requires finding answers to globalisation challenges posed by the economic activities of interrelated multinational corporations, international financial operations, global goods and services market and tax evasion (Dietsch and Rixen, 2016; Christensen and Hearson, 2019;

Diamond and Saez, 2011). Furthermore, it should build a systemic resilience to the global macroeconomic risk, to the growing job cuts and labour market changes, trade wars and lack of market liquidity.

The ongoing worldwide geopolitical and geoeconomic changes are shaping a new paradigm of the 21<sup>st</sup> century tax system, verifying the countries' existing regulatory model which represents a cumulative set of legal responses to crises occurring in the past.

The key issue of the economic policy is to ensure the state's prosperity as well as economic security and progress of this and next generations through an interaction between entities that shape the economic policy and those being object thereof and impacted by it. As regards social policy, the activities of the central government, local governments and non-governmental organisations aim to satisfy fundamental needs without which the society cannot function. This includes shaping general working and living conditions, pro-development social structures (generation renewal, human capital development) and social relations that are based on equality and social justice. The idea of sustainable development assumes that the society and the economy can and should satisfy the current generation's needs without diminishing the future generations' prosperity. This is conditional upon a good economic governance translating into relations between economic growth, environmental protection, and quality of life by means of economic and environmental performance. The quality of social and economic policy implementation depends, to a great extent, on identifying the underlying circumstances that impact on its objectives, directions and tools. Economic pragmatism involves thinking and acting in economic terms when governing a country, by adopting a monetary and fiscal policy that determine a balanced profit and (acceptable) loss account for the social policy, and requires "tightening" reforms, especially on the spending side, by greatly increasing job activation and diversity of benefit recipients. To explore all of the above indicated areas, we suggest that tax system economics should be defined as an overall management of a state's or integration grouping's public revenues and expenditure to shape a smart economic policy that stimulates economic growth and development and safeguards against a functional risk for the current and next generations.

This will allow us to revise the currently functioning and determine new rules of taxation economics for such essential areas of science as public finance, management of the economic security of the state and tax policy, which are facing new challenges related to scientific and technical

progress that are the basis for the Fourth Industrial Revolution (Industry 4.0). This requires an analysis of the mechanisms of socio-economic relations functioning in economies, national and international tax policy, taking into account the relationships between:

- 1) **managing sources of tax revenues and expenditure** (national and international income, assets, consumption, social transfers, public investments),
- 2) **managing public administration and private sector institutions** (e.g. international institutions, government, tax administrations, corporations, enterprises, households),
- 3) **managing financial results** (e.g. budget incomes and expenditure; tax advantages and losses; mobile capital—savings—investments; social cash transfers; tax competition) (Diamond and Saez, 2011),
- 4) **managing economic operators' behaviour—behaviourism** (professional and personal activity: education, retirement, unemployment, marriage and divorce; energy invested in tax avoidance instead of increasing one's prosperity; tax system rationality; international cooperation).

This necessitates institutional market conditions that should, by their definition, foster economic growth and development.

Such a perspective does not only relate narrowly to tax economics or to the set of applicable taxes but also to the social system, whose elements include the economic system and an efficient and fair allocation of resources. Thus it expresses a position that aspires to explain and pragmatically apply tax policy as the most important—together with monetary policy—instrument of governance within the framework of the general systems theory, and the need to build and apply a legal system that will prioritise the economic and social context, reducing systemic risks.

## 1.2. The economic concept of tax and tax system

To properly define tax, one should start by making an assumption that the same is both a legal and economic category. The public law nature of taxation requires that the tax imposed should be governed by laws. One should bear in mind that looking at tax economics in isolation from institutional law issues may result in its misinterpretation. And the other

way round, the analysis of tax system only in its formal and legal aspect focusing on a narrow perspective i.e. on the general functions of taxes, principles, methods for establishing respective types of taxation that set them apart from other public charges and levies (Braithwaite, 2002; Zander, 2004), requires adding an economic and social dimension. In economics, a reference is often made to the formal and legal definitions of tax indicating its compulsory nature, universality, non-refundability and unrequitedness. One of the most often cited definitions suggested by OECD (*Definition...*, 1996) for the purposes of comparing tax systems of countries with varied local tax structure models, ascribing to taxes characteristics such as being compulsory and of public-law nature, defines taxes as compulsory unrequited payments to the sector of central government, local government and international institutions. Therefore, when extending this definition to include the formal and legal aspect, we can talk of tax if a given payment is:

- 1) of monetary nature because a payment to a legally defined institution is required (Thuronyi et al., 2016); as well as (Bitner et al., 2017),
- 2) compulsory — the duty to pay stems from the provisions of law and administrative decisions, and thus the obligation to pay is secured by the authority of the state, which has the bodies and tools to enforce the due payment (state's tax sovereignty),
- 3) unilateral — the amount of tax is regulated in the provisions of law, and a taxpayer has no option to negotiate the amount of the liability payable (state's tax sovereignty), because the state participates in the outcomes of citizens' economic activities, while tax payments do not result from state-taxpayer market relations,
- 4) non-refundable — because its nature is that of a definite movement of assets between taxpayers and the public authority,
- 5) non-equivalent (unrequited) — taxpayers have no right to expect from a tax jurisdiction any specific service or product in return for meeting their obligation (James and Nobes, 1997); they only benefit from specific public goods because they belong to a given society,
- 6) general, i.e. uniform, imposed based on the provisions of law, relating to a relevant group of taxpayers who meet the conditions for the liability to pay tax to arise but are not specified by name,
- 7) made to public authorities represented by central government's and local governments' tax bodies.

## 1.2. The economic concept of tax and tax system

Such a broad definition of tax includes a set of public fiscal charges applied as part of national tax systems, as well as social security contributions, customs duties, export taxes and parafiscal charges. The need to lay down the principles of tax law is, beyond dispute, intrinsically linked to the taxpayer's economic situation and relations with tax authorities. These relations are characterised by subordination, and in tax economics we can even talk of coercion arising from the competences awarded to the authorities representing the state's interest (Etel et al., 2015). One can agree that the structure of tax system is a legal matter seeing as it involves public interest and administrative and legal power, whereas the object of taxation itself is an economic matter, with sources of tax depending on the social and economic potential of the economic operators taxed.

In economic theories, taxes are the condition of an efficient sourcing of budget revenues (fiscal goal), and represent an instrument influencing the taxpayer-state relationship, which designs the current economic and social policy in place (non-fiscal goals). The classic tax system economics is based on two main principles: non-distortionary tax efficiency and fairness of taxation while meeting the economic condition of maintaining the taxpayer's ability to bear the burden of taxation (Stiglitz and Rosengard, 2015). Non-distortionary tax efficiency encompasses the following principles:

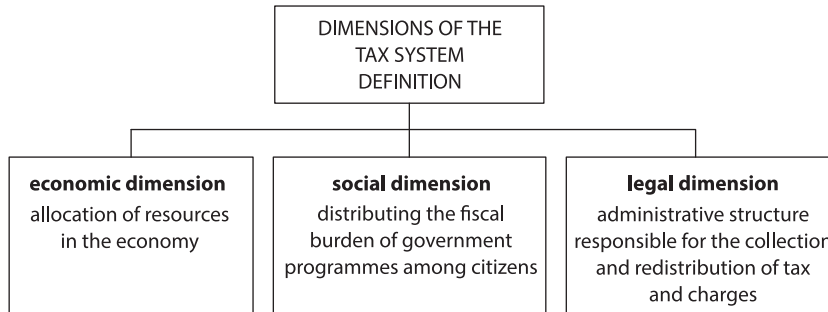
- 1) **fiscal:** taxes yield a source of public income at a low cost and relatively low political risk, taking account of the ongoing changes to the state's and taxpayer's economic situation, and limiting frequent changes to the tax system, which make it difficult for taxpayers to make relatively rational decisions, and destabilise the national economy;
- 2) **economic:** this principle takes account of the economic and social consequences of taxation such as the impact of the economic crisis and the decrease in budget receipts or a functional risk to the society;
- 3) **statutory form of taxation:** it guarantees adopting substantively and formally correct measures to design and amend the principles of tax law.

Therefore, the definition must consider the issue of rationality of taxation, making sure its burden does not enforce on taxpayers any actions whose outcomes are detrimental to the state. One should examine the

question of the ability to pay tax, which safeguards the current existence and provides conditions for creating new tax sources, which will also result in higher national budget revenues.

When defining the tax system from an economic perspective, it is worth analysing its dimensions in the following order (Fig. 1.1). Firstly, it has an impact on the allocation of resources in the economy (economic dimension). Secondly, it plays an instrumental role in distributing the financial burden of governmental programmes among citizens (social dimension). Thirdly, it is a legally sanctioned administrative structure responsible for the collection and enforcement of tax receivables (legal dimension). The essence of each tax system is to provide the funds necessary to finance public goods and services. Tax systems evolve as a result of fulfilling citizens' needs which have to be financed from the central government or local government budget. They help identify a certain level of income depending on a number of wide-ranging political decisions which traditionally have influence on the development of tax systems.

FIGURE 1.1. Legal, economic and social dimensions of the tax system definition



Source: own elaboration.

Considering that the tax system is also characterised by specific functionalities involving not only fiscal but, most of all, social and economic relations, this system can be defined as a common base of public levies, established and enforced by organisational and legal provisions, financial institutions (and for the EU, also by Community institutions), paid by households and enterprises oriented to improving the competitiveness of the national economy and maximising social prosperity (Raczkowski, 2016: 75), pointing to the significant co-participation of all the stakeholders in

designing the tax system. From an economic perspective, tax system can be treated as a comprehensive set of taxes applicable and used at a time by a given state or integration grouping, which directly impacts the economic growth and development in the monetary dimension (secondary income distribution), and indirectly supports taxpayers' efforts with respect to their professional, economic and welfare-enhancing activities.

One should observe the crucial role of tax system as a countercyclical and rescue tool after the financial crisis 2008+ (Jordà and Taylor, 2016), sustainable growth driver (*Fiscal...*, 2015) catalyst for public investment in the economy (Summers, 2014), direct instrument supporting structural reforms and elimination of inequalities (Piketty and Saez, 2013; Piketty, 2014; 2015) or, last but not least, a mechanism for enhancing a state's credibility and influencing the interest risk, building the room for transfer policy in the sphere of productive expenditure or sustainable tax cuts (IMF, 2017). Hence, it is legitimate to say that both fiscal and monetary system are the most important mechanisms for designing social and economic processes as part of a relevant policy, complementing each other as part of the financial security network. Tax system should be defined as a fiscal mechanism designing shaping social and economic processes as part of a state's or integration grouping's macroeconomic policy.

Tax system defined this way becomes an integral part of the economy, responsible for the economic and legal form of the social income distribution. Its goal is to guarantee financing for the state's functions (allocative, redistributive and stabilising), without which it would be impossible to perform even the most basic public service tasks oriented to the prosperity of citizens. The functioning of tax system is visible at the national, regional and local level, and its efficiency results in social and economic development, and higher social prosperity, which should be considered, on par with the fiscal objective, as the ultimate goal of each tax system in the global economy. It is a system of interconnected institutions, instruments and measures that help perform the fiscal, redistributive and stabilising functions.

### 1.3. Principles of taxation

A lot has been said about the principles of taxation, with each respectable scientific paper or book referring to canons formulated by Adam Smith (18<sup>th</sup> century), David Ricardo (18<sup>th</sup>/19<sup>th</sup> century), John S. Mill (19<sup>th</sup> century),

Adolf Wagner (19<sup>th</sup> century) and Fritz Neumark (second half of the 20<sup>th</sup> century). Why are they so often revisited? The functioning of the tax system in economic practice required developing some principles of taxation and calls for action by the legislator (Musgrave and Musgrave, 1989) to guarantee an efficient collection of tax, limit the negative impact of fiscalism on the economic processes and minimise the inconvenience of the tax collection to taxpayers. Principles of taxation are considered as fundamental standards that determine the correctness of the tax system theory and of practical tax models. These are desirable features that should characterise tax system. The knowledge of the legacy of previous generations helps appreciate which of our present rules are owed to the historical economic thought and make us wonder which postulates we should bequeath to the next generations.

In the traditional classical economics, four canons of taxation are most often cited (Smith, 2007): equality, certainty, convenience and economy, which result from the analysis of the underlying causes of the 18<sup>th</sup> century political, economic and social circumstances (Table 1.1).

How did Adam Smith envisage the tax payment process then? All citizens participate in the state's operating costs pro rata to their income. They are subject to the same tax liability as, in line with the canon of equality and economic rationality, the same tax must be paid on the same amount of income generated. Taking account of the social dimension means exempting from the liability to pay tax those whose income only covered basic living essentials. Taxation should not compromise the sources of tax income or interfere with the economy. The canon of certainty of taxation details the economically significant elements of tax, i.e. amounts to be paid, payment method and due date. It can be compared to the currently applied principles of respect for acquired rights, of non-retroactivity of law and *nullum tributum sine lege* (no taxation without law). This stems from the taxpayers' need to have transparent and exact information on their rights and obligations as to when, in what amount and as a result of what activities taken by them they must pay the tax. The canon of convenience of taxation raises a socially significant dilemma — the due date of payment of the tax liability. Adam Smith defined the key universal economic and social dilemma of the authorities — if you impose a tax (you need money), consider whether the current regulations guarantee timely payment of this tax (you will collect the money). Presently, within the framework of corporate and household finance one can refer to such frequently used terms as maintaining financial liquidity and stability so that taxpayers, when

### 1.3. Principles of taxation

TABLE 1.1. A. Smith's canons of taxation and their anticipated effects

Canon of taxation	Dimension	Reasons for formulating the canon	Anticipated effect
<b>Equality of taxation</b>	Economics	The same amount of income did not equal the same amount of tax. Some groups within the society were favoured due to the social class they belonged to.	The same income generated equals the same tax paid by all taxpayers. No group favouritism; fair taxation that is proportional to the income generated—taxpayer's ability to pay. Introducing a preferential tax policy for people with minimum income.
<b>Certainty of taxation</b> (taxpayers are aware of their rights and obligations)	Technical design of the tax	Uncertainty of tax regulations may result both in their misinterpretation by taxpayers and possible abuse by fiscal officers	Precise identification of: liabilities (upfront), the amount of tax to be paid, the moment when the liability to pay tax arises, the due date of payment.
<b>Convenience of taxation</b> (tax collection due date and method)	Technical design of the tax	Problem with the taxpayer's liquidity at the time of liability to pay the levy	Taxpayers make the payment when they have the financial means to meet their liabilities. The solutions used for indirect taxes are preferred.
<b>Economy of taxation</b>	Technical design of the tax	Major cost of tax collection, thus the lack of estimated proceeds becomes the reason to raise taxes.	Minimal expenditure on tax collection generates higher net proceeds from taxes (the canon of economy of taxation).

Source: Smith (2007).

meeting their tax liability, would not face a deterioration of their financial situation. Another canon, the one relating to economy of taxation, focused on the issue of maximising the fiscal function by limiting the administrative costs of tax collection; looking at the present tax system and the challenges of tax compliance, Adam Smith seems to have rightly anticipated the tax collection consequences on both ends—both for state institutions and for taxpayers themselves. To sum up, a good tax system, according to Adam Smith, firstly, guarantees a universal and proportional taxation that is adapted to taxpayers' income (the canon of equality taking account of the taxpayer's ability to pay). Secondly, the due date and amount of the tax liability are precisely formulated in legal regulations (canon of certainty). Thirdly, taxpayers are guaranteed the most convenient manner, place and due date of payment of the required tax liability (canon of convenience). Fourthly, it is important to minimise the costs of tax collection both at the state's end and that of taxpayers' (canon of economy of taxation).

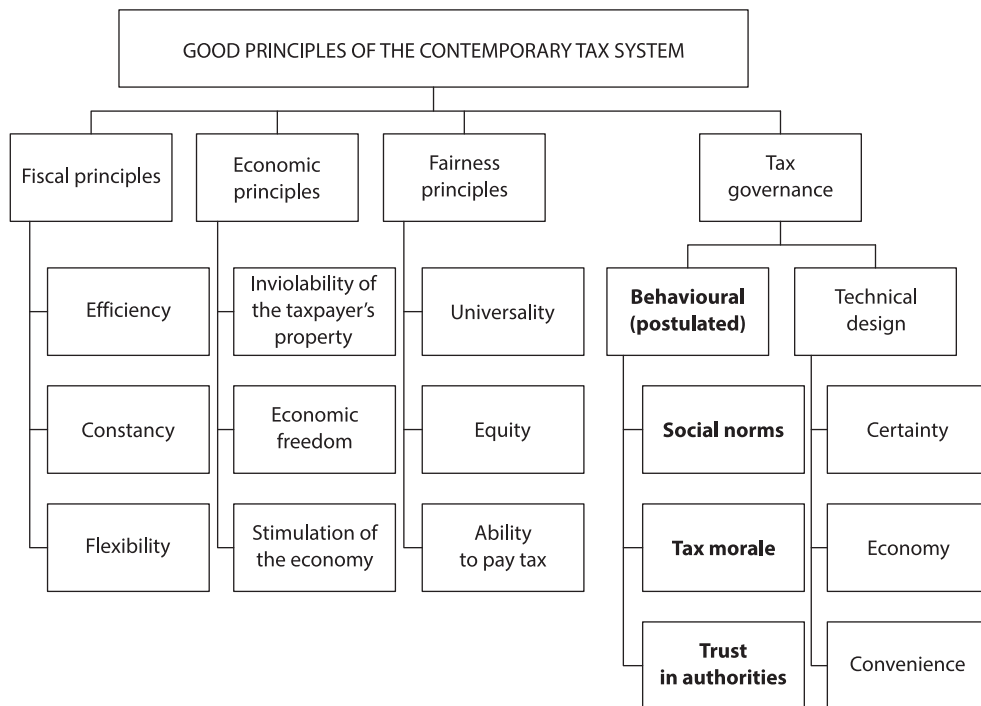
To this fiscal policy postulated by liberalism, Adolf Wagner (1967) added further functions: economic function, and the functions of justice and of administrative efficiency of the tax system. Thus he envisaged a much more extensive impact of taxes on the economy and society. The fiscal principle was based on adequacy of yield, flexibility and on guaranteeing tax proceeds that are high enough to finance the state's current needs. Indeed, the amount of receipts is subject to natural fluctuation according to changes in the taxable object, phases of the economic cycle, and social and civilizational evolution. The fundamental principle of the economic function is the protection and inviolability of capital and property (sources of taxation), so that the tax payment should not limit taxpayers' economic freedom or freedom to manage and accumulate property and capital. When applying this in the current practice, one should consider whether and how tax system makes an arbitrary distinction between taxpayers, i.e. when it is in breach of the principle of horizontal fairness. This is the case if a consumption tax is charged on a merchandise purchased at a local shop and when the same person buys the same merchandise online, this tax no longer applies (Wise and Berger, 2010). The function of the administrative efficiency (tax administration) refers to Adam Smith's canon of certainty, convenience and economy of tax collection.

A systematic approach to historically established principles was proposed by representatives of the German school of economics (F.K. Mann, W. Gerloff, G. Schmolders, F. Neumark), who extended the principles with economic, social and political aspects. The most representative theory of Fritz Neumark's tax rules divides tax principles into four basic groups: fiscal and budgetary (providing the state with budget revenue as part of the fiscal function of the tax system), ethical and social (principles equality and universality in taxation, redistribution of tax revenues), economic (the effect of taxation on the economy- stimulating function) and the principles of tax technique (cheapness and convenience of collection). Fritz Neumark (1970) assumed that the taxation should be levied in accordance with the principles of universality and equality, as well as the principle of redistribution of income and property, ensuring sufficient tax revenue of the state without exceeding the level of tax liabilities.

In the contemporary tax system, the above presented postulates and good practices that have evolved throughout the history of economics still remain very valid. Meanwhile, one needs to bear in mind that the paradigm is changing as a result of the evolution in the prevailing scientific views, which, most commonly, happens as a result of external shocks, especially in the form of financial crises. Testing the resilience of the

principles of taxation to external shocks is probably the best way to check if their underlying assumptions are correct, and to formulate normative proposals aimed to modify the existing regulatory and supervisory model. Therefore, the classical principles need to be reviewed to include the understanding of the impact of taxation on prosperity, which is increasingly important for the post-crisis economics, taking account of the principles of behavioural economics (Fig. 1.2). The social (behavioural) perspective complements the principles of a good tax system by ensuring the correction of irrational biases in the complex decision-making process relating to compliance with tax laws. This correction is needed due to the awareness of the objectively existing shortcomings in the transparency of an institutional organisation, and legislative imperfections which characterise the contemporary tax systems. The power of social norm in behavioural economics is considered as one of the most significant determinants of behaviour; hence, it may be deliberately or unconsciously used when taking relevant decisions on compliance with tax laws.

FIGURE 1.2. Postulated principles of taxation in the contemporary tax system



Source: own elaboration.

One's place in the social structure and identification (and its intensity) with a specific social group plays a meaningful role in the negative or positive perception of tax frauds, tax evasion and harmful tax practices, which is also influenced, among others, by general social expectations, and other taxpayers' actual behaviours (Hallsworth et al., 2017; Torgler 2016). The demand to include the behavioural dimension in the principles of tax governance stems from the need to emphasise the society's impact on an individual when it comes to compliance with tax liabilities, reaction to tax burdens, tax mentality and morale, as well as the social criteria for considering a tax system and respective taxes fair. This will help highlight the role and the attitudes determining efficiency and effectiveness of a wide range of entities, on the one hand, those complying with tax laws and, on the other, those responsible for legislation and the collection and enforcement of tax liabilities. Another issue that becomes important in this respect is an adequate evaluation of the applicability of laws (understanding of laws) taking account of the impact of information asymmetry and of the regulators' and stakeholders' limited perception of the legislation process. When it comes to social norms and tax morale, another step involves measures aimed to build social trust in the authorities, which results in a more voluntary compliance with laws (long-term effect).

The dynamic of economic changes and global crises make principles of taxation difficult to apply when taxation is complicated by short-term political goals, which are not necessarily aligned with long-term economic goals. One must concur with William J. Congdon, Jeffrey R. Kling and Sendhil Mullainathan (2009: 378) that: "while the traditional case for tax simplicity is indirect, related to achieving broad tax bases, or administrative, the behavioural approach suggests that the degree of simplicity directly enters the optimal tax calculation". When the state uses its superior position, a risk of regulatory moral hazard may arise. It consists in the government following its own interest as the owner of relevant assets rather than the public interest when laying down regulatory standards or taking relevant decisions on the tax policy in place. The larger these assets are compared to the state's economic potential, the stronger the possible temptation to behave that way.

### 1.4. Goals of tax system

The tax system fulfils specific economic and social goals in accordance with the state's political strategy in place. Not every tax may have advantageous redistributive characteristics from the systemic perspective, nor

can each tax be pro-social or pro-environmental. Meanwhile, when looking at taxes through the lens of the system as a whole, one should analyse how its respective components impact one another and enable the fulfilment of relevant goals.

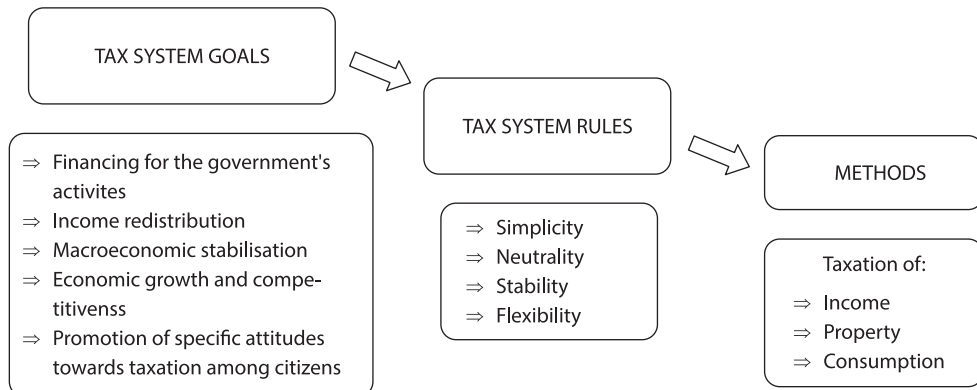
Most of all, the tax system should ensure the funds to finance the spending needs. The state's fiscal goals require that tax system should be based on taxes that are efficient, flexible and consistent with social justice. Efficient taxes guarantee the fulfilment of the essential public needs; flexible taxes help satisfy those needs irrespective of the current market situation. Social justice guarantees the adequate amount of taxes paid by due dates, while not compromising taxpayers' economic situation and the market situation. This should be guaranteed by a transparent tax policy and by administrative authorities following a policy of low operating costs. With tax system influencing so many social and economic areas (labour market, consumption and output) and social and economic life being so complex, it is extremely difficult to fully evaluate tax policy's outcomes (Greenwald and Stiglitz, 1990; Gilchrist et al., 2014). The goals attributed to tax system in a market economy are strongly linked to the role the state plays in the process of creating a favourable environment for social and economic development, broken down to:

- fiscal goal — ensure budgetary receipts that are relatively high considering the economy's level of development but not so high as to encourage taxpayers to resort to acts that are detrimental to all beneficiaries of the public finance sector, such as tax avoidance and evasion, or operating in the shadow economy (Darvas and von Weizsäcker, 2010);
- redistributive goal — ensure transfer of income and protection of socially and economically vulnerable groups;
- regulatory goal — use taxes as a regulatory instrument in support of macroeconomic policy goals;
- stabilising and economic goal — support and drive a competitive economy and social prosperity.

In other words, **the goals of tax policy** are as follows: guaranteed ongoing financing for the government's activities, income redistribution, macroeconomic stabilisation, support for economic growth and competitiveness, and promotion of specific citizen behaviours (Fig. 1.3). Their fulfilment is based on the principles of taxation, the most fundamental of which are simplicity, neutrality, stability and flexibility, the best tax system being **simple, neutral and stable** (Mirrlees and Stuart, 2010), and making an efficient use of taxation of income, property and consumption.

## I. THE ROLE OF TAXES AND TAX SYSTEM...

FIGURE 1.3. The main tax system goals, rules and methods



Source: own elaboration.

In existing tax systems, the principal classification of taxes by taxable object is as follows:

- 1) **Income taxes, including, without limitation, corporate and personal income taxes, which are levied on income at the time of its generation.** These are charged to taxpayers at the time of generation of income treated as the difference between the revenues generated and the cost incurred to generate revenues (the so called net profit). For PIT, the so called tax individualisation is additionally taken into account. Income taxes are characterised by universality when it comes to taxable persons, meaning that all legal and natural persons generating income are subject to taxation. Direct taxes, in particular those relating to taxpayers' personal income, including income from salary and capital income alike, have an impact on taxpayers' decision on the supply of labour, and on the amount of savings and investment (Stiglitz and Rosengard, 2015). They can affect the economy as an automatic business cycle stabiliser. Maria G. Attinasi, Cristina D. Checherita-Westphal and Malte Rieth (2011) studied the impact of PIT on production volatility between 1982 and 2009 in OECD member states, indicating that countries with a more progressive taxation experienced less fluctuation in production. The drawbacks of direct taxes that need to be pointed out include the delayed collection of tax dues (their annual settlement and payment, and flow into the budget takes place several months into the next calendar year), high collection costs (tax returns being verified by the administration).

- 2) **Property taxes**, which are levied on property owned or on specific assets, additions thereto or sales thereof, vary greatly across countries as to their form and structure. As a rule, they are levied on the value of property or specific portion thereof (e.g. real estate), additions to assets (e.g. gift, inheritance), sales of assets (e.g. transfer of rights to the property against payment).
- 3) **Consumption taxes** including current expenses charged on the taxpayer's income at the time of expenditure (e.g. VAT, excise tax). They are included in the price of goods or services. The payer is the legal entity conducting business activity, but the economic burden of taxation is borne by consumers who buy the goods or services. The tax is collected at respective stages of economic circulation (e.g. VAT) or only at one stage thereof (e.g. retail taxes or excise tax, which is a selective consumption tax, (Annacondia, 2018)). Such taxes are relatively efficient (proceeds from these flow swiftly into the budget), which causes them to be seen as flexible taxes that are strongly linked to economic activity; hidden in the price of goods or services purchased, they are less appreciable to taxpayers compared to income tax, giving them the advantage of low social sensitivity, higher budgetary efficiency and resilience to inflation. What can be seen as their disadvantage is no concern for the ability to pay tax, making them more onerous to the less well-to-do households, which spend most of their income on consumption.

Literature on the subject acknowledges the supremacy of the fiscal (income-related, financial) goal, which supplies most of the public income, without calling into question the economic and social goals pursued with its help, subject to the condition of not interfering with the market mechanism (Devereux, 2007). The efficiency of an economic system is of fundamental significance for establishing the limits of taxation. This efficiency is quite volatile, susceptible to business cycles, unemployment, investments and consumption levels, and the scale of international economic exchange. The attempts at a concurrent implementation of fiscal and non-fiscal functions of taxation provide inputs for the discussion of goal prioritisation. According to the classical liberal theory, the only purpose of tax as the state's fiscal instrument is to cover public charges, so it should cause neither economic nor social interference (Gaudemet and Molinier, 2000). Meanwhile, the contemporary practice of state non-fiscal interference indicates that the effect of taxes on the economic sphere can be generalised, e.g. have the

form of strong state interference with taxes to combat excessive inflation (e.g. the crisis of the 1930s in the USA), higher government spending to reduce the unemployment rate, fight against tax avoidance and tax evasion (e.g. *Base Erosion and Profit Shifting* – BEPS); or selective, e.g. when the state wants to encourage the development of a certain branch of economy by means of a tax relief system (e.g. *patent box* for innovative sectors in the United Kingdom, Poland, Ireland, France, the Netherlands). Non-fiscal functions of the tax system used for social purposes may help bridge the social gap, but the financial goal that guarantees the funds necessary for an effective implementation of the state's economic and social policy remains a top priority. If we were to assume that economic and social goals are of primary importance, there is a risk that the tax system structure will be temporarily destabilised depending on the current demands of the country's economic or social policy, and that the functional risk will materialise.

### 1.5. Tax system models

The contemporary state becomes an increasingly important commercial market participant which makes use of market instruments and resources. The scale of the public sector's presence in the financial system following the last financial crisis has been unprecedented. Financial security is becoming its domain, and the state's return to predominance over market forces goes hand in hand with a growing politicisation of its involvement, shifting onto the state a huge responsibility and reputational risk, which it will have to confront. The social and economic *raison d'état* entails economic pragmatism. What matters is a vision of the state and the ability to engage in an international competition where the winner is the state's economic interest rather than empty protectionist agreements which block the economic development of some countries to open the same areas of economy to others. There are calls for the state to play a new role, and, more specifically, for the state to increase its presence in the financial system. This is a global phenomenon that can be observed in all major economies. Applying a macroeconomic perspective to the supervisory approach changes the agenda of the discourse on tax system in the context of financial crisis and public finance deficit. What takes the centre stage is the adaptation of the tax system model to the current economic envi-

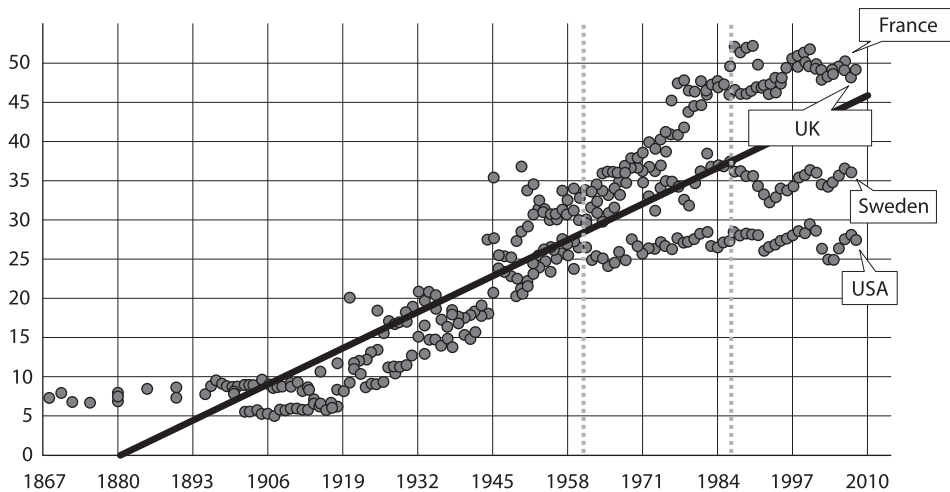
ronment, which requires thinking out of the box when it comes to deciding which tax system characteristics are desirable in terms of the links between taxation efficiency and tax fairness (*Addressing...*, 2014; Stiglitz and Rosengard, 2015). This places greater importance on the consequences of tax avoidance and tax harmful competition in the increasingly digital economy. The tax system's fiscal efficiency should maximise the attainable social prosperity of this and the next generations in each of the respective business cycle stages. This means, on the one hand, aiming for a neutral and fair taxation, and, on the other, eliminating the tax gap and protecting market competitiveness (Raczkowski, 2016). The discourse on efficiency increasingly focuses on limiting the negative impact on market processes (Nhekairo, 2014) with respect to the supply of labour and capital, and on supporting their efficient use (Gomułka et al., 2017) to prevent dislocations in the global economic system, which may, at the same time, trigger negative economic consequences in many countries.

A comparative study of countries with similar macroeconomic indicators, and legal, economic and social norms points to a diversity of systems, which can be linked to the economic history, different underlying assumptions of tax policy and to particular political decisions. Various systems have evolved in a different economic, social and political environment, which has left its imprint on the institution of taxation to which taxpayers adapted over time (Durusu-Ciftci et al., 2018; Delgado, 2017; Hettich and Winer, 1984). Tax regime most commonly develops as a result of a long and complicated process of creating a logical system structure. The outcomes are types and forms of taxation that are adapted to the social and economic situation, along with the transformation or abandonment of inefficient solutions. This requires taking account of many direct and indirect factors affecting taxation, including the social and political system, the country's level of economic development, the social and economic development programme, administration and international legislation. This long-term process of gradual designing, systematisation and harmonisation of respective taxes in a specific political, economic and social context is aimed to identify the existing imperfections which should be corrected after some time. Correction is important, and a major role is played in this respect by the society's familiarity with the taxes in place and aversion to radical reforms. The design of the contemporary tax system model is based on the interaction between two types of entities—active and passive ones. An active entity is a public law regulator competent to impose laws and shape taxes.

## I. THE ROLE OF TAXES AND TAX SYSTEM...

Passive entities are social partners and stakeholders (e.g. individuals, business), for which a liability to pay tax has arisen—most of them will bear the economic burden of tax (actual taxpayer), and some will be liable to pay tax (formal taxpayer). The taxable object is established by the regulator based on the practice adopted in a given society's economic activity. The basis of taxation is the monetary measure of the taxable object, and a tax rate should be treated as the state's share of each social and economic event. Looking at the increase in taxation in France, Sweden, the United States and the United Kingdom (Fig. 1.4), until 1914 (the outbreak of World War I) governments had collected less than 10% of the national income in the form of tax, earmarking it to finance basic functions relating to government maintenance and current needs of the state. From 1920 until the 21<sup>st</sup> century a cyclical increase has been observable in the share of taxation in the economy, which is also connected with higher public expenditure on services such as education and healthcare. Rapid growth is especially notable in the period right after the end of World War II, a reconstruction cycle of respective economies. Since the end of 1960s a slowdown in economic growth can be seen in the United States, and in Sweden in the late 1980s and early 1990s.

FIGURE 1.4. Taxes as a share of GDP between 1860 and 2010 as illustrated by the examples of France, Sweden, the United States, the United Kingdom (in %)



Legend: dots—evolution of tax as a share of GDP; France, the United Kingdom, Sweden, the United States; black continuous line—trend line; grey dotted vertical lines—trends in changes in tax as a share of GDP after World War II

Source: own elaboration based on data retrieved from [ourworldindata.com/taxes](http://ourworldindata.com/taxes).

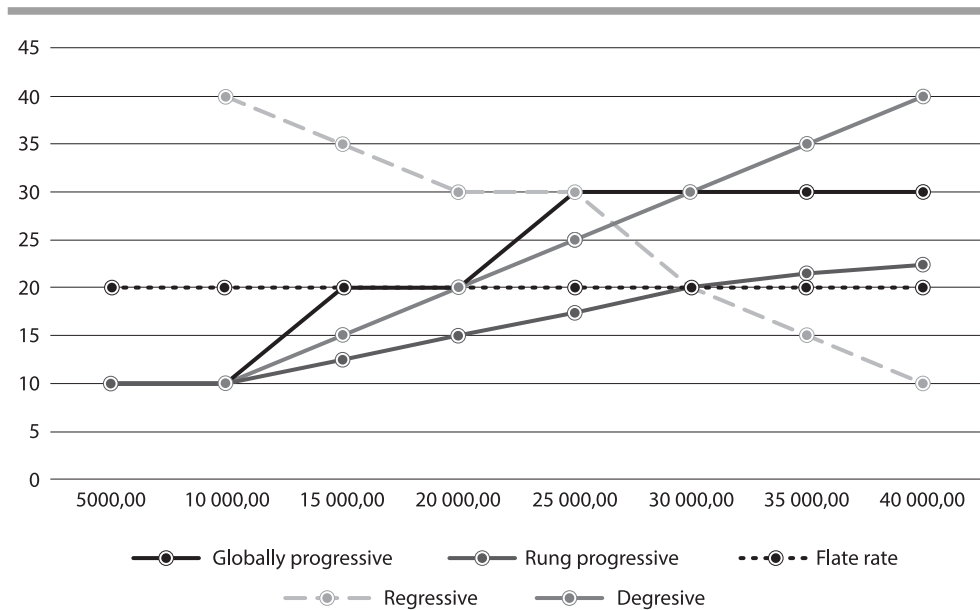
Douglass C. North (2006) regards the tax system as an important element of the whole historically shaped economic ecosystem reflecting a given country's timeless ideals and current needs. Expansion of the state and of the tasks imposed on it entailed the need to finance them. With growing needs of the state and its administration, it became useful to develop, impose and collect general taxation. In 1798, the first income tax was introduced in England (the need to finance preparations for the war against France); in Italy it was introduced in 1864, and in Germany in 1891. The increasing economic growth contributes to applying taxation also to processes driven by economic changes: in 1920, corporate income tax was introduced in the United States and in Germany; after World War II, France put in place personal and corporate income tax, and in 1954, a value-added tax (VAT). Throughout the 20<sup>th</sup> century, virtually every year more and more legal and factual circumstances would become subject to taxation.

The state's share of each activity, depending on the social contract (Fig. 1.5) will be proportional to all citizens or variable. A proportional share will be where a flat tax rate is applied; in this case it will be always the same, irrespective of the amount of tax base. The state's variable share allows for a broader spectrum of possibilities, this share either progressively growing pro rata to a higher tax base (e.g. globally progressive, bracket progressive, regressive) or decreasing pro rata to the tax base increase (regressive rate); a certain tax free amount is a commonly used solution where the state's share is variable, especially in revenue and income taxes (Fig. 1.5).

Tax system models in a free market economy apply derogations from the generally accepted tax standard. This helps them perform non-fiscal functions which result in alleviating the tax burden on taxpayers who benefit from specific preferences including tax credits, exemptions or lower tax rates. A taxpayer's eligibility for the preference is meant as a reward for a behaviour or attitude that complies with the state's expectations. The solutions in use favour certain social groups, e.g. large families, farmers, entrepreneurs; or certain sectors of the economy and economic behaviours (investment, innovation, savings). It is done using systemic tax credits applicable to taxpayers meeting specific conditions set out in relevant regulations, or individual tax credits applied on a case-by-case basis. Exemptions frees a certain group of tax beneficiaries of some tax obligation or refers to a certain type of income or transactions free from tax.

## I. THE ROLE OF TAXES AND TAX SYSTEM...

FIGURE 1.5. State's share of tax base (from USD 5k to 40k) depending on the tax rate preferred by the tax policy

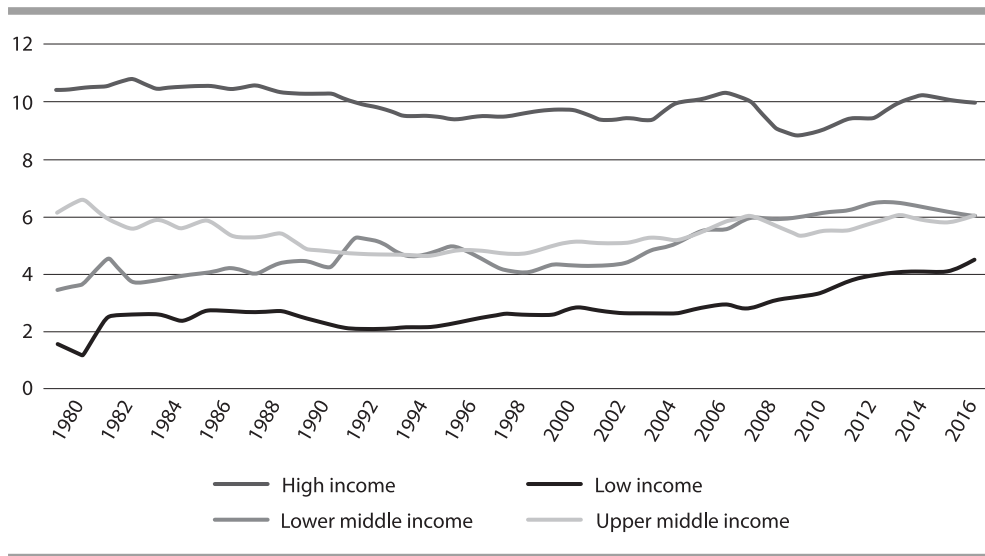


Source: own elaboration.

Tax system models used worldwide encompass a full spectrum of taxable persons and taxable subjects. A difference can be observed in weights allocated to respective types of public levies flowing into national budgets (Fig. 1.6), e.g. in the United States, Australia and Scandinavian countries direct taxes will have a relatively high share of tax revenues, while in other, middle- or low-income, countries the taxation on consumption (with a particularly fast VAT collection) represents a major counterbalance to income taxation. Looking at the changes in income taxes as a share of GDP, this share, over the last 30 years, has followed an upward trend more often in less well-to-do economies than in highest-income economies, where the effects of the crisis of 2008+ can be particularly observed.

Despite differences between national tax systems, one could point to areas which are subject to international, global convergence (Thuronyi et al., 2016), among others: the implementation of income taxes in all countries; reduction in PIT, CIT rate; social security contributions have become a widely used solution and their systemic coordination with the income taxation is growing; customs procedures have been significantly

FIGURE 1.6. The structure of direct taxes as a share of tax revenues in economies at different income levels between 1980 and 2016 (in %)



Source: own elaboration based on World Bank database.

harmonised, with customs duties greatly reduced; CFCs (Controlled Foreign Corporations) are widespread, especially in countries that are net capital exporters; a major consensus has been reached on many issues of cross-border taxation (e.g. transfer pricing), mainly as part of OECD cooperation; general and specific anti-avoidance rules have become a fixture as has the consensus on the need for legal and administrative measures to reduce tax base erosion; tax administrations have gained greater expertise in collecting and processing taxpayer information, and the taxpayer numerical identification has become a universal solution.

The gradual re-evaluation of views on the role of the state in the economy is usually driven by the evolution of the economic doctrine inspired by classical economic theories (Keynesianism, liberalism) and their contemporary varieties (such as neo-Keynesianism, neoliberalism). Shocks in the economy (e.g. increase in the unemployment rate, decline in output, financial crisis) are reflected by the tax policy in place (Delgado, 2017). Distinguishing between evolutionary and shock factors driving the tax system helps observe a certain constant process of tax policy adaptation, where corrections to tax policy shaped by evolutionary factors are verified by shock factors (Raczkowski and Węgrzyn, 2017). Theoretical aspects of taxation arising out of the wealth of existing economic theories,

from economic aspects through institutional and political ones, to the strictly financial dimension, enable an in-depth debate on which referential structure of tax system would best correspond to the prevailing economic environment, rather than just copying solutions used in the past. With tax theories embedded in today's tax systems, it is possible to develop a variety of tax models referring to the fiscal function in the free market economy, the social and economic goals of the state administration and tax system evolution following the development of the state and economy. The paradigm of tax system economics is still determined by two highly opposing theories representing different views on its role in the economy. The neoclassical tax analysis focuses on designing tax systems that help ensure the financing of public expenditure in a fair and efficient manner (Stern, 1987), with fiscal policy playing a minor role in the long-term development (Delgado, 2017). A comprehensive scope of the role of the tax system in the economy was introduced by interventionism, focusing on socialising the economic environment in the macroeconomic perspective of intervention to combat unemployment. John M. Keynes (2014) argued that the monetary policy is best positioned to support the free market economy, but if the market mechanism is destabilised by the growing unemployment rate, the market does not have self-stabilising mechanisms. Consequently, public intervention is necessary to stimulate market mechanisms with higher public expenditure (fiscal policy). Despite differences as to the role of the state and the scale of intervention related to social and economic goals, both doctrines point to the need for fiscal function as a condition for efficient and optimal use of the other functions (mutual effect). Without understanding the tax mechanism and the related economic circumstances conceptualised in the historical science of taxation, it is impossible to properly develop new concepts in terms of their long-term implications, which is of particular importance to the ongoing debate on the crisis of economic sciences (i.e. Colander et al., 2009; Bookstaber, 2017). The last financial crisis sparked off a discussion on whether the crisis is a sign of dysfunctionality of the economy alone of some economic schools, since they failed to predict it (models only predict a probability of crises) or suggest effective remedies. On the one hand, we have the criticism of monetarism, and on the other — the criticism of interventional fiscal incentives, with both schools aware of the real problem of having to garner the essential support for the necessary changes.

### 1.5.1. A neutral tax system model

The supporters of liberal theories advocate low taxes and a simple system that mainly serves the fiscal function, with other systemic functions limited. Liberal models are founded on the rationality and individualism of respective market participants in the economic decision-making process, and assume that a free market economy is the most efficient form, and the market mechanism should suffice to ensure economic growth. In accordance with the liberal economic thought (Table 1.2) the purpose of the tax system boils down to serving the fiscal function and collecting public revenue.

Based on the criteria listed in Table 1.2, a neutral tax system can be defined as one that meets the principal assumptions of the liberal role of the state in the economy, i.e. the least possible state involvement in managing the processes taking place in the real economy, complies with the principle of economic freedom and guarantees free competition. A neutral tax system does not distort the allocation of resources in the economy, which evolves in a competitive environment. A system of taxation or particular taxes can qualify as neutral when it does not impact an market participant's decision aimed to have a specific market effect (Schön, 2015).

Each interference with an individual's decision-making process may result in loss of prosperity, and thus instead of the universal neutrality of tax system (general perspective), we should talk of many neutralities related to individual economic activity. Hence the goal of full tax system neutrality is unattainable. Neutrality should be understood as no-interference with price relations based on which consumers and producers make their choices. Economic operators should base their activity on the principles of market mechanism, placing their resources on the market rather than being guided by tax system solutions resulting from state intervention. A neutral tax should not contribute, through so called tax rationality, to a change in the circumstances and in the operation of economic operators subject to market mechanisms. Functions of tax systems are limited to the fiscal and redistributive functions (and only to their basic extent). The model's main assumption is the equality before the law, there is no room for broad tax preferences, especially those targeting only a specific group of beneficiaries. Budget income should ensure financing of the essential expenditure only, defined by the state's involvement in the economy (e.g. external defence, protection of property, the judiciary).