Czech University of Life Sciences Prague

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Diploma Thesis

Sustainability of public finance European comparison

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DIPLOMA THESIS ASSIGNMENT

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Thesis title

Sustainability of public finance – international comparison

Objectives of thesis

The main aim of this diploma thesis is to find out the structure of the public finances of the given countries. Introduce their differences in this type of state sector and which side effects greatly influence them. This can be further interpreted by comparing its current state after the Covid pandemic and before.
The secondary objectives which will be examined include:
- The specifics of the selected countries' public finances and their vast differences.
- Determining the external factors affecting public finance and how the country in question could defend itself against them or where the government should intervene the most.
- A recommendation to improve public finances.

Methodology

The diploma thesis will primarily consist of several basic steps. The first will describe the information obtained from individual literary and electronic sources. Therefore, it will refer to the current state of knowledge available in this field and methodically based on document analysis.

The next step of the methodology will be to apply the direct observation of the current situation within the timeline from 2000 to 2020 in the selected countries, which will be examined. The primary goal of this endeavour is to find the main differences in the types of certain states' public finances and describe more precisely by the contrast between its current status and the one following the Covid epidemic.

In the last step, the synthesis of all acquired knowledge is used, which will be subsequently supplemented by a deduction. That is accompanied by a final interpretation of the obtained information.

The proposed extent of the thesis

60 – 80 pages

Keywords

Economy, public sector, state, fiscal policy, currency, budget, sustainability, public expenditure, public choice, taxes

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Recommended information sources

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Declaration

I declare that I have worked on my diploma thesis titled "Sustainability of public finance – European comparison" by myself and I have used only the sources mentioned at the end of the thesis. As the author of the diploma thesis, I declare that the thesis does not break copyrights of any their person.

In Prague on 31.3.2022 ____________________________

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Sustainability of public finance – European comparison

Abstract

The thesis aim is to compare the public finances of three selected countries: Germany, France, and Austria. This research will be carried out through several consecutive objectives, starting with the presentation of the specific situations that occur in the public finances of these selected countries and identify their differences, further clarification of the primary financial sources from which these countries receive their state revenues, and then how they spend these hefty sums of money. Other partial objectives are, first how these countries could improve their public finances in certain areas where it is essential to intervene, and secondly, how the recent covid-19 pandemic affected the state of these public finances.

As part of this research, it is necessary to mention that there will also be added economic variables, such as GDP, public debt, unemployment, inflation, which will serve to make a closer comparison between countries and create some idea of how these countries are doing in the international economic comparison. Subsequently, the overall results of this research then will be presented at the end of the diploma thesis.

Keywords: Economy, public sector, state, fiscal policy, currency, state budget, sustainability, public expenditure, public choice, taxes.

Udržitelnost veřejných financí – evropské srovnání

Abstrakt

Cílem této diplomové práce je porovnání veřejných financí tří vybraných zemí, což jsou Německo, Francie a Rakousko. Tento výzkum bude vykonán skrze několika po sobě navazujících cílů, které počínají, od představení konkrétních situace, které se vyskytují ve veřejných financích těchto vybraných zemí, a stanovit jejich rozdíly, dále jasnějšího specifikování, z jakých hlavních finančních zdrojů tyto země získávají své státní příjmy a posléze jakým způsobem tyto tučné finanční obnosy utrácejí. Dalšími drobnějšími cíly jsou zaprvé, jak tyto země by mohly zlepšit své veřejné finance v určitých směrech, kde je to nezbytně nutné zasáhnout a zadruhé zjištění, jak se nedávná covid-19 pandemie podepsala na stavu těchto zkoumaných veřejných financí.

V rámci tohoto výzkumu v práci je nutné zmínit, že zde budou také doplněny ekonomické proměnné, jako například HDP, veřejný dluh, nezaměstnanost, inflace, které budou sloužit k bližšímu srovnání mezi jednotlivými zeměmi a utvoření jakési představy, jak si tyto státy vedou v mezinárodním ekonomickém srovnání. Posléze celkové výsledky tohoto výzkumu budou prezentovány v závěru diplomové práce.

Klíčová slova: Ekonomika, veřejný sektor, stát, fiskální politika, měna, státní rozpočet, udržitelnost, veřejné výdaje, veřejná volba, daně

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List of abbreviations

€ - Euro

Covid-19 - Coronavirus-2 (SARS-CoV-2)

EU – European Union

GDP - gross domestic product

OECD - Organisation for Economic Co-operation and Development

RSA - Revenue Sharing Act

UN - United Nations

1. Introduction

In today's world, public finances are considered to be one of the most important topics in maintaining states sustainability and overall financial vitality, which is then in correlation primarily responsible for the level of living standards in the country. Most countries face individual internal problems and therefore have their public finances divided into different amounts of money and separated sectors according to their current situation. The government decides the amount of funds each sector gets, therefore mainly by managing their gained revenues and given expenditures. The scope of public finances is mainly considered to be divided into threefold. First is the efficient allocation of available resources, the second is the distribution of income among the state citizens, and the last is the general stability of the economy. The most important goal of public finances is to achieve the government's desirable economic effects and also to steer clear as much as possible from the undesirable ones. In the year 2021, all the worldwide governments are going through hard times that are also definitely affecting their public finances. The covid-19 disease has spread throughout the world so fast that most countries did not have enough time to prepare a good financial plan for the case of an outbreak like this and are now facing a progressive economic regression. These regressions are starting to radically show their harsh economic effects on their domestic markets.

The main focus of this thesis is to compare three different approaches towards public finances from certain countries of specific choosing, which are France, Austria and Germany. Each of them is compared in several different categories such as available resources, distribution of income, the overall stability of the researched economy, state debt and the country's challenges. These will be then constructed a recommendation where every mentioned government should intervene the most within their fiscal politics.

2. Objectives and Methodology

2.1. Objectives

The main aim of this diploma thesis is to find out the structure of the public finances of the chosen countries. Introduce their differences in this type of state sector and which side effects greatly influence them. This can be further interpreted by comparing its current state after the Covid pandemic and before.

The secondary objectives which will be examined include:

The first aim is to introduce the specific situations that occur in these selected countries' public finances and establish their vast differences.

The second marginal objective is to determine what external influences mainly affect these selected public finances and how the country in question could defend itself against them or where the government should intervene the most.

The third secondary objective is to describe how the concerned countries could improve their public finances in specific directions where it is necessarily needed and compare their condition before and after the pandemic crisis.

2.2. Methodology

The methodology of the diploma thesis will largely consist of several basic steps. The first of them will be a description of the information obtained from individual literary and electronic sources. This starting process is crucial for the successful start of the initial part of the thesis and will especially decide on the summary information content of the whole diploma thesis itself. The description alone must be done very thoroughly and only from credible and correct sources that will be a part of the literature review and therefore will primarily refer to the current state of knowledge available in this field and will be methodically based on document analysis. The sources themselves, specifically the numerical data used in the diploma thesis practical part, will be taken mainly from verified internet databases such as World bank, Statista, OECD Statistic and then subjected to a thorough examination and adjusted to comparable variables and written in the tables.

The next step of the methodology will be to apply the direct observation of the current situation within the timeline from the year 2000 to 2020 in the selected countries which will be examined and the main goal of this endeavour is to find the main differences in the types of certain states public finances and describe more precisely by the contrast between its current status and the one following the Covid epidemic.

Last but not least, in the last step of the methodology, the synthesis of all acquired knowledge is used, this which will be subsequently supplemented by a deduction which is accompanied by a final interpretation of the obtained information are the most important steps, from which the text of the whole diploma thesis will be based and therefore written.

The diploma thesis is divided into three parts. Each of them has a few chapters which are furthermore divided into another several subchapters underneath for more detailed description of the researched topic. The first part is mainly focused on explaining basic theoretical concepts, abbreviations and tables which are the main stepping stone for the additional segment of the thesis. The second part contains the examined countries in the mentioned areas of research and the continuation of the comparison of the obtained information and analysis of specifically selected variables based on the study of professional literature and their ability to describe the precise economic situation of the surveyed countries. At the end of this part, these selected variables would be also tested by Pearson's correlation coefficient to establish whether these variables have a possible correlation between each other or not. The third part includes conclusion of the thesis with informational repetition of gained information and important details and final summary of the work.

2.2.1. Proposed research hypotheses

As in any research, it is necessary for this diploma thesis to establish research hypotheses, which will later be confirmed or refuted at the end of the research. These proposals will be comprised from the relationship between the later discussed researched variables and a subject of the analysis which are the three selected states. The first of this hypothesis is the value added tax is not the most important tax revenue of the state budget of these countries. The second hypothesis is the most governments create a financial deficit rather than a budget surplus.

3. Literature Review

3.1. Theory of Public finances

A comprehensive theory of public finances has been in development since the end of the 19th century and the beginning of the 20th century. The modern take on the theory of public finance then follows a number of other scientific disciplines, mainly law and economic theories. Therefore, it can be said that public finances are a quite huge complex of many scientific disciplines.

The overall concept of **public finances** can be understood from several perspectives. First, they are perceived as monetary relations arising with the acquisition and redistribution of money. Secondary they are one of the tools of public policy and are mainly used **to meet the specific needs of the country's population.**

These relationships and mainly their functions can be considered essential for state finances because they include several important economic purposes, but the main focus is how the government should raise its resources to meet expected expenditure.

There are also other definitions such as those below this line to establish the fundamental essence of what public finances are fundamentally about:

"Public finance is the study of the role of the government in the economy. It is the branch of economics which assesses the government revenue and government expenditure of the public authorities and the adjustment of one or the other to achieve desirable effects and avoid undesirable ones. " (AHUJA, 2015).

Another definition can be taken from the book Public finance and says: *"It is the field of "Economics "devoted to the study of how government policy, especially tax and expenditure policy, affects the economy and the welfare of its citizens.* " (S.N.Chand, 2008).

Public finance is about much more than just the redistribution of resources. It necessary reflects the main political philosophy of a whole state or region. Therefore, public finance could have been defined as any revenues or expenditures passing through certain state budgets; these financial inflows and outflows mirror in the way the relationship between the citizens of the nation and the government.

That relationship can be further distinguished between the **Libertarian, Neo-Liberal and Collectivist political philosophies**. Eventually, therefore, political philosophy determines the structural levels of country's government, its expenditures and revenues from their taxation rates, money borrowing and sources of their main budget spending. (Bailey, 2004)

This can also be elaborated extensively because, essentially, two sides meet in public finances. **Individualism,** which mainly prefers a greater degree of self-determination of rules by mostly the citizens and **Collectivism**, which on the other hand, prefers a greater number of public funds at the substantial redistribution rate, and also agreeing with resulting higher taxes which are resulting from that decision. Both of them have their significant pros and cons.

Although an individualist society values personal control, autonomy, and individual accomplishments, a collectivist society values loyalty and unity and enforces reciprocal obligations within in-groups. It has been proposed that, in opposition to collectivism, individualism will actively enhance economic growth and increase individual incentives to invest., innovation and wealth accumulation. (Kyriacou, 2015)

The primary parts of public finances are the actions connected to collecting of revenue and taking care of society expenditures and mainly making sure that the implementation of a state's financing strategy is carried out in proper way. These parts can be distinguished as five components which make the core of the whole process. These include tax collection, state budget, expenditures, deficit / surplus and government debt. However there are also couple of very important roles of public finance which are considered to be essential. First is make sure of that government does a proper allocation of social goods, or the establishes the mechanism by which total resource consumption is divided among private and social goods, as well as the selection of the mix of these social goods. Second is to distribute the state wealth and income and most importantly ensure that it is distributed the way as the society considers fair. Third is to use established budget policy to ensure high employment, a tolerable level of price stability, an appropriate rate of economic growth, and accounting for trading and secure economic stability within the state.

3.1.1. The philosophical and historic foundation of public finance

Public finances as any other discipline went throughout its existence through a number of significant changes which took a huge role in their modern form which we see today. But its origin can be traced back toward ancient civilization such as ancient Greece. The natural concept of public finances was not yet established there nor it was even considered to be but the distribution of the monetary state resources to its subjects was already an organized process, which had its noticeable benefits but also demonstrable mistakes.

There is a quite lasting tradition of philosophical discourse that is concerned about the need for sufficient government, beginning with the ancient **Greek philosophers** such as Socrates, Plato and even Aristotle These are mainly set in the times around three of four centuries BC. Today, political philosophy remains a vital subject for debate in contemplation about the relationship between the citizen and the state. This particular relationship essentially affects the nature and scope of public finance. (Bailey,2004)

Greeks had two primary roles for their public finances. The first was to provide entertainment for the general people each town had its own theatre. Amazing works of art were strewn around the landscape. Annual festivities were regularly held. This all needed to be funded from somewhere if not from the artists or the business owners.

The second role was to raise and train soldiers, as well as to provide funding for them. This endeavour was mainly pointed toward bringing glory and necessary slave force from the states that would be conquered.

The Romans took the idea of public finances further. They spread the concept of a structured body of law; this law would safeguard property and preserve contract freedom. Also they developed one of the first effective systems of taxation due to need of funds to build better and effective system of roads within to their empire.

Following the fall of the Roman Empire. The feudalist regime was weakened by inadequate communication and pervasive instability. This brought new challenges towards the so-called government. Its obligation was to provide a regular allowance for those individuals who would otherwise live by charity. This is similar to the modern concept of a negative income tax.

In the eighteenth century, two schools emerged. Those two were the **Physiocrats** in France and the **classical school** in Scotland and England. The Physiocrats passionately opposed the core **Mercantilist** beliefs such as: "foreign trade is not a primary aim of a nation but is a "means of last resort" which carries with it the danger of ill-feeling and war. " and "Gold and silver are not wealth but effects of real production which has changed its form". (Sojka, 2010)

The **Physiocratic** thought that law of nature was the foundation of their thinking. Along with the natural order, there was the positive order, which reflected the inadequacies of human law. The father of the school named **Quesnay**, despised the concept of everyone having a right to everything, and the concept of private property was important to them. Thus, the Physiocratic role of government was to ensure private property and the imposition of a single tax. (Stiglitz, 2000)

Further in time in the year 1776, **Adam Smith** published his five-volume work on 'The Nature and Causes of the Wealth of Nations". He studied labour, capital, economic growth, economic history, and public finance.

After that **Thomas Robert Malthus**, a radical economist, devoted most his life's work to changing Smith's mind. Unlike his colleagues, he questioned the sufficiency of total output and promoted self-control as a solution to economic scarcity. (Hansen & Prescott, 2002)

He foresaw Keynes in his conviction that a tax-financed public work would be more effective than tax cuts if it provided stronger and more predictable demand for labour and commodities. **David Ricardo** examined Smith's books as well, and his work was more widely accepted than Malthus'.

In the year 1845 **John Ramsay McCulloch**, a Ricardo's student, published the first separate account on public finance. After a while few other opinions swept through the world of public finances. Example can be **Karl Marx**, who believed that the state, as a tool of the ruling class's, would lose its role and vanish. This was later refuted as in Western democracies; the extension of suffrage and the creation of labour laws have meant that Marx's characterisation of the state as an instrument of the bourgeoisie[1] no longer holds true. (Faccarello and Sturn, 2014)

Later economists **Alfred Marshall**'s and Arthur **Cecil Pigou**'s joint work helped to define the concept of a public good. Ensuing after economist Knut Wicksell challenged classical view competitive prices assure a social optimum. He believed that a transaction exchange between rich and poor may raise total utility. This trade may occur by setting prices at non-competitive levels, for example, by enacting minimum wage or maximum hours laws,

Then another significant change in public finance came after Second World War. At that time modern public finance theory truly took off. It owes a great deal to the work of **J.M. Keynes**, who questioned the adequacy of demand in the classical system and saw a need for government in keeping aggregate demand at full employment. (Doyle, 2016)

Thanks to all these gentlemen the field of public finance has become so large that it now has its own position in economic theory. The competitive economy is being investigated within the scope of general economic analysis. The nature of government is being called into question. and an examination of the mechanism of public choice is being conducted. (Bateman, 2020)

3.1.2. History of public finance on European continent

The history of public finance on European continent is a bit of a tangled topic. This can be seen in the different structures and differences in the interpretation of concepts by authors of professional publications in the field of public finance over the years.

[1] The middle class, usually in terms of its perceived materialistic values or conventional attitudes.

For example the British authors have a long history of writing about public finances on the European continent. However, in terms of public finance, he has been somewhat different from the writers of the West European countries. In the classical period, English writers saw the market as the rule and the public sector as the exception. Only in cases of market failure is the public sector required.

West Europeans in particular the German tradition viewed the economic system in dual terms, with the public sector as vital as the private sector. The source of this disparity could be found in variances in tradition. The British tradition arose from the **Lockean** foundation of the social contract. Individual entitlements and free exchange underpin the society. Such a civilization is governed by an unseen hand whose work benefits the entire society. Overall the European continental approach takes mostly from the **Cameralist** teaching. As stated by this tradition the rules for the conduct of public affairs are developed in the enlightened state. This lead also for many economists to have their own perspective towards this decision. (Singh, 2008)

3.2. Principles of public finances

Individuals and businesses engage bilaterally and multilaterally ways to form the economic world. The great majority of these economic ties are linked to the exchange of money. There are two important features in the market environment for monetary relations between economic entities, which we refer to as finance. The first is spontaneity and the second is voluntariness

Volunteering and spontaneity are common for both corporate and household finances, but do not apply to public finances. These relationships are not spontaneous, but are governed by the government's financial plan, which, once approved by parliament, takes the shape of a law. These unique monetary interactions are subject to several principles such as irreversibility, non-equivalence, and involuntariness.

The principle of non-equivalence of its complexity is that each person participates in drawing from the state budget, but also in paying taxes. The complexity of the public finance problem stems from the fact that these shares are not equivalent. This follows from the fact that if someone pays twice as much in taxes, they are not entitled to draw twice as many services financed by the state from public expenditure. *„This situation was described by Samuelson* (1954)*."*

The principle of involuntariness points to the fact that the subject's supply of money to the state budget is given, but drawing from it is diverse for him and often due to the diversity of his situation unpredictable. Therefore, it is clear that no rational economic entity would enter into these monetary relations with the state voluntarily. Therefore, they must be enforced by law. (Dvořák,2008)

3.3. The state budget

The state budget is a financial management plan for the state that ensures the state's economic, social, and political functions and usually its time span is particularly for one year. When we are describing budgets, they are generally grouped into three types based on these estimates: balanced budgets, surplus budgets, and deficit budgets. In the instance of a balanced budget, the expected government expenditure in a fiscal year must be equal to the expected revenue otherwise we might get into surplus or deficit budget situation. (Lee et al., 2013)

A surplus budget occurs when expected revenue exceeds estimated spending in a fiscal year. This phenomenon means that a government's revenues are more than the number of expenditures paid on public welfare. A deficit budget occurs when a government's expected expenditure exceeds its estimated revenue in a fiscal year. This type of budget is beneficial in times of economic downturns. Also, very important note is that the deficit budget is beneficial in periods of recession because it generates more demand and stimulates. A government often covers this sum by public borrowings via treasury bonds or by pulling from its accrued reserve surplus. (Musgrave & Musgrave, 1989)

However, if we wish to go into further details about about what the state budget is. It is the most important fund in the budget system, the centralized money fund. The reason for its importance is because it concentrates a significant portion of the financial system's financial resources, and a large proportion of tax money also flows into its revenues.

Thus, the state budget is the most important public budget since it concentrates the majority of the budget system's income and thus contributes the most to the irreversible redistribution of a significant portion of GDP through the budget system, particularly through taxes.

The state budget can be classified according to its functions, allocation, redistribution, and stabilization. Stabilization and redistribution, as discussed on earlier pages, are particularly essential since they are applied at the state level through the state budget, also the legislature normally enacts and decides on these instruments. (Musgrave & Musgrave, 1989)

When approving the state budget, the volume and the given structure of social transfers are approved in the first place. Not only that, the state also approves the volume and structure of its subsidies, which are mainly provided from the state budget to the local government and other various entities in the country. (Peková, 2005) There are called mandatory spending.

Budgetary principles are another key aspect of the state budget. These are the parameters that should be considered when creating and implementing the state budget. As the legislatures sought to control the activities of state administration bodies and restrict their freedom in the area of state finances, the so-called influence of government policy through the approval of revenues and expenditures of state executive bodies, budgetary principles gradually began to take shape.

Budgetary principles are following certain principles in particular. (Pattaro, 2016) These are the principle of unity of the budget, the principle of completeness of the budget, the principle of annual budgeting and approval, the principle of publicity, the principle of budget reality, the principle of budget balance.

The principle of budget unity is based on the fact that all of the state's financial earnings and expenditures should be contained in a single document, i.e. the state budget, and should be charged centrally to obtain an overview of the state's entire financial management.

The principle of completeness of the budget mandates that the state budget contain all of the state's revenues and expenditures without compensation, as well as all financial operations of the government.

The principle of annual budgeting and approval ensures that government actions are under control. Every year, the state budget is produced according to this principle, and the approval date must be set so that the budget can be considered and passed prior to the beginning of the budget period.

The principle of publicity is to prohibit the government from working secretly. This approach is presently followed in such a way that the approved budget takes on the form of budget legislation, which is published in the Collection of Laws and therefore accessible to the public.

The budget reality principle is introduced to avoid budget data from being manipulated. It is primarily a matter of preventing budgetary transfers between individual objectives from occurring without the knowledge of Parliament.

The budget balance principle demands the equilibrium of the state budget, particularly over a longer time; this principle is a traditional guideline of the state's financial policy. Initially, the principle of budget balance required that state budget expenditures be paid by only by revenue rather than governmental loans. (Hejduková,2015).

Lastly, because state budget takes the form of a budget law, therefore it should be a legally obligatory financial plan. The extent to which the state budget is available when drafting the final draft of budget is determined by how well the budget is met as a binding financial plan. If the state budget is not approved by the start of the fiscal year, it is managed according to the so-called provisional budget. (Peková, 2005)

3.3.1. State budget creation and approval process

The creational and approval process of state budget differs depending on the country and its ministry of finance. In this case, let's introduce the overall budgetary creation and approval process of the Czech Republic. The Ministry of Finance normally compiles a draft of a state budget detailing estimated revenues and expenditures in collaboration with other governmental authorities. This process also considers the condition of state finances during the previous budget cycle.

A number of factors determines the time required to develop a budget. (Potter, 1997) The budget is compiled based, among other things, on the results of the state's economy in the previous fiscal period, the aims and aims of the state's economic policy for the relevant fiscal period, the predicted economic development of the national economy, etc.

There are three main preconditions for budget creation. These are the need for a medium-term perspective, the need for early decisions and the need for a hard constraint.

The need for a medium-term perspective focuses on explaining the basics of what and how should the budget preparation be composed. To be a successful financial management tool, the government budget must first and foremost be credible. The expenditure program must be realistically affordable in order to be trustworthy and efficient.

As a result, budget preparation must begin with a good estimate of revenue, even if that estimate may vary before the budget is finished, in order to establish a consistent revenue-expenditure combination. To achieve the government's goals, the budget process must create a solid link among government policy and resource distribution through the budget. Since this majority of these policies cannot be executed in the brief period, the formulating the yearly budget should take place over a period among several years.

The need for early decisions suggests that the budget preparations must be approached with careful consideration because when the budget development starts to line up, the required compromises must be made. The reason for this is that it will allow for the smooth deployment of priority programs and prevent other running financed programs from being disrupted during the budget creation process. Also, possible political intervention, administrative incompetence, and a lack of necessary feedback, which frequently occurs, might lead to the postponement of these selections and to final proper budget execution itself.

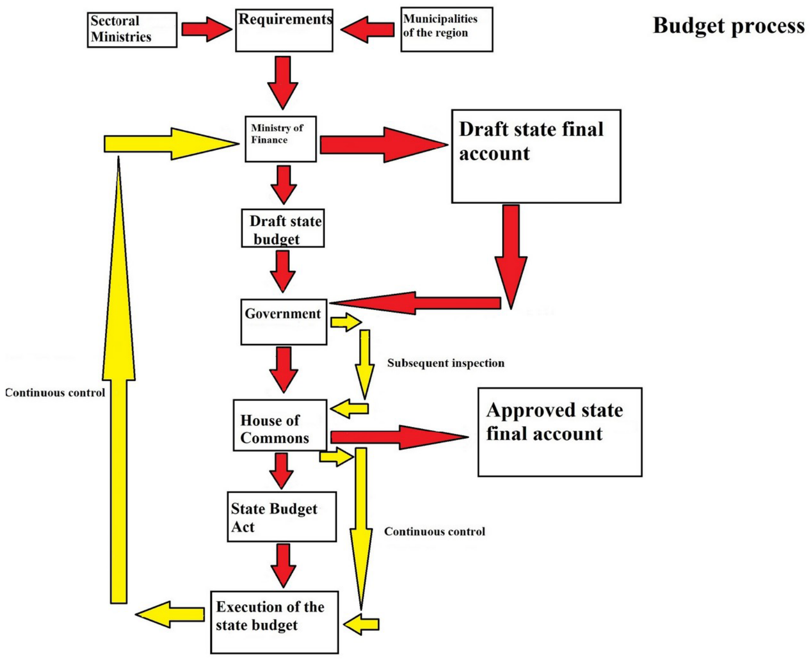
The need for a hard constraint reflects the a very important aspect in budget creation and that is of the setting clear borders of budgets framework and necessary communication during its negotiation stage precisely with the ministry of finance and also make sure that all necessary parts of the budget are confronted and deeply adjusted toward right amount of planed spending before the final review of the budget. (Shah, 2007)

After being reviewed by the relevant government, the draft budget is presented to the legislature for discussion and approval.

Then the implementation phase begins with its own administration in accordance with the state budget that has been approved. The implementation of the budget is primarily the responsibility of the government and its agencies. Its essence is to ensure the timely and right payment of all budget revenues, as well as the efficient and cost-effective use of budget expenditures.

The final stage of the budget process is budget control. The results of budgetary management are evaluated in this phase, and the final accounts are prepared at the end of the fiscal period. The overall procedure is shown in more detail in Graph 1 (Hejduková,2015).

Steps of the budget process in graph 1.



Graph 1: Budget process,
Source: (Peková, Pilný and Jetmar, 2005) (Own interpretation).

3.3.2. Problems with state budget's creation

A simple system of government budget limitations can characterize the nature of budget creation problems. This framework comprises of a budget balance, which expresses the difference between government revenue and spending in a fiscal year.

The government addresses two major public financial decision-making issues during the fiscal year. First the ex-ante problem, which must be solved prior to the start of the period, namely the budgeting problem, when it is necessary to compile an economically realistic and politically sound draft state budget, namely to indicate the level and structure of public expenditures, public revenues, and the size budget balance.

And second is ex-post issue, which must be addressed after the fiscal year ends if the volume of tax revenue is less than the volume of public expenditures, i.e. the challenge of funding the budget deficit. This includes selecting whether the deficit will be covered by debt, issuance, or other means. (Dvořák, 2008)

3.3.3. Public revenues

The economic and social systems define the type and composition of public revenues in any country and the services performed by the public sector, comprising public administration. After all course, the public revenue system is also subject to cultural and historical evolution. The budget structure is required to share the income of the public finances; however, there are many various types of public revenue, each with its own distinct and specific meaning.

From this point of view, factors such as the source of these revenues, their type of depletion to public budgets, their scope, tax powers, the degree of liability, the aspect of return, and the time aspect are significant for their basic differentiation.

Furthermore, public revenues can be more classified according to its source: first, income from the business sector, and second, income from the population. The third source of income is from overseas.

Additionally, also we can categorize additional revenue based on the method of withdrawal into the public budget as: levies from public insurance, state financial taxes, customs duties, and other unnamed sources. In terms of individual public revenues, taxes play a direct and decisive role in this system, serving as a key tool for the irreversible redistribution of a portion of GDP within the budget system. (Rosen & Gayer, 2013)

Another significant inclusion is an explanation of the distinction between taxes and fees. Taxes are financial contributions made by residents and businesses in the state, whereas fees are payments made to a public body for an activity or service done. Fees are also governed by legislation under various pieces of legislation. In short, it is a payment to the public sector with special consideration that does not emerge with taxes and levies. (Hejduková, 2015)

Current revenues are the most important group of state budget revenues, with the majority of them having the character of regularly recurring revenues. The majority of them are comprised of tax revenues. In most nations, the state budget continues to get the biggest share of tax revenue, particularly taxes with stable revenue, or a major amount of revenue in some countries, mainly indirect excise duties, including the most stable and profitable universal excise duty and value added tax. (Peková, 2005)

3.3.4. Subsidies

A subsidy is defined as financial support provided in the form or transfer of a specific quantity of money which is mostly distributed by the state or regional budget.

Municipalities, particularly regions, are not financially self-sufficient and require additional funding from the budget system, particularly the state one. Also, it is important to be noted that subsidies are the most important source of revenue in regional budgets today.

Therefore, municipalities and regions can potentially and in most cases need to obtain structural financial subsidies if the EU's standards are met. The level of subsidies is essential, but so is the mechanism of releasing subsidies and transferring them to the revenue account of a given municipality's or region's budget, since this affects the flow of budget revenues. (Peková, Pilný and Jetmar, 2005)

3.3.5. Characteristics of taxes

The tax is legally required, non-refundable, and frequently a recurrent payment to the government without the entitlement to equivalent and direct performance from the government.

The State authority responsible for the drafts of tax laws and, therefore, the construction of taxes is Ministry of Finance, the top body of the budget system. The important detail that needs to be taken into consideration when implementing the taxes is that they reduce taxpayers' disposable income. Therefore high taxing may not always result in maximum revenue for public budgets and it can even have negative implications for the state and its possible stagnation thanks to a fall in overall tax revenue. (De Mooij and Keen, n.d.)

Because taxes are mandated payments that the subject is required by law to make to the budget, the form and amount of income tax are interesting to taxpayers in terms of what taxes are spent on what public goods, which is how tax-payers profit from taxation. According to economic theory, this is the so-called tax price for public goods.

The definition of tax price is the additional tax contribution that a taxpayer must make for each additional unit of public goods expenditure. Ultimately, the tax falls on every single citizen therefore is included mostly in everything like the cost and price of products, and etc. (Peková, Pilný and Jetmar, 2005)

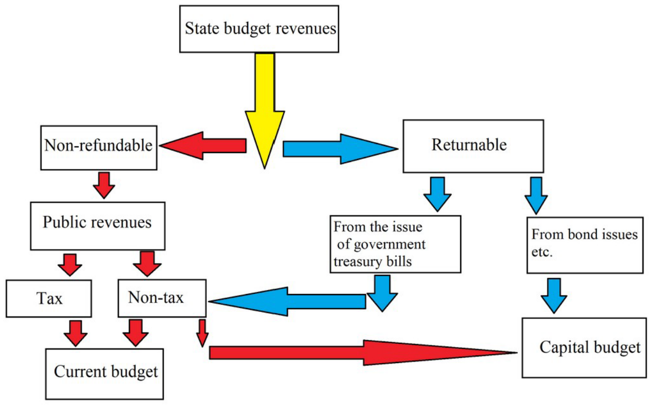
3.3.6. Tax harmonization in the EU

Taxation is another area that has undergone harmonization and has a direct impact on fiscal policy whose function is ensuring macroeconomic stability by maintaining aggregate demand, inflation, and employment during economic downturns and regulating economic activity during periods of great expansion. For example, in LDCs (Least Developed Countries), it is necessary needed factor. (R. Musgrave, P. Musgrave, 2004)

Although, there is a harmonization of indirect taxes throughout the European Union, harmonization of direct taxes has long been in the works and does not appear to be to this day politically viable.

The primary goal of tax harmonization is to enable the seamless operation of the single internal market. Indirect taxes, which are visibly reflected in the prices of products and services, constitute a visible impediment to the smooth operation of the single internal market, i.e. marketplaces without internal borders. The varied rate of indirect taxes benefits producers in nations where the rate is lower. (Hedija, 2014)

Public revenues are displayed in graph 2.



Graph 2 Public revenues,
Source: (Peková, Pilný and Jetmar, 2005) (Own interpretation).

3.3.7. Public expenditures

Public expenditure, in particular, describes the permanent transfer of money from public budgets in accordance with specified principles and rules. Furthermore, certain expenditure is legally enforceable, which means that government budgets must secure it.

Public expenditures, like revenues for public finances, can be allocated based on a variety of factors, and, of course, they cannot be omitted entirely based on the budget structure.

There are two types of government spending. First, a breakdown of public expenditure allocation methods and outcomes: allocation, redistribution, and stabilization expenditure. This division relates to the functions of public finance. The second way to categorize public spending is from a macroeconomic standpoint, which includes government spending on goods and services as well as transfer spending. (Peková, Pilný and Jetmar, 2005)

Public expenditures can be further classified as mandatory and non-mandatory, the mandatory are essentially government spending which are decided according to a certain policy or required by law. Non mandatory spending is polar opposite of the mandatory and its mostly under a set of budget enforcement rules and processes that differ from those that apply to mandatory spending. In terms of time - current and investment, and in terms of planning - planned and unplanned.

Public spending, particularly mandatory one, is always increasing, and this fact is influenced by a variety of reasons. They are mostly economic variables, demographic factors, scientific and technological advances and technological innovations, political and social factors. These are the most important elements influencing not only the magnitude but also the overall structure of public expenditures.

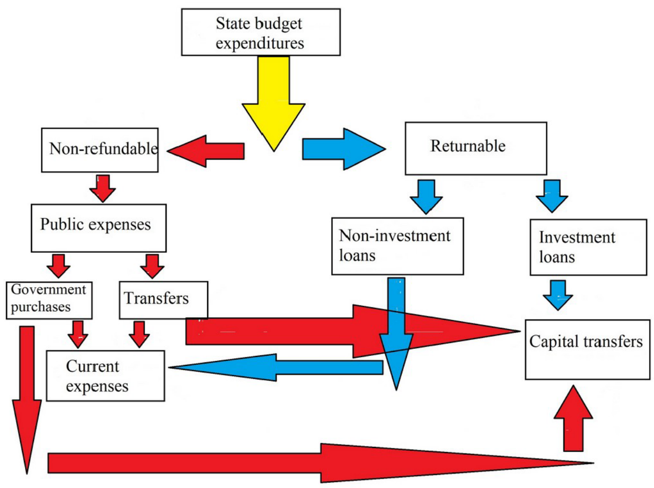
Now let's take a closer look at individual components, the economic ones which primarily include the size of the gross domestic product, the state's economic level, the unemployment rate, the inflation rate, and the size of the public sector. These essentially have a large influence over the economic situation within a state. They are often measured against their past values, which serves as an indicator for monitoring the long-term economic development within the state. Demographic factors are mostly connected with ageing population and low birth rates, but they are also associated with population or migration. Scientific and technical growth also plays a vital role in the structure of public spending. It is particularly concerned with the advancement of medicine, pharmacy, and ever-improving information technology. And last political and social factors in the country. These include tradition, social sentiment, philosophy, and electoral populism. (Hejduková, 2015)

If we look at state budgetary expenditures more closely, specifically the volume and structure of state budget expenditures, we can see that in most nations, expenditures and individual types of expenditures are increasing in absolute and relative terms. In many countries, the public expenses are growing even faster than their gross domestic product. This type of comparison is expressed by a comparative indicator called the expenditure quota.

However, in most industrialized nations, the share of allocation expenditures in total expenditures, i.e. government purchases of goods and services, is gradually dropping as the funding of allocation needs for local government becomes more decentralized.

Simultaneously, the increase in transfer payments, particularly social transfers, restricts the increase in allocation expenses. Reducing the share of allocation expenditures also limits their ability to be used to stabilize the economy, i.e., to directly affect aggregate demand through government purchases and services. (Peková, 2005)

Public expenditures are displayed in graph 3.



Graph 3 Public expenditures,
Source: (Peková, Pilný and Jetmar, 2005) (Own interpretation).

3.3.8. State budget balance

At the most general level, the **budget balance** can be defined as the difference between budget revenues and expenditures during the budgetary year, as reflected on cash flows. There another time of balance called the **primary balance** which is basically the difference between governments revenue and its non-interest expenditure which is government spending but without including the money which are used to repay government debt payments. A **budget deficit** occurs when the amount of public expenditure surpasses the volume of public revenue in a certain fiscal term. If, on the other hand, the volume of revenue surpasses the volume of spending, a **budget surplus** is created.

It is critical to distinguish between the deficit before, during, and after the fiscal term. The balance of the government's draft state budget, which has been accepted by parliament, represents a certain presumption or intention, which is the current government's idea of the development of the country's financial planning in the incoming next fiscal year, which always combines the government's active fiscal intent and estimating the overall effects of independent external influences towards their decisions.

But even with a balanced draft budget, the formation of a deficit is mostly common during the fiscal year because the flow of budget income and expenditures is prone to seasonal anomalies. (Dvořák, 2008)

3.3.9. State debt

State debt originates from a country's deficit management and represents the total of financial liabilities to domestic and foreign creditors. This is a lengthy situation in which state expenditures exceed state revenues and it is the reason why state must borrow money to operate.

State debt is the debt of the central government and forms only a part of the so-called total **public debt**. Historically, this public debt has been closely tied particularly to the state budget deficit, and is an indication of long-term fiscal imbalances. The causes of government debt can vary a lot. (Bui Van, 2015)

As for the overall perception of the state deficit, there was also for a long-time discussion due to many different views on its severity for the state in the case of its occurrence. The reason for this is that many economists in the past considered it a not so drastic indicator of the country's problematic economic development. Nevertheless, there were also those who perceived it as a very alarming and dangerous indicator of the country's growing financial problem. And called for this to be a common knowledge between all economists. (Nur Hayati, 2012)

This was mostly the opinion of economists who considered themselves to be a part of classical public finances group. They considered its occurrence to be highly immoral, and a great burden for future generations. Most other groups of economists returned to this certain view in the early 1980s.

In the case of the current public finance theory does not provide a clear answer to the validity of deficits as the most significant component of state debt. However, it underlines the need to lower the debt burden, both at the state and municipal levels, as well as the need to improve the effectiveness of fiscal stabilization policy. (Peková, 2005)

It is also important from the start to significantly recognize the difference between net and gross debt when describing the financial status of any economic body, including the state. The whole amount of an entity's liabilities, regardless of the level of its receivables, is expressed as gross debt. On the other hand net debt is the total volume of an entity's obligations less the total volume of its receivables.

The total financial status of the state is better portrayed when net debt is used. However, a difficult problem arises in establishing which government assets can be subtracted from gross debt and how they are valued. Most international statistics report public debt as gross, that is, as the overall amount of government liabilities, regardless of government claims. (Dvořák, 2008)

When we look at the types of government debt in most nations, we see that government debt is covered by government bond issues, which are bonds purchased by various entities both at home and abroad.

In terms of the form of this coverage of the state debt, we distinguish two basic ways. First, it may be a book-entry form called dematerialized, ie that the debt is entered in the books of government debt and bonds are recorded in accounts, or secondly, materialized securities in paper form as a classic paper form of bonds.

The third option for reducing government debt is publicly traded securities on the secondary market. These securities can be not only bonds but even shares, a bill of exchange or mortgage bonds. These are traded on the capital market and have an exchange rate price and a yield reflecting the creditworthiness of the creditor which is in this case the state.

In developed countries, most government securities are usually sold at special auctions or tenders to specific financial institutions, either keeping them or selling them to other investors in the secondary market. (Peková, 2005)

3.4. Fiscal sustainability

Fiscal sustainability is the government's capability to sustain their current way of public spending and to support their policies without any threat of cancelling them. Also, this sustainability shows that the government is not in danger of solvency or not able to pay its liabilities in time of need.

To further specify public expenditures is the government's spending on collective desires and needs, such as pensions, provision, security, and infrastructure. Several economist authors such as Pigou, Adams, Shirras and Nicholson describe the public expenditure itself in slightly different ways. (Singh, 2008)

Pigou divides public expenditure into transfer and non-transfer expenditure in a similar manner. Non-transfer expenses were referred to as exhaustive expenditures in the first version of his famous book, "A Study in Public Finance," but he referred to them as real expenditures in the second edition. In the later version, he opted to refer to them as non-transfer expenditures. That refers to the acquisition of current services and productive resources for the use of the government, hence generating social income Transfer expenditures include payments paid as subsidies for the production of certain commodities and the repayment of government debt, etc.

Adams divides public expenditure into three categories based on function. The first is Protective expenditure, which includes government spending on the procurement of weaponry and ammunition, army maintenance, police administration of justice, and jails. The second category is Commercial expenditure, which includes government spending on railways, roads, highways, airports and harbours, among other things. Furthermore, the third category is known as Development expenses. These are decisions taken by the government regarding the country's social and economic development. It includes expenditures for the supply of social and economic infrastructure such as education, health, electricity, etc. (Singh, 2008)

The **Shirra's** classification has divided government spending into two groups. There are two types of spending: primary and secondary. The basic responsibility of the state is to maintain security, peace, and law and order. Primary expenditure refers to spending on them. All other government spending are considered secondary.

According to **Nicholson's** classification, the return from public expenditures can be direct or indirect. Nicholson has classified government spending into the following categories based on this criterion: expenditure with direct return, expenditure with indirect return, expenditure producing partial return and producing full return.

This method of categorizing public expenditure has the significant advantage of disclosing the state's ability to incur any given expenditure. However, the true goal of government spending is to compensate for unproductive labour. (Singh, 2008)

3.4.1. General approach and market mechanism with state intervention

Fiscal sustainability can be operationalized in technical terms based on the government's intertemporal budget constraint. The constraint states that the present value of the outstanding sovereign debt needs in any time to equal the present value of all future primary surpluses in order to be sustainable (Priesmeier, C.,2012*)*

State offenses are linked to so-called non-market activities, these activities can be characterized as the state's non-market operations and are primarily focused on preventing and mitigating the effects of market failure in the economy. According to the definition of the systems of national accounts are non-market activities of production of goods and services, the sale of which covers at least 50% of costs and whose deficit is financed by state funds, the so-called financing of part of the costs from the budgetary system

In relation to the causes of market failure, we can divide the non-market activities of the state into five parts: legislative, allocation, redistribution, regulation, stabilization (Peková,2005)

The legislative actions of the state are historically the state's oldest activity. Throughout history, the state has been the author of different regulations that citizens have been required to follow. It is the state's responsibility in modern society to create a legal environment for the functioning of the market mechanism. The state's legislative non-market operations thus include the approval of the Constitution, laws, and other binding rules, as well as the monitoring of their execution. (Dvořák, 2008)

The state's allocation actions are also the oldest in history. In current terminology, the state strives to effectively allocate resources which it concentrates in the budget, to securing the goods, which when they are produce, it results the market system failure. The partial decentralization of these allocations actions also led to an increase in their efficiency.

In a nutshell allocation of non-market activities of the State are therefore the result of microeconomic causes of market failure and by correct allocation the state strives to achieve an efficient allocation of available resources and liquidate the negative consequences of the market. On the paper this endeavour seems easy but in the real world, this effort is not an easy process and the result is often inefficient allocation of resources, ie government failure. (Ochrana, 2001)

The state's stabilizing activity is the state's endeavour for macroeconomic management, influencing production and consumption while also preventing market failures in order to maintain economic stability, as instability leads to efficiency losses.

The state's redistributive operations are especially significant because the state secures the redistribution of money amongst entities with their assistance in order to achieve more justice in distribution. The redistribution is carried out using funds contained in the state budget. An important question in the distribution of funds is the extent to which the state should redistribute it so as not to undermine economic efficiency or create new inequalities.

The state's regulatory action is focused on the control of business conditions, the labour market, and so on. It is directly tied to the previously described stabilization and legislative operations. (Peková, 2005)

3.4.2. Financial law and its system

The subject of financial legislation is the relationships that occur in the course of financial activity, particularly, but not only, state financial activities. These connections emerge in a variety of contexts. They can be relationships between state bodies, relationships between state bodies and territorial self-governing units, or relationships between financial institutions.

Financial law is a set of legal standards that govern the relationships that arise during the formation, distribution, and usage of money mass and its constituent financial law. This definition of financial law, however, must be understood in the context of the features of financial legal relationships, because some forms or parts of financial activity may be governed by rules from another legal sector.

In terms of financial law's place in the legal system, most countries treat it as a separate branch of the legal system. This independence is provided by the particular of social connections, which are governed by the principles of financial law. (Ochrana, 2001)

Although many finances concern the private domain, financial law is typically categorized as public law. In specific relationships with other subjects of law, public law expresses the supremacy of public power, i.e. the state or possible territorial self-government.

Legal institutes, and this is partly an example of financial legal institutes, are characterized by different combinations of different methods of regulation. When creating a law, the degree of use of one method or another in the regulation of certain social relations must usually be given consideration, and not exclusively the use of a single method.

Legal regulatory methods cannot be totally separated into public and private. As a result, the approaches outlined below are indicative of how the great majority of relationships are governed by public or private law. (Bakeš,2012)

3.4.3. State supervision and financial control

The term state supervision as itself expresses the state's ultimate responsibility for a situation in which a state is supervised by financial activities performed primarily by non-state entities, while the actual performance of this oversight and the conditions of its implementation are authorized and imposed.

But aside from the state and other public agencies, a number of non-state private legal institutions participate in the execution of financial activities. These are mostly corporate enterprises like banks, insurance firms, collective investment enterprises, securities dealers, payment institutions, and so on, all of which manage money as part of their operations, or other financial values obtained from the general public, such as securities and other investment instruments (Peková, Pilný and Jetmar, 2005)

In practice, the client public of these private financial organizations would find it extremely difficult, if not impossible, to exert effective control over their actions and therefore defend their property interests.

As a result, the state steps in to safeguard the public, on the one hand largely regulating the establishment, conditions, and norms of operation of the before mentioned organizations, and on the other hand subjecting their operations to governmental oversight. State monitoring of financial operations is one type of administrative supervision used in various sectors of public administration.

Because state supervision represents a considerable interference with the freedom of business of supervised entities, these entities may have their rights and obligations constrained, including financial sanctions, and in extreme situations, exproprising nature or forced termination of economic activity. (Bakeš, 2012)

3.5. Budgetary law

In the broadest sense, we may interpret and classify the state budget as a product of the historical development of society and its economy. Its core functions are, once again, constrained by certain regulations. These can be summarized as budgetary law. (Bakeš, 2012)

Budget law is a comprehensive set of legal norms that deal with the behaviour of entities of financial and legal relations to public money funds, respectively public budgets. Budgetary law is divided into three parts, the first of which is the General part, the second is the Special part and the third is the Procedural part.

The general part contains mainly the terms characterizing the subsector: The budget, the public budget fund, the state fund, the types of public budgets, budgetary principles and budget functions. The special part contains mainly: the state budget, the budgets of state funds and the budgets of territorial parts. The procedural part includes: the process of creating budgets, deadlines and sanctions.

The budget principles and norms can be established in descending order of legal hierarchy. They also can definitely be mentioned in the Constitution, a foundation legislation of the state, and in established budget law. It should also be difficult to change the basic rules because a broad majority of people must support them, but on the other hand, it should be simple to change some particular rules because they these rules are likely to require regular changes as conditions could change and also the overall fiscal politic of the state.

But the important detail is that only the most basic concepts must be incorporated into the country's constitution. The subject in which these fundamental principles are consistent is called a template legislation, also known as an organic budget law. It comprises the basic rules for managing public finances, distributing powers and accountability, and offering financial supervision. (Shah, 2007)

3.5.1. Recent budgetary rules in Eurozone

The recent eurozone debt crisis in the year 2012 exposed the enormous failure of the governance structure which was put in place at the start of the euro currency to prevent eurozone nations from generating excessive state deficits. The European Union leaders restructured eurozone management in the aftermath of the crisis. Their main agenda was to seek to limit political discretion over fiscal policy by enabling courts to enforce balanced budget rules to maintain member state fiscal discipline.

This approach has resulted in creation of the Fiscal Compact Treaty. This agreement mandates that eurozone states and other signatories have to establish legally enforceable structurally balanced budget regulations that will be imposed by national courts.

The Fiscal Compact Treaty is intergovernmental treaty which says that the national budget of its members must be in balance or surplus. If there is a situation when the potentially substantial deviations are occurring the country needs to build in an automatic correction system to remedy the problem. If the state's budget or anticipated fiscal account is determined to be noncompliant with the deficit or debt standards, the state is required to immediately start the correction of the problem. (Bird & Mandilaras, 2013; Smeets & Beach, 2020)

As is said in the last paragraph, a country which can found itself in violation with the treaty's stipulations can be considered problematic and is obliged to do adequate remedy and major to achieve considerable improvements of their situation however if a country experiences a substantial recession, it will be excluded from the duty to deliver a fiscal correction for the duration of that certain recession.

Advocates of the Treaty's fiscal rules have also heavily emphasised on the requirement for the eurozone nations to integrate these rules in the national law through stipulations of binding force and make them particularly perpetual part of their law system, even preferably as a Constitutional law so they would be respected and mainly followed to throughout national budgeting processes in the future. (Kelemen and Teo, 2014)

3.6. European Fiscal politics

The aspects of the monetary union's environment affect member nations' fiscal policies, which can have a considerable impact on national fiscal policy and its success. This is a quite necessary detail towards the overall public finances structure, of the European Union members.

The national budgetary policies of eurozone members are coordinated to some extent. The coordination of national budgetary policies is codified in the Treaty on the Functioning of the European Union. The Stability and Growth Pact, and, since 2013, also the Fiscal Pact, are the primary tools for coordinating the fiscal policies of Eurozone countries.

For example, article 2 of the Treaty on the Functioning of the European Union already requires Member States to coordinate their economic and employment policies in conformity with the Treaty's requirements. Article 5 requires the Council to take economic policy coordination measures. (Hedija, 2014)

3.6.1. Fiscal policy coordination in the Euro area

The national budgetary policies of eurozone members are coordinated to some extent. The coordination of national budgetary policies is established in the Treaty on the Functioning of the European Union as legislation. (Hedija, 2014)

But what if a member country has a budget deficit? In this scenario, the EU members use two approaches for reporting the budget deficit. The first is the International Monetary Fund's approach for government finance statistics. This approach is focused on cash flow. This means that all operations performed in a particular year are tracked on a cash basis, and are included in the period in which the revenue or expenditure operation is carried out.

The second methodology is called the European Statistical Office Methodology and is used to calculate the Maastricht criteria and in documents submitted to the EU. Its creator is Eurostat and is in charge of overseeing its implementation in different nations throughout European Union. (Dvořák, 2008)

3.6.2. European Stability and Growth Pact

The Stability and Growth Pact attempts to ensure that eurozone nations' public finances remain sound. The pact is designed to urge for the members of the monetary union's fiscal policies to be based on balanced budgets in the medium term, while leaving fiscal policy implementation to the built-in stabilizers as a matter of priority.

The treaty says that the general government deficit should not exceed 3% of GDP and that public debt should not exceed 60% of GDP. At the same time, it establishes the procedure for monitoring fiscal discipline and imposes penalties for violations. (Hedija, 2014)

These standards are based on the budgetary politics according to Maastricht fiscal criteria. They are frequently criticized and described as too rigid, due to the fact that they do not take into consideration variances in the status of particular countries and even contain excessively punitive sanctions that do not account for the influence of the economic cycles.

The history of this Maastricht Treaty on Monetary Union is that it came into place in the year 1993. Given the significantly noticeable worsening of short- and long-term fiscal imbalances, the two convergence criteria also encompassed specifically on purpose towards the fiscal domain of the members of EU.

Interestingly fact about these criteria is for example that, there is no convincing theoretical explanation that would permanently maintain the logic of determining the value of the 60% public debt-to-GDP ratio as a binding value. Despite their flaws, these criteria probably contributed to the reduction of both short-term and long-term fiscal imbalances in EU members. (Dvořák, 2008)

3.6.3. Fiscal pact in the European Union

The Treaty on Stability, Coordination, and Governance in Economic and Monetary Union, which went into effect in early 2013, tightened the fiscal restrictions for eurozone countries even more.

The Fiscal Pact's goal is to promote the fiscal discipline of EU member states, mainly those in the eurozone, to promote the coordination of economic policies, to improve eurozone governance, and therefore to aid in the attainment of the European Union's goals.

The Stability and Growth Pact's fiscal rule is founded on the logic of medium-term balanced budgets and sustainable government debt, while also respecting the golden rule of public finances. It is, in essence, an extension of the Maastricht convergence rule of public deficit and public debt. (Hedija, 2014)

As a result, the Stability and Growth Pact and the Fiscal Pact are today among the most important tools for coordinating the fiscal policies of eurozone countries. They seek to ensure sound public finances in eurozone member countries. If eurozone member countries function in a balanced manner over the medium term and their government debt does not reach 60% of GDP, the terms of the Stability and Growth Pact and the Fiscal Pact do not put any major constraints on them.

4. Practical Part

The practical part of this diploma thesis will mainly focus on continuing of research within public finances of specifically chosen countries inside the established areas of the selected topic and it will be divided into several chapters as it was previously in the literature review part.

4.1.1. Germany's public finances

Germany is a federal state made up of sixteen regions known as Länder. The Länder primarily exercises state powers. As stated in Germany's Constitution, the exercise of state powers and the performance of state functions is a matter for the Länder; if in some cases is the not Länder affair, then the exercise of power is provided by the Basic Law[2].

Germany's reunification at the end of the year 1990 posed unique challenges in terms of economic and financial integration, thus even in the case of the country's newly structured public finance sector.

The Unification Treaty stipulated that the new states should be integrated into the financial system created by the Basic Law as soon as possible. As a result, the new states have essentially been subject to the same restrictions in terms of budgetary management and tax distribution since the year 1991. From today‘s standpoint the we can safely say that the integration did proceed more than successfully and Germany's economy and particularly their public finances functions are mostly excellent. But even with this positive attitude Germany's decentralized system is far from fixed. Although decades of years after the establishment of the Federal Republic of Germany there are still visible areas for improvement which are constantly being recognized and intense arguments regarding them and implementation options for them are taking place every year.

If we look closer towards the German financial structure the Basic Law is the most fundamental legislative document that mainly oversees fiscal decentralisation. Toward the history of the Basic Law it was reformed in the year 2006 with the dominant goal of

[2] The Grundgesetz, or basic legislation, is analogous to the Federal Republic of Germany's constitution and applies to all sixteen German Länder. This document places a strong emphasis on human rights.

reorganizing the legislation and making more clearer distinctions between the competencies of the Länder and the Federation as whole.

Then in the year 2009, a second stage of reform was implemented. This one is focusing more on the system of intergovernmental financing. A variety number of other acts are enacted by the Länder, which have their own legislative authority. These legislative powers as specified in the Basic Law, are given to the Länder unless given to the Federation by the Basic Law directly to itself.

The Federation has sole legal power over parts such as foreign affairs and defence, citizenship issues, migration, customs and trade, federal railways, postal and telecommunications services and so on. On the other hand for example municipal law, education policy, police law, road development are the areas of legislation that have remained under the jurisdiction of the Länder.

4.1.2. Germany's fiscal decentralisation and its basic principles

Germany as a country has one of the most decentralized[3] fiscal systems in the European Union and uses system of the fiscal federalism[4]. The reason for it is due to the significant obligations of the sub-national governments the previously mentioned Ländern. The German financial system strives to guarantee that money allocation and executive tasks are clearly stated between the central government and Ländern. This can be seen on example of the actual national management of distribution of expenditures themselves. That is specifically split by 31% towards the Ländern and 19% is managed by municipalities. The rest of the 50% is distributed by the central government.

This can be shown on example shown on graph 4 which deals with financial balance from 1st quarters of 2020 and 2021. Here, this graph shows the distribution of the federal state budget between the various levels of government and their specific costs.

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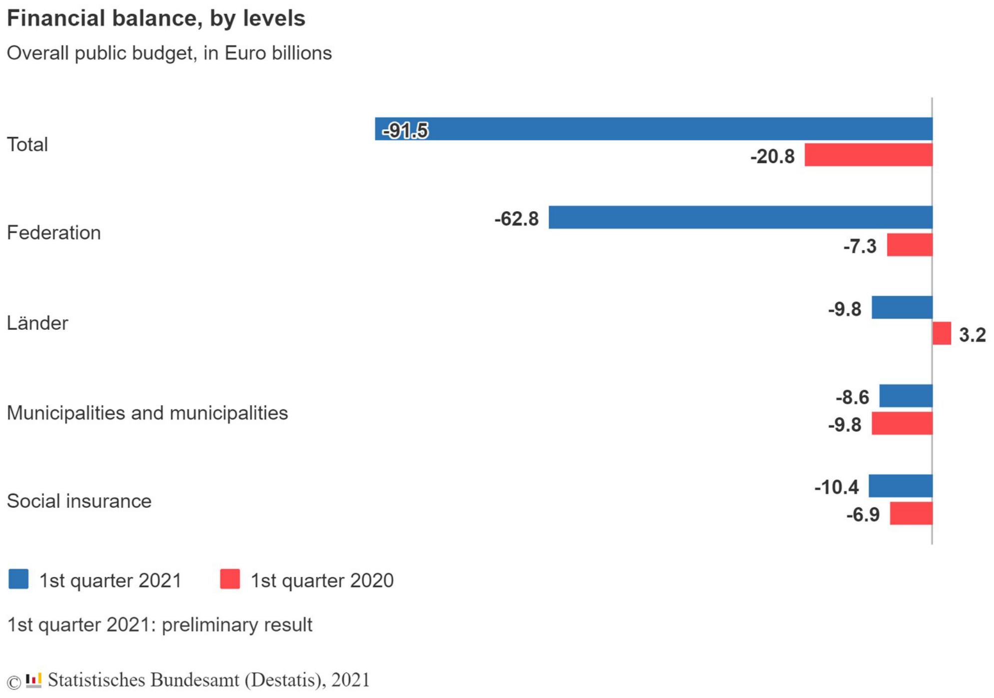
[3] Fiscal decentralization implies transferring certain fiscal and revenue obligations to lower levels of government

[4] Fiscal federalism relates to how our federal system divides financing and administrative tasks among federal, state, and local governments.



Graph 4: Graph of comparison between financial balance, by levels in first quarters of 2020 and 2021

Source:https://www.destatis.de/EN/Themes/Government/Public-Finance/Expenditure-Revenue-And-Financial-Balance-Of-Public-Budgets/current-news.html

This kind of structure has a significant impact on political and cultural development. It simultaneously permits mainly citizen-oriented politics and balanced economic development throughout the country and the protection and maintenance of regional identities and particularities within a shared state and society.

The concept of the decentralisation is also stated in Agenda 2030[5] for sustainable development. To introduce this agenda further, it is presented as a development preserve program under the management of United Nations from 2015 to 2030 as a part of the successful Millennium Development Goals agenda. These goals had been approved at the UN Summit in September of year 2015 as part of the so-called 2030 Agenda Transforming Our World.

[5] Agenda 2030 is the United Nations Development Program for the next 15 years (2015-2030), and it builds on the achievement of the Millennium Development Goals as a part of the so-called Agenda 2030 Transforming Our World: An Agenda for Sustainable Development 2030.

The basic principles of decentralization can be introduced in two branches. The first is named Executive federalism. The second one is mentioned as local self-government and Länder administration.

The executive federalism stands on the principle that establishes a functional division of capability between the federal government level and Länder levels. It contrasts to each other the federal level is primarily in charge of policy formulation. The Länder levels is mainly concerned with policy implementation. But what is the most notable fact is that the federal level has no hierarchical authority, no legal oversight, and even no budgetary appropriation over the Länder level. Rather the Länder have broad legal autonomy but firmly defined legislative ability. The result of this is that the federal executive has extremely little authority and therefore less direct participation in implementation and for example service delivery, and so does not work with local offices except only defence, police and waterways.

The overall political structure in sense of decision making is also interesting one. Länder engage in federal policymaking through the second chamber called the Bundesrat in German. This structure is made up from the Ländern representatives voted through regular Länder elections. These results unique compositions of the Länder governments having to act as Bundesrat members.

Furthermore, many constitutional and legal criteria maintain the Bundesrat's participation and veto authority over policies proposed in the federal parliament. The Bundesrat's unique structure also helps to reflect the Länder's main interests. It is based on the number of inhabitants in each Länd. Bundesrat frequently mirrors the federal parliament's party competition, but it is also essential to highlight regional interests and necessarily need to collaborate to coordinate immediate policy implementation under the federation's unity principle.

Local self-government and Länder administration has few differences between them. The Länder administration is a very comprehensive topic. Because Länder has its own autonomy, which was an important aspect in selecting their management structure, it also resulted in significant institutional variation among them. Because of this it is common to make it easier for the Länder administration to choose between three-tier or two-tier systems. The composition difference between these three-tier structures is structurally diverse into the highest, higher, meso and lower levels. Two-tier has a very similar structure, except meso-level is missing.

Local self-government is a little bit different. While the local government level is treated as part of the Länder in German constitutional tradition and thought, in legal terms it constitutes a third politico-administrative level. The local government structure is divided into counties on the upper level and municipalities on the lower.

4.1.3. Germany's fiscal policies and borrowing power

In 2011 Germany enacted a constitutional norm on structural budget balance that applies to both the Federation and the Länder. That specific principle emphasizes that the Federation's and the Länder' budgets must be maintained without relying on debt income.

For this situation, even the Basic Law provides a hypothetical control account for the Federation where departures from the limit are reported in relation to this norm. If the debits on this account surpassed 1.5 % of GDP, they therefore have to be immediately minimized.

These credit limits may also be exceeded in the future in the case of a horrible natural disaster or any other unexpected situation which would require big financial support to extinguish its damaging effects. In a situation like those mentioned before, there was also set in place implementation of a Federation advance wide warning system to prevent these emergency budgetary situations.

For this reason there was established specific body of the government named Stability Council. Its main frame of work is to be regularly responsible for monitoring budgets of the Federation and Länder and ensuring the long-term viability of federal and state budgets.

Also the additional but essential obligation of the Stability Council is that it has a crucial role in ensuring that the EU's financial discipline rules are completely respected and not neglected by the country.

The organization of Stability Council is composed of the Federal Minister of Finance, the Länder finance ministers and the Federal Minister for Economic Affairs and Energy.

4.1.4. Sources of State budget revenues in Germany

Germany's state budget has its revenues split into three categories. The tax revenue, grants and subsidies and other revenues. The tax revenues mainly afflict the budget in the overall amount. This can be easily justified by just the sheer number of percentages in the overall comparison of each type of the revenues and their part in final result. But let's first focus on the individual parts and show why they are so important.

In Germany, taxes are imposed by the federal government, the states Länder, and municipalities Städte. There are multiple indirect and direct types of taxes in Germany, as was mentioned in previous chapters of the thesis.

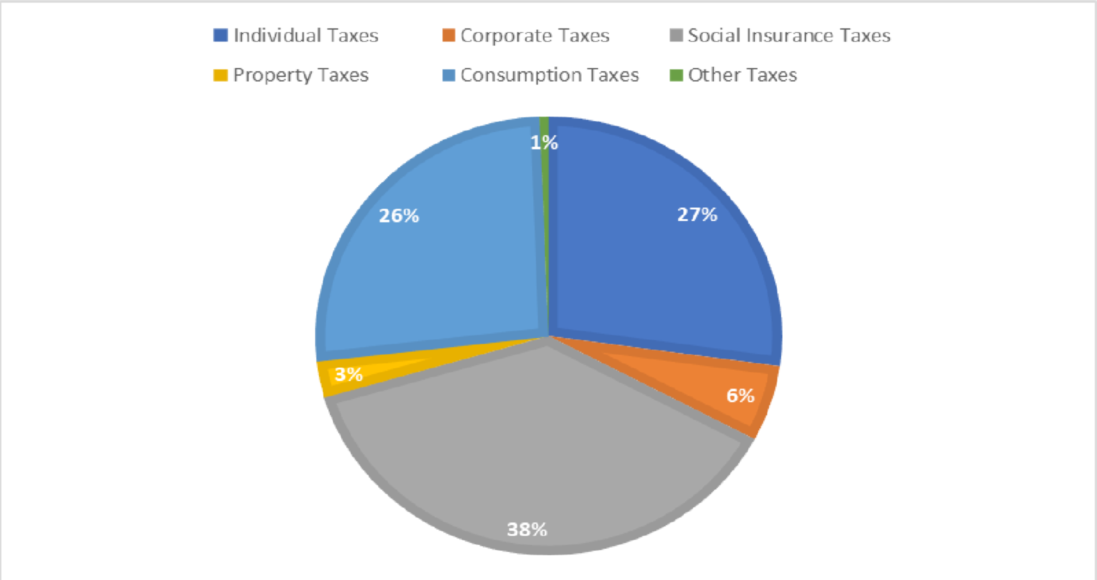
Germany's tax system ranks on 15th place in the ranking of OECD. The most used types of taxes in this stream of state budget revenue are individual income taxes, corporate income taxes, social insurance taxes, taxes on goods and services, and property taxes. If we take the closer look on how much of a size each tax have on overall tax revenue, the biggest part of all of them have. First, let's start with the social insurance tax which is around the 37,7% , after that comes the individual tax with its 27,2%. Then consumption tax which is 26,2%. Then the next is a corporate tax with 5,6% and last one is the property tax with 2,7%. A little 0,6% of other taxes can also be mentioned, but they are not specified further. For better clarity all these values are shown in graph number 5.

The revenue gained from taxes is distributed to Germany's three spheres of government. They are the federation, the states, and the municipalities. All of these have a joint right to the most significant sorts of taxes. As a result, these taxes are often known as so-called shared taxes.

An interesting detail is that the federal government and all of the states collectively decide on most taxation, although some are allocated completely only at the federal level.

Grants and subsidies are another source of government's revenue. But this type is not directly understood as new income source but more like a transfer of funds towards the Länder from the Federal government with a goal of reaching equal public services in all regions. But there is a little difference between certain types of grants and reasons for their distributions. The Federal transfers compensate states with less-than-average budgetary capability. Furthermore, transfers are made to reflect special needs of the Länder, to finance shared tasks or for specific objectives. Also what is important to distinguish is that there are no direct federal subsidies to municipal governments at the local level; solely only state grants are available.

Moreover, last part of Germany 's state budget is other revenues (graph 5). These revenues can be specified as primarily user costs and expenses paid by local individuals and corporations as consumers of local public services. It can also be pinpointed that they are a quite large source of income mostly for the Länders.



Graph 5: Types of taxes in the state budget of Germany.
Source: https://taxfoundation.org/country/germany/(Own interpretation).

4.1.5. State Budgeting in Germany

Germany is the country that belongs to the group of economic and manufacturer leaders within the EU. Germany has an open economy with a solid industrial base that exports roughly one-third of its GDP This trend has subsequently been rising ever since the beginning of the century as it can be seen on graph number 6. Because of its openness, Germany is influenced by several factors. First, the intense rivalry on the markets selling global products and the competition among locations for the internationally mobile capital and technology. Due to this reason, most of the economic decisions in Germany are thus influenced by the country's desire to compete mainly in the global economy.

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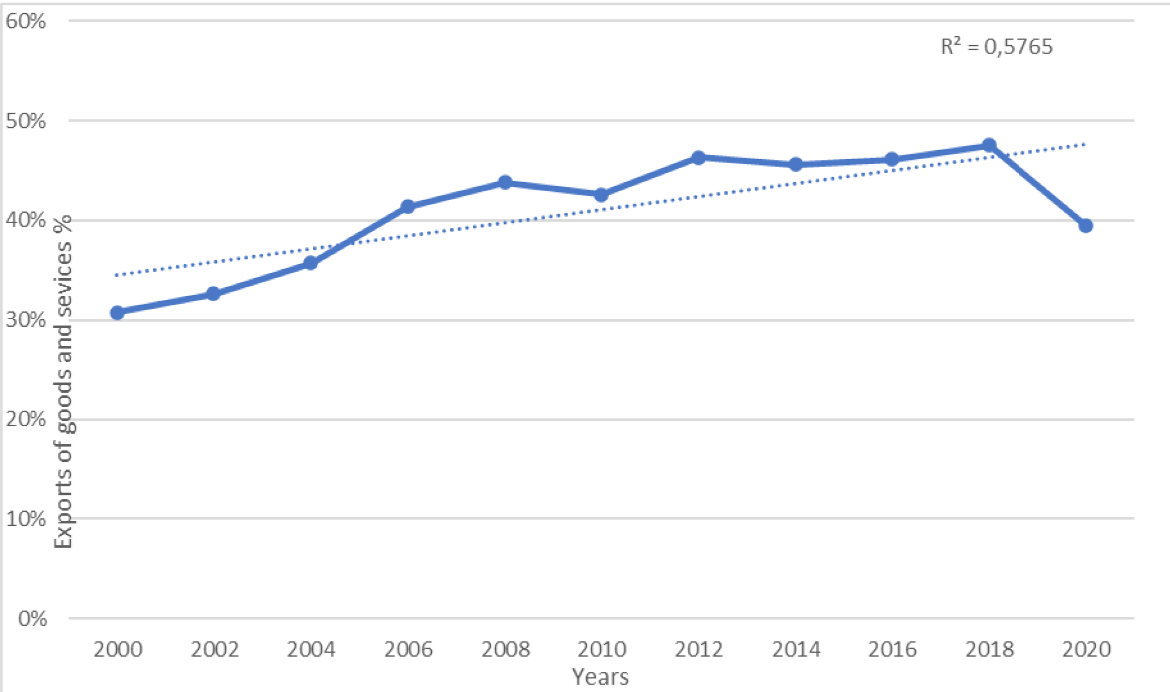
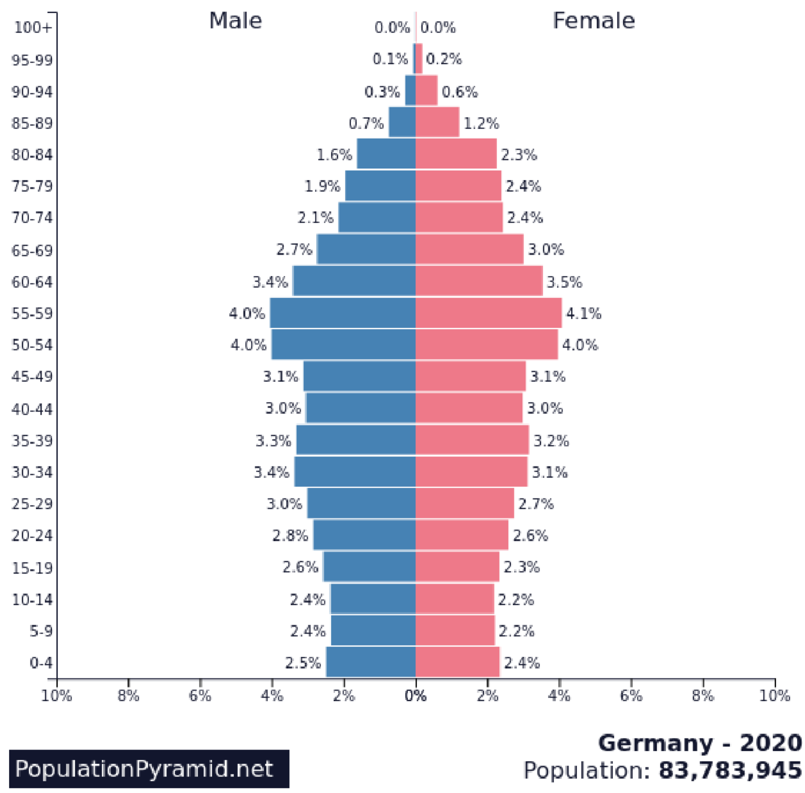


Graph 6: Germany - Export of goods and services (% GDP)

Source:https://databank.worldbank.org/reports.aspx?source=2&country=DEU (Own interpretation).

Let us take an even closer look at the economic situation within Germany. It can be stated that it is nearly excellent for today's standard due to several essential characteristic factors. First is the creation of a good fiscal policy, then the nation's diligence and working spirit of its people and its main and worldwide well-known background as a high skilled technical manufacturer, which puts them among the leading European industrial powers, but what is an incipient problem of its inner state economic structure is mainly Germany's rapid population ageing.

Many working citizens are around the age of 45 years. If we look at the population structure, every fifth German person is over 66 years old (graph 7). These figures strongly show that the future of Germany's public finances will require drastic change amendments therefore to alleviate a financial burden that may become unbearable for future generations of workers, not to mention the sooner solution for this problem will come the better it will be for the overall financial health and stability of the whole country.

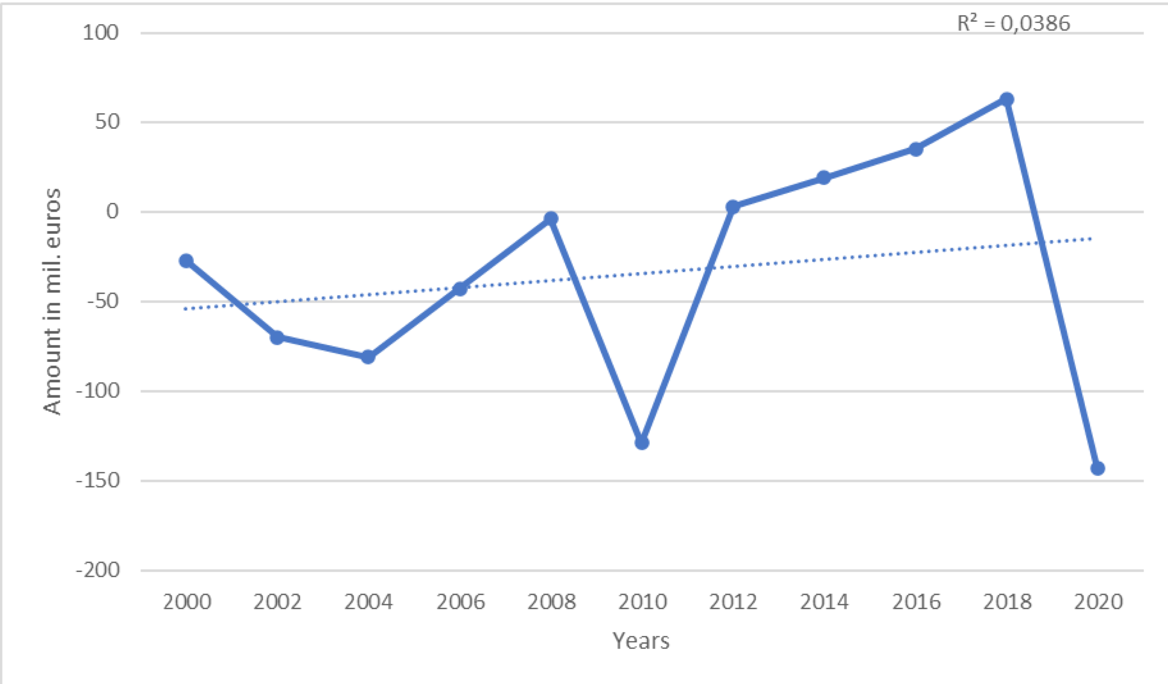


Graph 7: Graph of Population pyramid of Germany

Source: https://www.populationpyramid.net/germany/2020/

German public finances are often in large surplus, frequently invested mainly in developing transport and digital infrastructure, education, or the fight against climate change. Deficit-free budgets were especially possible in recent years due to a very good labour market situation and conditions and a high record of tax revenues.

However, today, due to the pandemic crisis, Germany has unfortunately returned to a deficit after years of budget surpluses and from an overall perspective of the circumstance it is clear that this situation will last more than just a few years until the state budget returns to a surplus state. For a better idea of how long the surplus lasted and the deficit occurred a more detailed analysis of German state budget and its development can be seen in graph number 8.



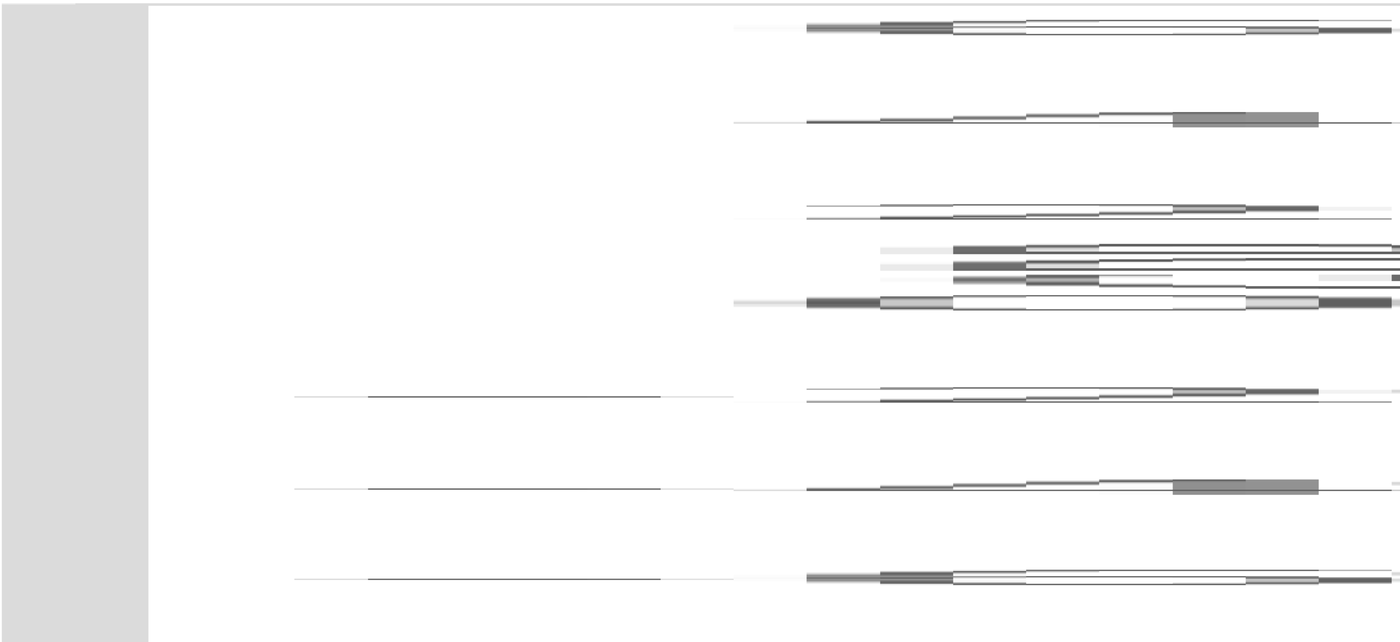
Graph 8: Germany - Government budget through the years (2000 – 2020)

Source: https://countryeconomy.com/deficit/germany (Own interpretation in euros).

Year	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20
Millions of euros	-27	-51	-70	-80	-81	-82	-43	8	-4	-93	-129	-29	3	1	19	28	35	43	63	51	-143

Table 1: Year-on-year changes. (2000-2020), source: (own interpretation).

Germany's economy is to be expected one of the biggest producers of goods and services within the European Union. Moreover, the world's ranking is currently regarded as the fourth-largest economy, following the first United States, China, and Japan. Germany's economy has been mainly on the rise, especially at the beginning of the 21st century, even despite the world crisis in 2008. Regarding the country's modern GDP growth, the situation is more than satisfactory Germany's GDP growth is perpetual only with a few decrease points throughout the years.



Graph 9: GDP growth (2000 -2020)

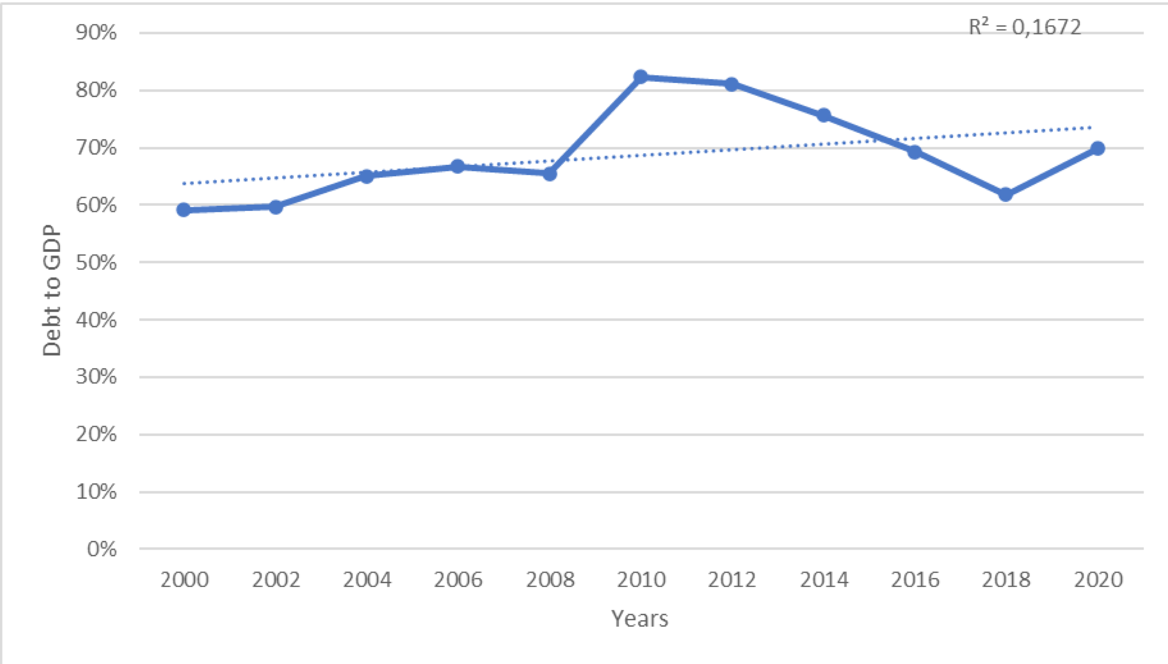
Source:https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?end=2019&locations=DE (Own interpretation).

Considering a previously mentioned Germany's fiscal policy, this phenomenon makes the overall GDP growth save to say more than less stable, and it can be predicted that it will be slowly rising again in future years to come.

Germany's public debt was a relatively quite high number throughout the years compared to the amount of the country's GDP. But since 2010 this amount was perpetually decreasing year by year due to better financial politics that Germany started to practice.

The key elements of its success were mainly supported by the rise of export of homemade goods, which resulted in a high number of revenues to the state budget, support of the labour market, and an increase in investment spending, increasing public infrastructure projects and improvements in education.

These steps were also a supporting part of other endeavours that resulted in Germany's stable state budget surplus, which significantly helped decrease the public debt. The lowering of debt throughout the previous years also tremendously helped Germany's ability to respond decisively to the COVID-19 pandemic difficulties without jeopardizing the long-term stability of public finances as a whole.



Graph 10: Debt to GDP (2000 -2020)

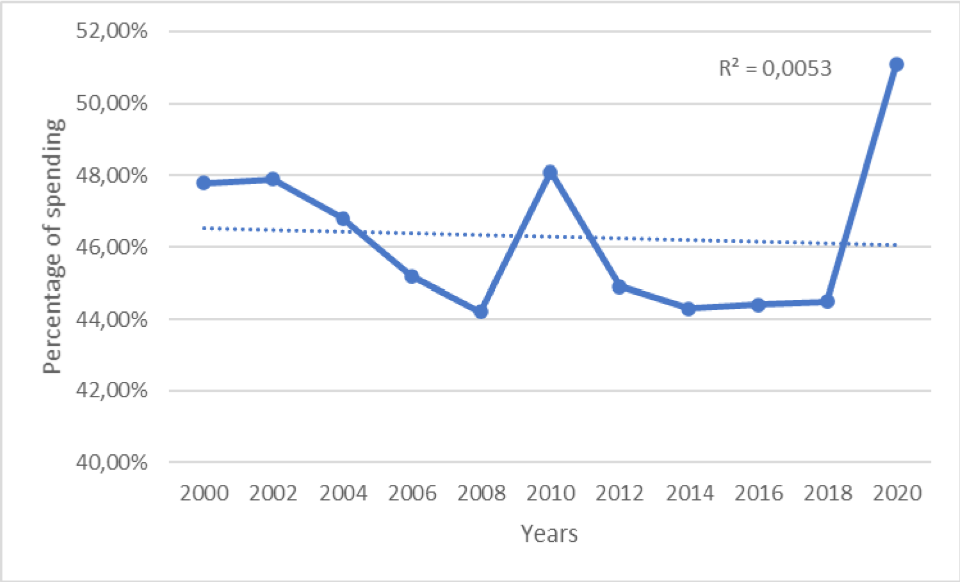
Source: https://countryeconomy.com/national-debt/germany (Own interpretation).

The income tax in Germany is progressive and starts at 1% and ranges toward 42% depending on a person's yearly income; specifically, the 42% tax rate applies to taxable income above €55,961 (the year 2020). The highly wealthy citizen pays even 45% (income must be over €265,327), which is the maximal rate. Also, it is worth to mentioning that only part of the wealthiest population used to pay the so-called solidarity surcharge, which was in a nutshell an additional fee on income tax and the funds collected from it were used to support the restructuring of the Ländern of former East Germany and to overcome their backwardness behind the Western ones. Nowadays, the tax was completely abolished, specifically in the year 2021.

Income	Tax Rate
Less than 9.744 euros	0%
From 9.744 - 57.918 euros	14% - 42 %
From 57.919 - 274.612 euros	42%
More than 274.613 euros	45%

Table 2: Tax rates in Germany in the year 2021

Source:https://www.iamexpat.de/expat-info/taxation-germany/german-tax-system (Own interpretation)



Graph 11: Germany's government spending as a percentage of GDP (2000-2020)

Source: https://tradingeconomics.com/germany/government-spending-to-gdp (Own interpretation).

The government spending in Germany (graph 11) is mostly in the range of around 44% to 46% of their GDP on average, with a few extraordinary situations like, for example, 48% in 2010 after the house-market crisis in 2008 or even over the 50% during the pandemic situation in the year 2020. The state expenditures are primarily stable or on a slight decline in most researched years.

The process of approving the state budget begins with the initial draft of the country's budget is prepared by the German Ministry of Finance, then it is discussed by the Federal Government, and, if it is accepted, it is then submitted towards the Bundestag for consideration.

After considering and adopting the draft budget by voting, the budget plan is submitted to the Bundesrat, the Federal Council. After the acceptance of the budget by the Bundesrat and its signing by the President of Germany, the draft budget becomes the official law of the country.

4.1.6. France's public finances

France's public sector is exceptionally vast in numbers. Its main participants who are the government, local government bodies, public and para-public institutions, as well as mixed economy organisations, must manage a comprehensive and demanding structure of their citizens, requirements as well as to make sure to collaborate with each other and to guarantee the overall economic stability within the state.

As in the case of France's neighbouring countries, the growth of the public sector has nowadays become more urgent strategic issue within the political and economic discourse. These debates have in the past focused mostly on variables such as inflation and unemployment, but with the rising standard of living of the population, public finances are becoming an extremely important issue in terms of France's stability and its problem with the continuous decline in GDP growth over the years.

This trend was not particularly from the beginning, but what is also very interesting detail is France's ratio of total government expenditure over GDP. This ratio has constantly been increasing ever since 1950, and in 2011 it added up to 56% of GDP. It is necessary to mention that in 2011, social benefits and public wages accounted for the most significant share of public spending and curiously, interest charges only account for 5% of overall public spending. This is related, of course, to the low level of interest rates - a result of the disaster that has struck Eurozone peripheral countries - and to skilled debt reduction.

French wage restraint has been the most significant source of budget reduction in France since the 1980s. Governments strictly managed public-sector pay, particularly between the years 1984 and 1987 and 1992 and 1993. France's persistently high unemployment rate undoubtedly contributed to salary cuts in both the public and private sectors. Furthermore, since 2004, public-sector employment has been declining since retirees in the government sector have not been adequately replaced.

France's taxes are another important topic due to their sizeable important place in state budget revenues, where they occupy around 91 % of overall state budget income. However, many French economists claim that their tax system is based on a limited basis and lacks justice due to its highly complex structure.

France's tax revenues are divided into four categories. First are income taxes, then capital taxes, consumption taxes, and social contributions. If we take a closer look at their percentage part in the overall state tax revenue, their respective shares are unequal. For example, in 2011, social contributions represented 42 % of overall tax. Personal income tax was only 21% and taxes on capital even sole 14%. In the case of consumption tax, it was around 23%.

4.1.7. France's fiscal decentralisation and its basic principles

France's financial autonomy at the local level, which contains regions and municipalities, is consistently higher than the EU's. The EU's is roughly equal to the standard of 53 % , but in France, it is almost over 72 %. In a nutshell, this means very beneficial and less reliance from the regions on central government transfers. However, a minor difficulty is arising. The lower dependency ratio and a slightly more significant percentage of own revenue decentralisation indicate a lower degree of competency at the local level.

To fully understand fiscal decentralisation, we first need to focus on its beginning. Between 1982 and 1983, a series of laws known as decentralisation laws was established. These laws significantly altered the division of authorities and competencies between central and municipal.

Up to that time, French legislation has avoided major changes in local government's administrative structure and the local tax system. The only exceptions are minor changes regarding indirect taxes transferred from central to local governments. If we talk about a significant financial change from that era, the only one was in regard to local expenditures. Those went through a significant increase in centrally given funds which were given out via various distribution channels. This was also accompanied by the consolidation of the previously existent central government.

4.1.8. France's fiscal policies and borrowing power

France as a country is very serious about its fiscal politics. A particular example of this can be the so-called “Golden rule“ which states that it is prohibited for local government to finance its current expenditures through debt and also can only use borrowing as an option to satisfy solely capital expenditures. The other interesting rule regarding the local budget is that it can only be unbalanced by up to 5% of the current revenue for the fiscal year.

Although local governments may flexibly borrow within the limits provided, each of decided action is subjected to ex-post legal and fiscal supervision by the office of the central government delegate called the Prefect and the chamber of auditors. To illustrate how much debt is currently required, debts are currently utilized to support approximately one-third of investment spending.

Regarding the division of power the central government has very strong control of over local budget's funds but a very low in case of decision making what to use those funds. But to further their reach in this more financial areas, central government also enlisted a set of rules regulating asset deposits and defaults which are on purpose incredibly strict. For example liquid assets must be deposited in non-interest-bearing accounts with the French Treasury, preventing local authorities from making financial investments.

It is also interesting to mention for example that local authority financial failures are not covered by central government warranties Therefore the bankruptcy is not allowed, requiring local governments to reschedule debt if the risk of such a scenario arises.

In the case if the exceptional scenarios really happen the central government may provide cash advances on future tax payments to sustain at least the mandatory operations. In such cases, the prefect may place the local authority under its supervision.

4.1.9. Sources of State budget revenues in France

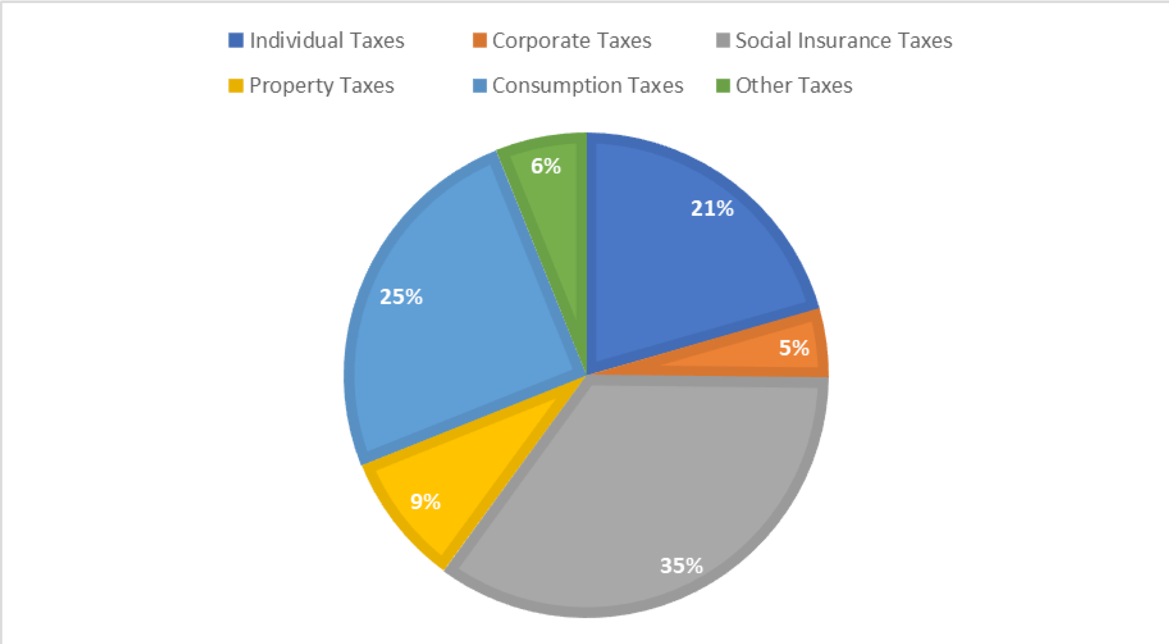
As many other European countries even France has seen its government grow in size and with it came a quite high accumulation of public debt. Ever since the last economic crisis in the year 2008, the government has had to confront new financial consequences and has used its fiscal policy as a weapon to grow the economy and lower the budget deficit while simultaneously decide how to tackle its GDP growth issue. The main idea of the current government is to maintain the stable amount of contemporary government spending while imposing higher taxes to eliminate the budget deficit.

In its governmental structure France is a rather centralised country that allows its sub-national governmental units some flexibility in terms of fiscal policy. Therefore the division of fiscal responsibilities between local and central governments is regulated by the State's Constitution. In the year 2004 there was also established The Decentralisation Act which devolved further rights towards the each of the regions.

France's state budget revenues consist mainly of taxes comprised by the income tax, domestic tax on consumption of energy products, indirect taxes, corporate taxes, and value-added tax after them are the grants and other revenues.

For a greater demonstration of the importance of each of the listed taxes, let's show their percentage distribution. First is the individual income tax, which has 20,6% and is paid by employees of all legal professions. After that is the corporate tax which occupies around 4,6%, and it is paid by foreign companies and businesses, which have trade operations in France or by domestic companies conducting business from property or establishment in the country.

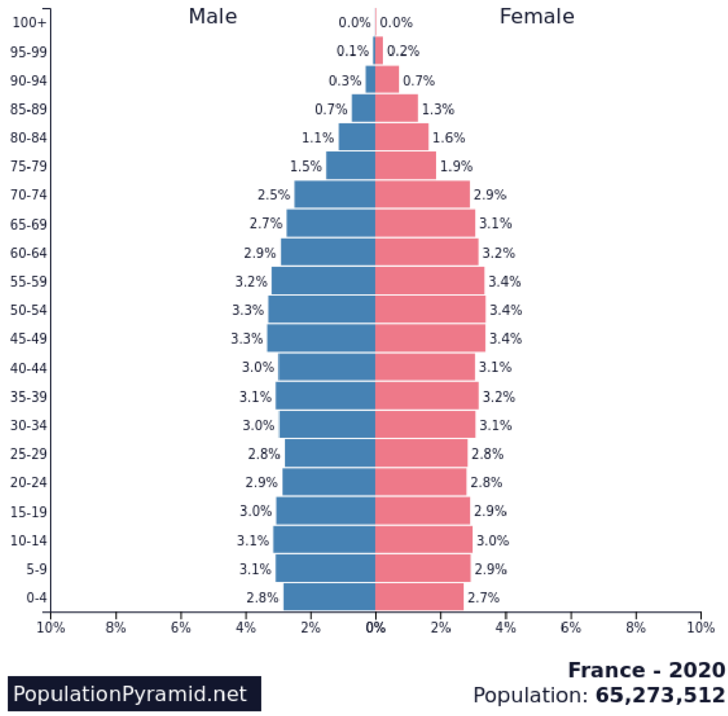
Next is the social insurance tax which is paid by employees and employers to fund social programs for disable and retired people and has around 34,9%. After that is the property tax which has around 8,9% part in overall tax structure and is paid by owner of the property. There are two taxes that comprise the property tax and they are the land tax and habitation tax and both are paid annually . The next is consumption tax (graph 12) which occupies 25% and is imposed on purchased goods and services. And the last are other taxes that have 6,1% part and can be defined as the VAT, travel tax, etc.



Graph 12: Types of taxes in the state budget of France
Source: https://taxfoundation.org/country/france/(Own interpretation).

4.1.10. State Budgeting in France

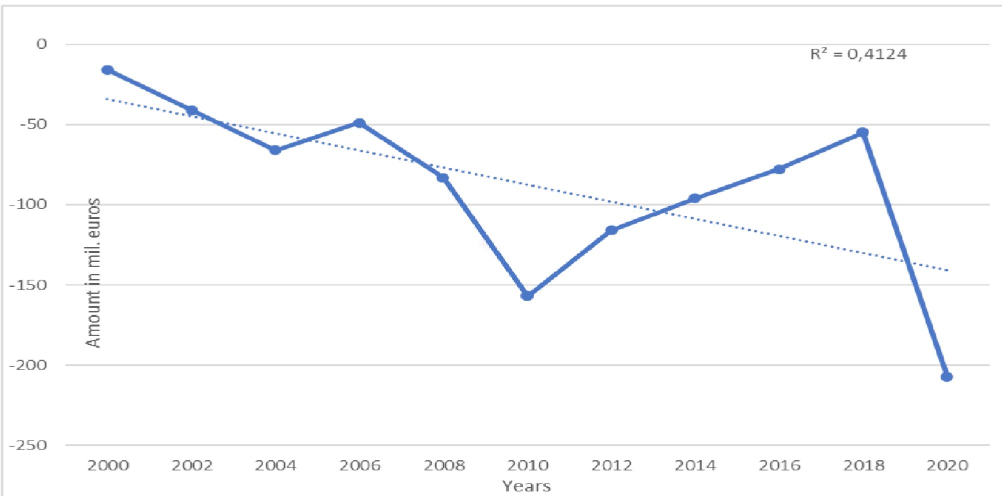
With its global impact in science, politics, economy, and culture, France is observed as a highly technically developed state with a focus on the economy-oriented towards tourism, industrial production, and pharmaceutical production of a wide range of different drugs against many serious diseases. France's demographic consists of 65,2 million people, with around 19,6% of citizens over 65 years. This fact shows an increase compared to the past because, for example, 20 years ago, the number of elderly citizens was only 15,5%. This exhibits that France faces the same problem as many other Western countries. The rising number of elderly citizens in the state's population is putting a strain on the economy, which fewer people in the working years support.



Graph 13: Graph of Population pyramid of France

Source: https://www.populationpyramid.net/france/2020/

France's budgeting situation shown in graph 13 is quite different from Germany's previously introduced example. The GDP growth in France, which is later shown in graph 14, has continued to decrease for several years.



Graph 14: France - Government budget through the years (2000-2020)

Source: https://countryeconomy.com/deficit/france (Own interpretation in euros).

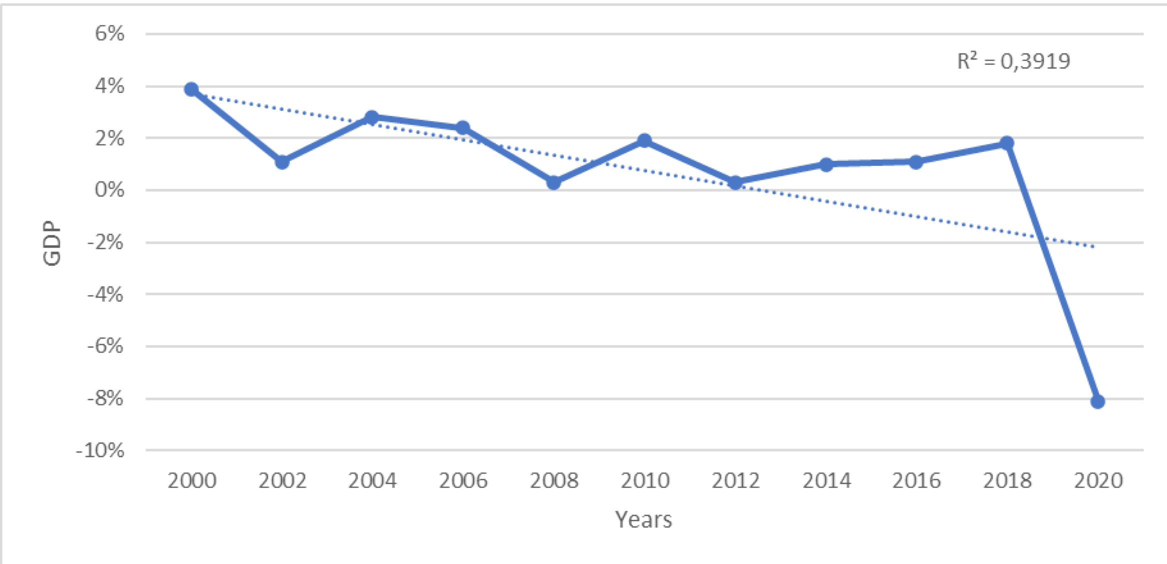
Year	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20

Millions of euros	-16	-16	-41	-64	-66	-64	-49	-61	-83	-168	-157	-128	-116	-99	-96	-76	-78	-66	-55	-72

Table 3: Year-on-year changes. (2000-2020), source: (own interpretation).

This phenomenon can be seen if we take a closer look at them. In 2020, the GDP growth was not surprisingly – 8,1% during the pandemic situation. This number is quite understandable if we consider the worldwide decrease in GDP growth. However, if we continue down the path of 2019, GDP growth was only 1,5%.

That is not an alarming number on an overall scale, but if we compare it further to 2018, when the GDP growth was 1,7%, and even further to 2017 when the GDP growth was 2.3%, the decreasing percentage trend from this observation is entirely visible and also very worrying for the country´s future.

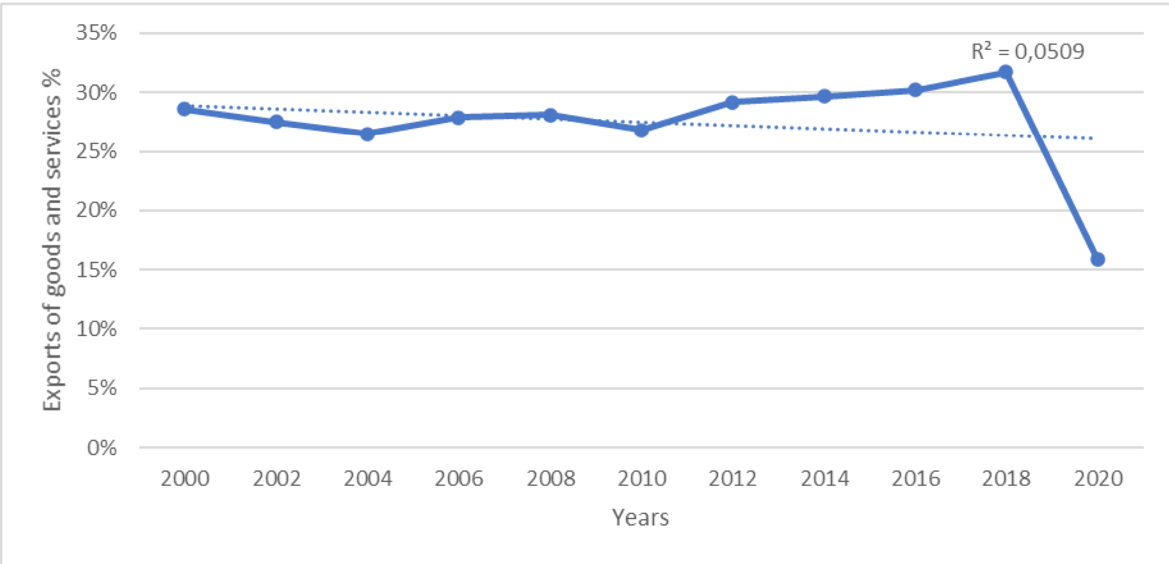


Graph 15: Source: GDP growth (2000-2020) https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?locations=FR (Own interpretation).

To introduce France’s diversified economy, the whole structure is led mainly by a few sectors - tourism, manufacturing, and pharmaceuticals are the top tier, mostly being run by private entrepreneurs. On the other hand, the government has a pretty strong presence in other sectors such as the power industry and state defence industry.

The highest sources of France's state budget are taxes and export. The income tax ranges from 11 to 45%, depending on their annual income. The corporate tax rate is around 26,5 to 27,5 %, depending again on the company's income. The rate of 26,5% is for companies which annual income is under 250 million, then the 27,5% is up from this specific number.

The export consists mainly by pharmaceutical mixtures, airplanes such as spacecraft and turbojets, automobiles, automotive components or accessories, and, importantly wine because France is one of the top wine exporters worldwide.



Graph 16: Exports of goods and services (% GDP)

Source: https://databank.worldbank.org/reports.aspx?source=2&country=FR (Own interpretation).

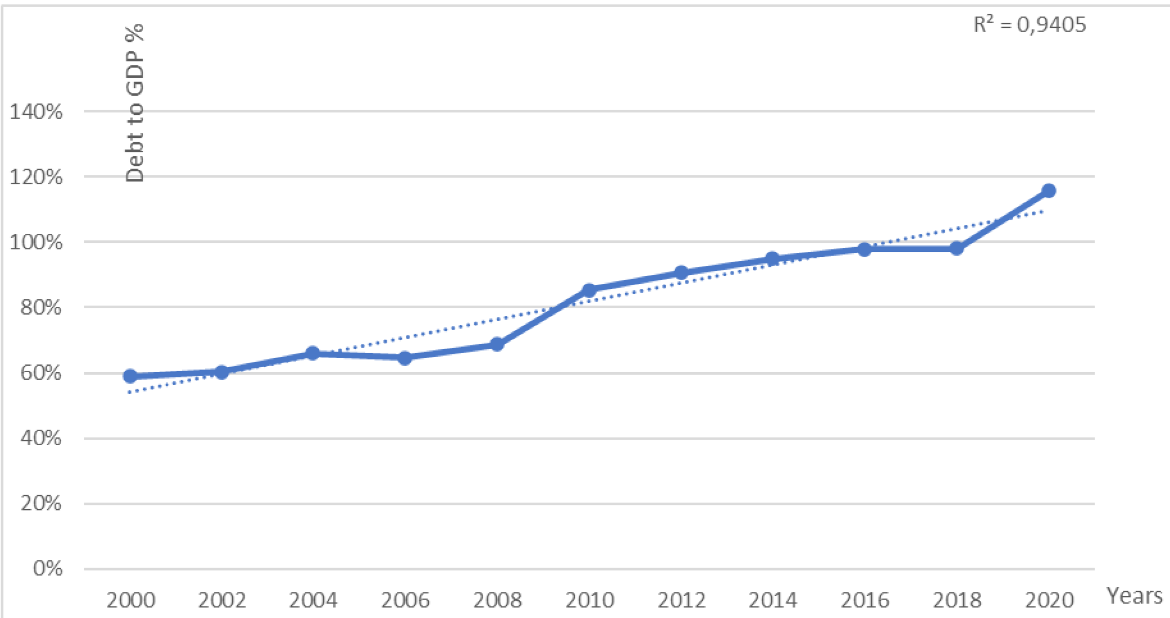
However, state budgeting in France is a complicated and painful topic. Over the last 30 years, France has mostly failed to bring its public finances to a sustainable level. The last government surplus was in the year 1974, and ever since then, its public finances have gone through several so-called recovery phases. However, mostly not those were followed by another quick setback.

This situation got even worse when France entered the 2008 world's financial crisis with a deficit of nearly 3% of GDP and public debt of 65% of GDP. Later in 2014, the government deficit was now 4%, and public debt amounted to 90% of GDP. Though successive governments have promised a return to fiscal balance multiple times, unfortunately, those promises never went through.

Another constantly alarming issue is that France has systematically failed to adhere to the stability programmes submitted to the European Union authorities. This problem has been worsened mainly through France´s very over-optimistic macroeconomic assumptions, which puts the whole country into an even more extensive and continuous economic recession.

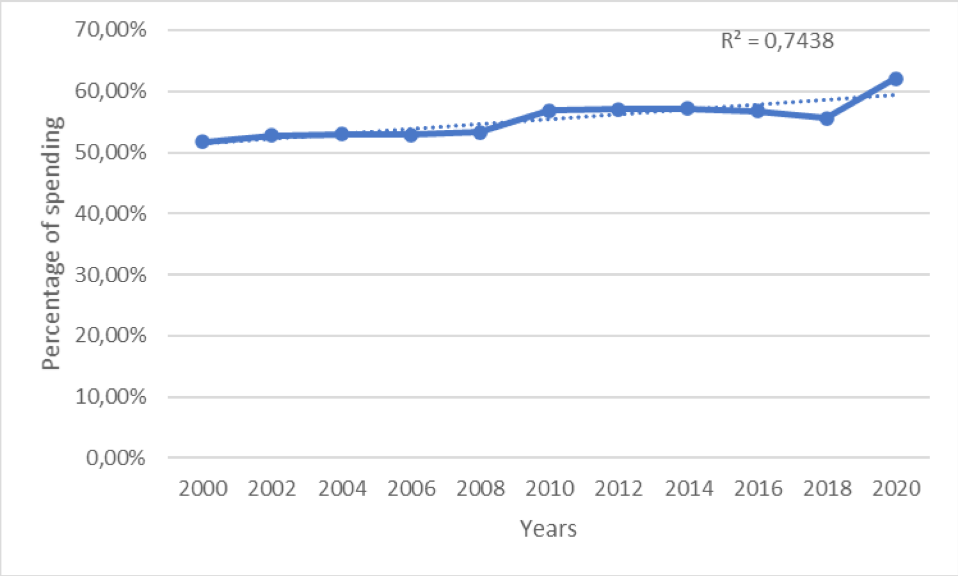
Fortunately, this overview of the past situation regarding France´s public finances problem improved for the country as the time progressed. The nation showed an increase in annual GDP growth with relatively high and sustainably growing percentages, with only a few notable decreases. However, in the case of public debt, the number is still very high; for a better understanding, if we look at the past five years, the percentage of public debt stays around 97% to 98%, depending on the particular year of the observation.

Graph of France's government debt to GDP in percentages.



Graph 17: Debt to GDP (2000-2020)

Source: https://countryeconomy.com/national-debt/france (Own interpretation).



Graph 18: France's government spending as a percentage of GDP (2000-2020)
Source: https://tradingeconomics.com/france/government-spending-to-gdp (Own interpretation).

In the case of government spending in France, the country is in most of the researched years in the range around 50% to 57%, with the occasional growth or decrease of its spending. The rise can be seen, for example, in the year 2019, when the pandemic started, here the percentage rise went from 55% to over 62%, which is a quite significant growth from the usual pace during the previous years. Also, the other one is in the year 2008 during the economic house-market crisis.

The budget approval process in France begins with setting revenues and spending levels, after the approval of the national assembly and the senate. The French Constitution provides a maximum of 70 days between the budget being proposed to parliament and approved. It needs to be pointed out that article 40 of the Constitution stops the National Assembly and Senate from making any alteration to the government's total spending and revenue amounts.

Once, the budget is approved by parliament, the government may make adjustments of up to max 2% to the budget without having to seek new or further parliamentary approval.

French budget has a specific rule that concerns only the central government's spending and revenue. It thus excludes the social security budget and regional and local authorities budgets, which should be in the standard government budget structure.

4.1.11. Austria's public finances

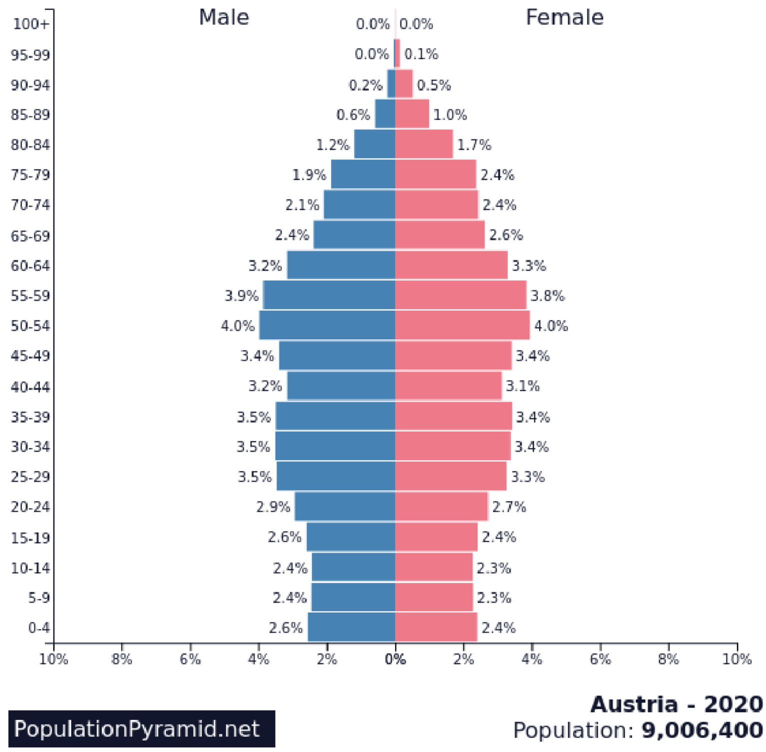
Austria's economy was one of those which were heavily affected by the pandemic situation. Therefore, it is logically understandable that even the country's public finances were massively affected as well.

The economic recession had a potential impact on several public finance variables. An example of it can be that the public debt stopped its continuous decline since 2016, and the consumer prices also rose by 1,5% , which is a quite high leap.

As for the government revenue as expected, it was primarily due to the federal government's extensive relief measures aimed at assisting particularly hard-hit industries, families, and low-income individuals. The government expenditures also raised due to numerous economic rescue packages as a possible repayment towards the inflicted financial damages.

Due to this specific situation, many economic experts agree that the possibility of successful future of Austria's public finance and its improvement from current circumstances lies within necessary economic stimulus, large new investment measures, and active labour market policies that are currently implemented as quickly as possible can be.

The demographic situation in Austria is quite similar to the previously mentioned states. Austria has a population of around 9 million. From this number, approximately 5,49 million citizens are within their working-age, which is around 61,5% of the whole population. The elderly population is about 1,17 million, which corresponds to 19,2% of the population.



Graph 19: Graph of Population pyramid of Austria
Source: https://www.populationpyramid.net/austria/2020/

4.1.12. Austria's fiscal decentralisation and its basic principles

Austria is a federal state with three territorial levels of government. These are the federal, regional and local levels. These levels can also be more defined as Vienna's main unit, also classified as local government and extra-budgetary units known as Länder.

The next very important part of Austria's decentralisation is the Fiscal Constitutional Law. This was established in 1948 and is the principal legislation that oversees fiscal decentralisation in Austria. Its main role is to establish the federal government's competencies and spending capabilities.

There is also a specified amount of possible governmental competences outside of this legislation, but these are coming solely under the jurisdiction of the regions. The next important part of the decentralisation is the Austrian Stability Pact. This document represents an updates Austria's medium-term fiscal strategy. At the end of 2011, the government made a new version of the Stability pact.

This new version largely matches the form and objectives of planned by European Union and its key requirements include firstly more strict deficit targets for various levels of government; secondary a new structural balance regulation that will be implemented beginning in 2017, establishing a lower ceiling for general government structural deficit of GDP, and lastly in accordance with the European Stability and Growth Pact's it imposes and preventative arm, in expenditure growth which must not surpass the average potential growth at all levels of the Austrian government.

Nevertheless, the most important main goal of this Stability Pack endeavour is to strengthen the fiscal framework, primarily through implementing the new system of various fiscal laws that are stretched to subnational governments.

Additionally, it is also necessary to mention that the Fiscal Equalisation Law and the Austrian Stability Pact oversee ties between the three levels of government mentioned before.

4.1.13. Austria's fiscal policies and borrowing power

Regarding the policy and rules towards the Austrian borrowing politics, the federal finance minister is authorized by Austria's Federal Budgetary Law to engage into a credit transaction on account of the regions through the Austrian Federal Financing Agency. It is important to mention that the amount of debt released by the federal government for state finance cannot exceed 20% of overall government expenditures in a certain year.

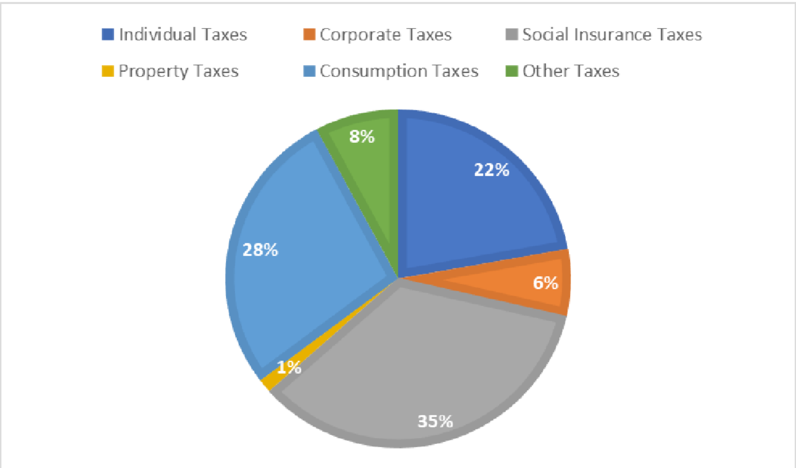
Also the Austrian financial sharing system is controlled by the Revenue Sharing Act, RSA in short, which is agreed upon by the federal government, states, and municipalities. In General procedure, the agreements are founded on political consensus, although sub-national governments have a weaker legal position in the negotiation. The RSA establishes the forms and rates of taxes that will be levied on the various levels of government and the taxes that will be split among them.

4.1.14. Sources of State budget revenues in Austria

As in previous chapters, even in the case of Austrian, the taxes are the most significant part of the state budget revenue. The most important of these taxes is income tax, which is levied at a progressive rate from 0 to 50 % in Austria. The income tax rate is determined by the amount of taxable income earned in a calendar year which is 12 months. The income tax has a 22,2% part of overall tax revenue.

The corporate tax is subsequent and has 6,4%, and the corporation's or firm's profits are taxed at a flat rate. Social insurance tax occupies around 34,8%, the highest part of them. Austria has a very high-quality, contribution contribution-based social security system in Europe to specify the system more. The Federal Ministry oversees the system and assists everyone currently employed and their children.

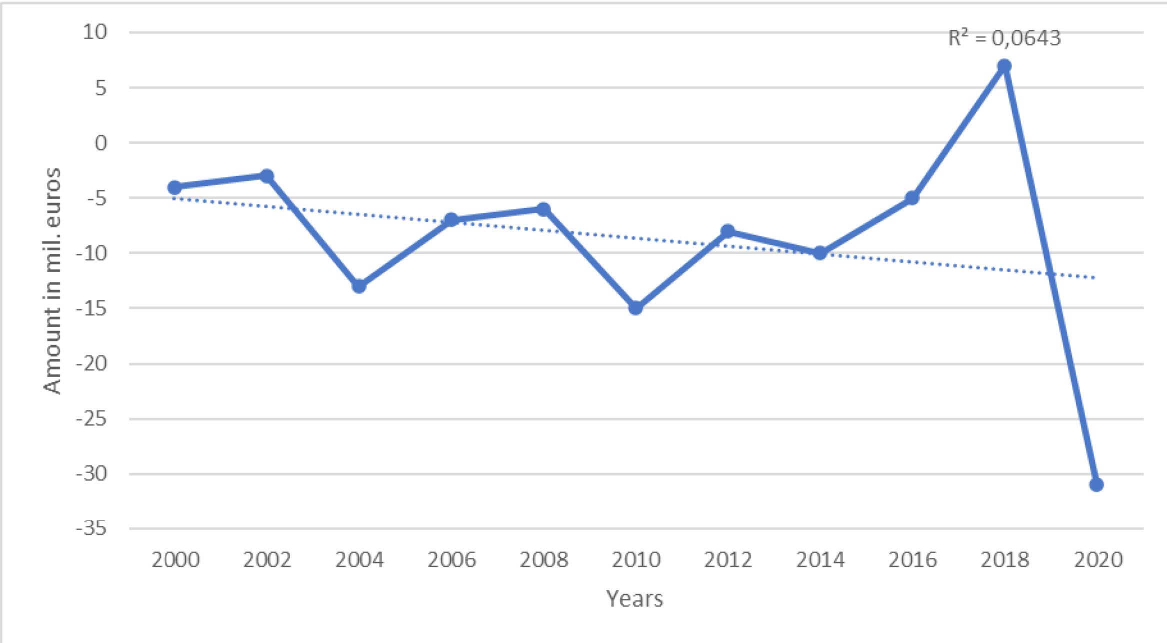
After the social tax is the property tax which has only 1,3% share on the overall tax revenue, the reason for such low percentage cannot be easily defined. Consumption tax is again as in previous cases imposed on goods and services and has share on overall tax revenues around the 27,5% ranking in the second most used tax. And the last are the other taxes with 7,8% share and can be specified as real estate transfer tax, vehicle tax, value-added tax, municipal tax, etc.



Graph 20: Types of taxes in the state budget of Austria
Source: https://taxfoundation.org/country/austria/(Own interpretation).

4.1.15. State Budgeting in Austria

The state budgeting in Austria has gone through an ambitious series of modern budgeting reforms. This process started with the first phase, which began in 2009, when Austria made many changes in its state budget; these are designed to mostly achieve several objectives, including increased flexibility, transparency, and performance in all parts of their home industries.



Graph 21: Government budget surplus/deficit through years (2000-2020)

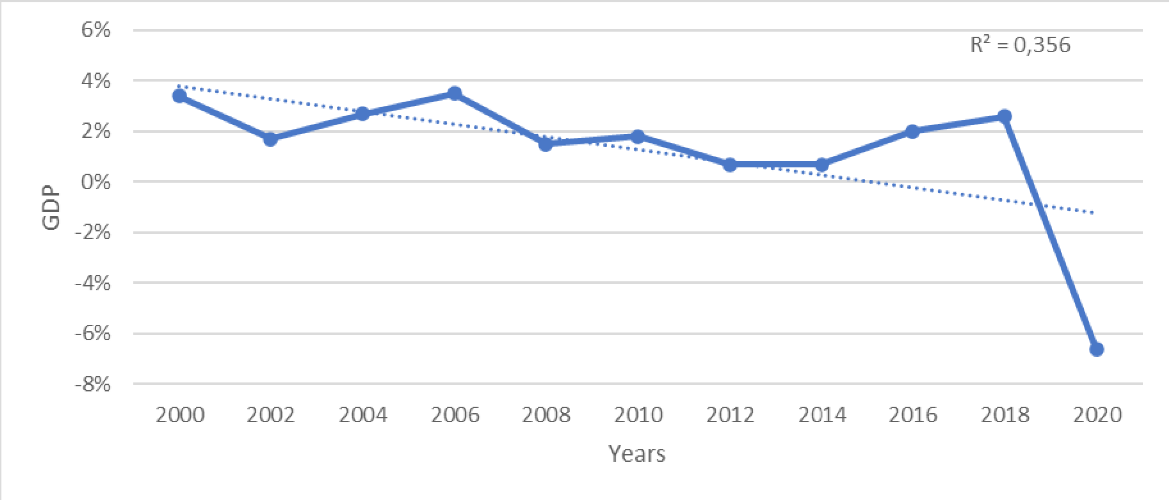
Source: https://countryeconomy.com/deficit/austria (Own interpretation in euros).

Year	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20
Millions of euros	-4	-1	-3	-4	-13	-7	-7	-5	-6	-19	-15	-10	-8	-7	-10	-3	-5	-3	7	2	-31

Table 4: Year-on-year changes. (2000-2020), source: (own interpretation).

Austria's GDP growth can be defined as rather more stable. The reason for this stability is in Austria's highly industrial economy, complemented by a quite high-quality service industry and a large number of exports. All of these are key components of Austria’s sustainable GDP growth.

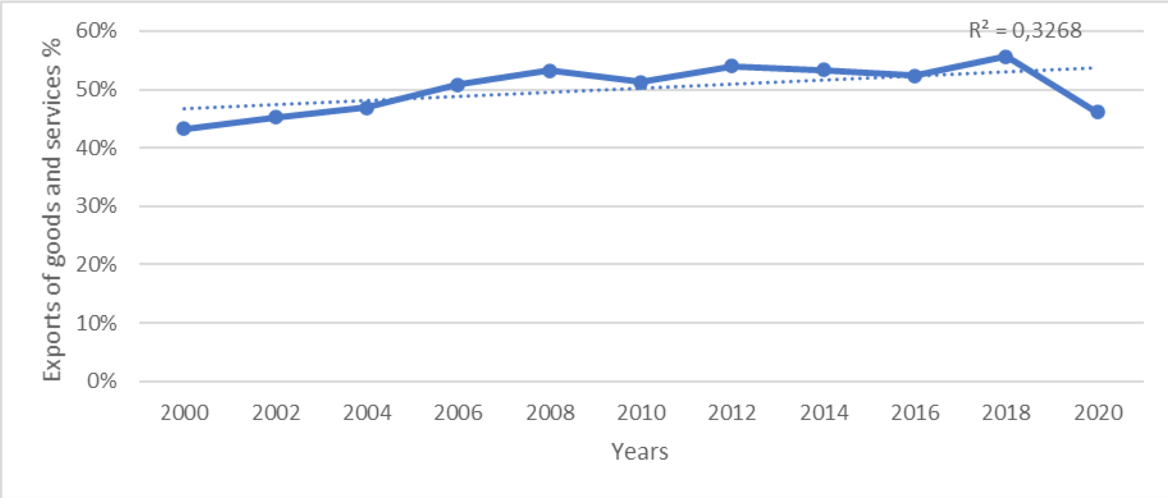
An additional detail that helps a lot is that Austria invests a considerable number of its finances into innovation and has research and development institutions for various industries that attract foreign firms. The benefits for those enterprises include a competent workforce and stable labour conditions, which is a significant plus for every foreign firm or enterprise considering going into the Austrian market.



Graph 22: GDP growth (2000-2020)

Source:https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?locations=AT(Own interpretation).

The overall quality of the state budgeting is very similar to Germany's. An example of it can be seen on the state budget surplus, which in the year 2019 was unbelievably almost 10.5 billion euros. This is the highest surplus since the year 2008. Another sufficient proof of good state management may be that Austria's balance of payments has been positive ever since 2002. This surplus was mainly due to the traditionally high positive balance of services industry and their export politics.



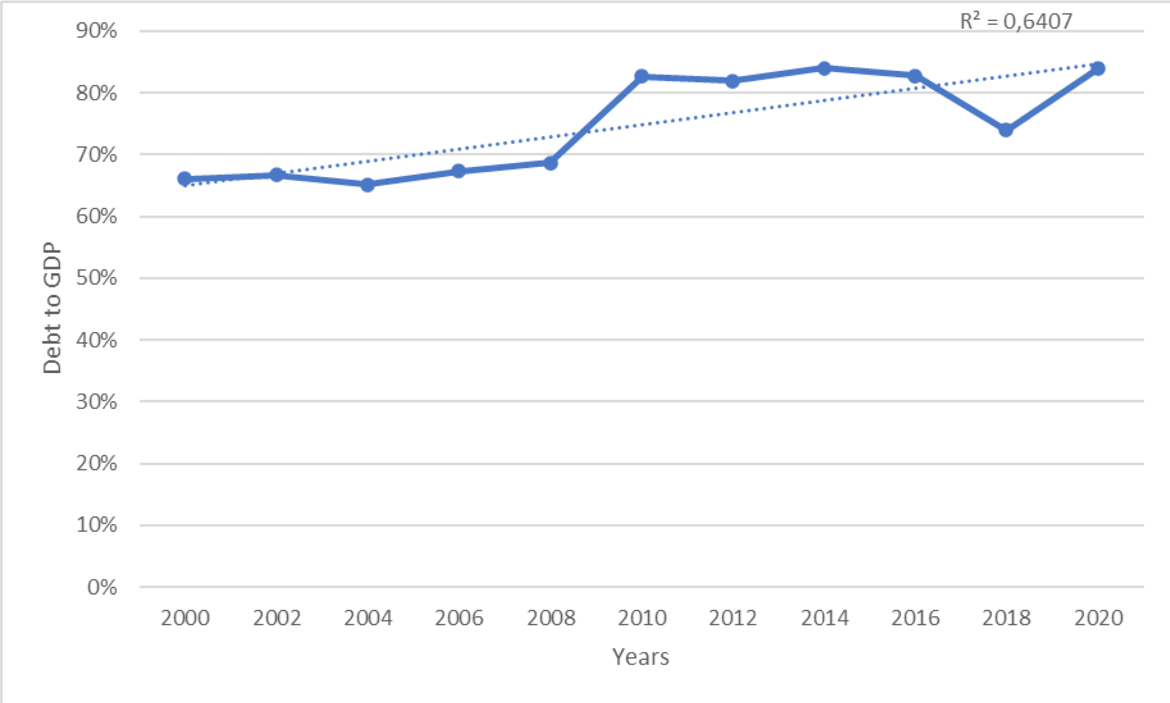
Graph 23: Exports of goods and services (% GDP)

Source: https://databank.worldbank.org/reports.aspx?source=2&country=AU (Own interpretation).

The second phase came in 2013 when several significant changes to the budget structure were introduced. The most important to mention is that performance budgeting has been introduced as an integral part of the Austrian federal budget. A dual approach to financial reporting and budgeting was implemented, concerning both cash and accrual accounting[6] and even budgeting in parallel.

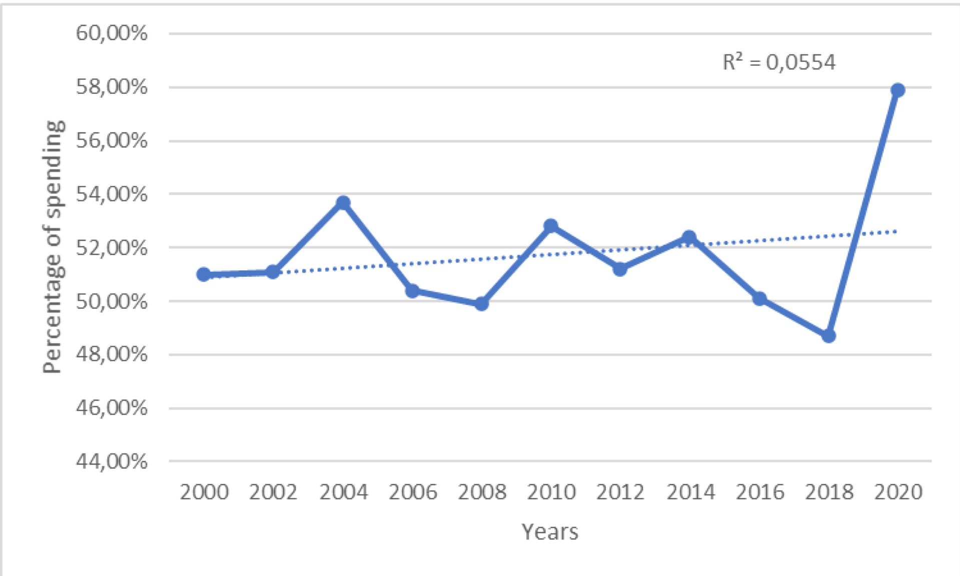
Austria also has a large spectrum of tax rates as the other analysed countries. There are seven tax rates brackets for personal income depending on yearly income. The lowest tax rate is 20%, and the highest is 55%, but that one goes mostly for people with more than one million Euro annual income.

[6] *where revenues or expenses are recorded only when a transaction occurs rather than when payment is received or made*



Graph 24: Debt to GDP (2000–2020)

Source: https://countryeconomy.com/national-debt/austria. (Own interpretation).



Graph 25: Austria's government spending as a percentage of GDP (2000-2020)

Source: https://tradingeconomics.com/austria/government-spending-to-gdp (Own interpretation).

The Austrian government spending is quite highly variable over the years. Its course can be characterized as very volatile due to being influenced by several factors, such as the rapid development of the economy in the early 2003, then the global financial crisis in 2008 which raised the spending for another 2 years and the last example can be recent pandemic situation in 2019, which again increased government spending, even to its historical high for the past 20 years. But what also can be noted from the graph is also that Austrian government is quite efficient in lowering their unexpected increases of its spending. This can be seen for example from the year 2014 to 2018 where the government was able to decrease its spending by 3,7%. Which is in general overview quite a lot.

The process of state budget approval starts with the Budget Committee, that has the main responsibility for examining the federal budget. That includes input from relevant sectoral committees on individual parts of the budget. The very interesting detail here is that only the first committee session, which considers the overall budget policy, is open to the public eye. Then the process of approval of the state budget in Austria is needed to be accepted by the parliament and the president.

4.2. Redistribution of the state income

The redistribution of income and wealth can be defined as useful and intentional applications of government funds whose amount constantly fluctuates as social norms, current state politics, climate, and culture evolve.

The main goal of the redistribution is to conduct social welfare programs, increase opportunities for the less wealthy members of the society, preserve public goods and their usage, and push forward the economic development of the whole nation. Nowadays, most of the world's democratic nations practise their income redistribution through their economic policies. These policies vary in their specifically permitted amounts of transfers towards each of the individual branches of the public sector funded by the government.

4.2.1. Redistribution of the state income and income inequality in Germany

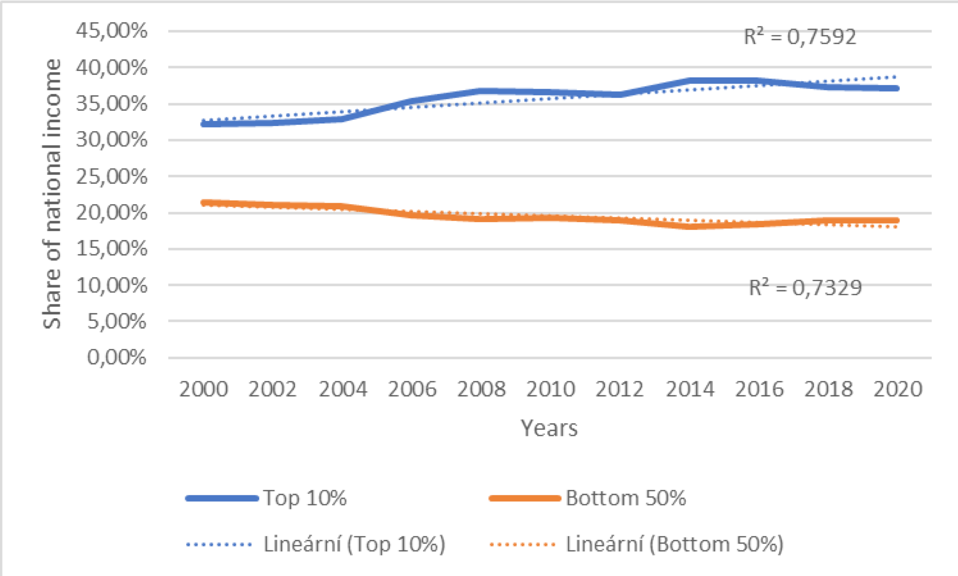
According to the international standards, Germany has a high degree of redistributing of its financial wealth. This statement can be shown on a large percentage of the government transfers, which is around 18% of GDP annually. The way the income distribution is handled is that it goes primarily through Germany's comprehensive social security system. This system is used not only to combat poverty but also to assure adequate standards of life in older years of pension, when the citizens are seriously ill, or when they are unfortunately unemployed.

First, let us look at where the redistribution starts, which is at the federated level. The monetary funds for each state, called as previously mentioned Länder, vary depending on their overall wealth. The federation treasury is dividing its funds to respect equalisation among the Ländern. However, it stands that wealthier Ländern is receiving only specifically allocated state contributions and the less wealthy Ländern receive additional adjustment funds paid for by those wealthier ones. The equalisation scheme determines this all.

The principle for evaluating the financial capacity of various types of Länder for the equalisation scheme goes as follows. First, the local government revenue is considered, but tax revenue is primarily recognized as significant in most cases. For financial equalization among the Länder, the Länder's share of combined taxes, tax revenues, and, to a lesser extent, local governments' tax revenues are included. The result should establish which Länder have to get additional funding.

As for how Germany's government spends its budget, it usually can be classified in overall total expenditure, which can be divided into three branches: current expenditure, staff expenditure, and investment. These government spendings go mainly toward labour and social affairs, state's defence, transport and digital infrastructure, health system, education and research and internal state affairs regarding new housing construction and funding not profitable organizations.

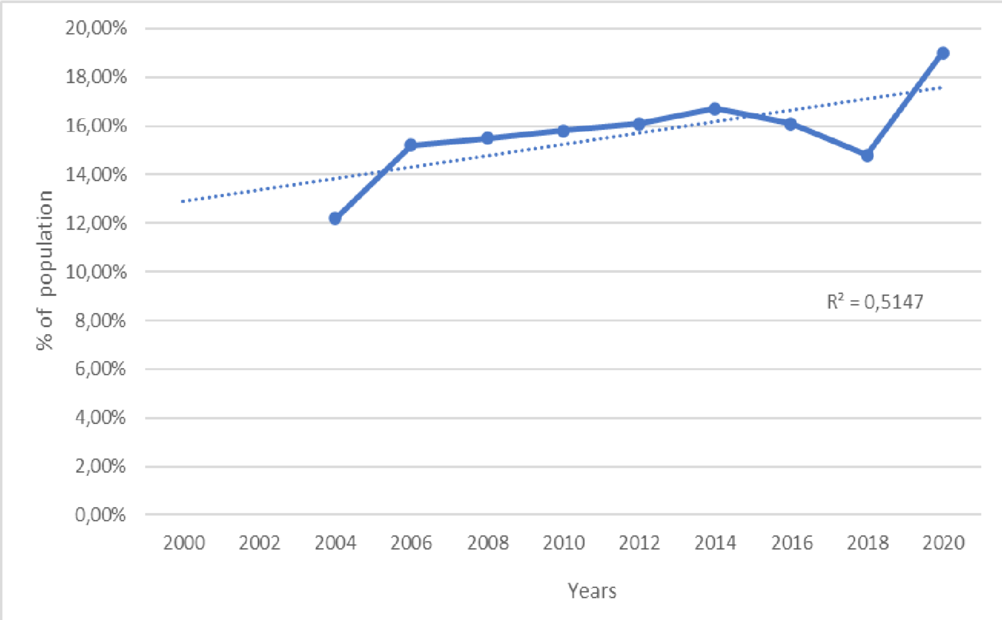
Suppose we take a closer look at internal issues within the state. One of Germany's biggest problems nowadays is income and wealth inequality. Germany is confronted with persistent poverty and growing disparities between the rich and the poor despite its richness.



Graph 26: Germany's income inequality the top 10% and bottom 50% (2000-2020)
Source: https://wid.world/country/germany/ (Own interpretation).

This can be shown on an example of a recent economic statistic that says the wealthiest 1% of earners receive roughly as much as the bottom 50%. More than 20% of employees earn less than two-thirds of the median salary. Also, around half of the state population owns approximately only 1% of the nation's assets. In comparison, the wealthiest 10% control around nearly 65%, which is, to be fair, one of the largest wealth concentrations in contrast to the other OECD countries.

Even though income inequality is being combated through taxation and government transfers, that endeavour does not change that most of the financial profits from the whole country's economic growth are not distributed equally, and even the average full time employed citizen with basic social security benefits can be considered poor. This particular problem is getting slowly but significantly worse with each passing year, demonstrated in the following example. In the year 2008, the population considered living below the poverty line was roughly around 15,5%; as of today, that number has gone up to around 19 % of the current population, roughly over 15,8 million people.



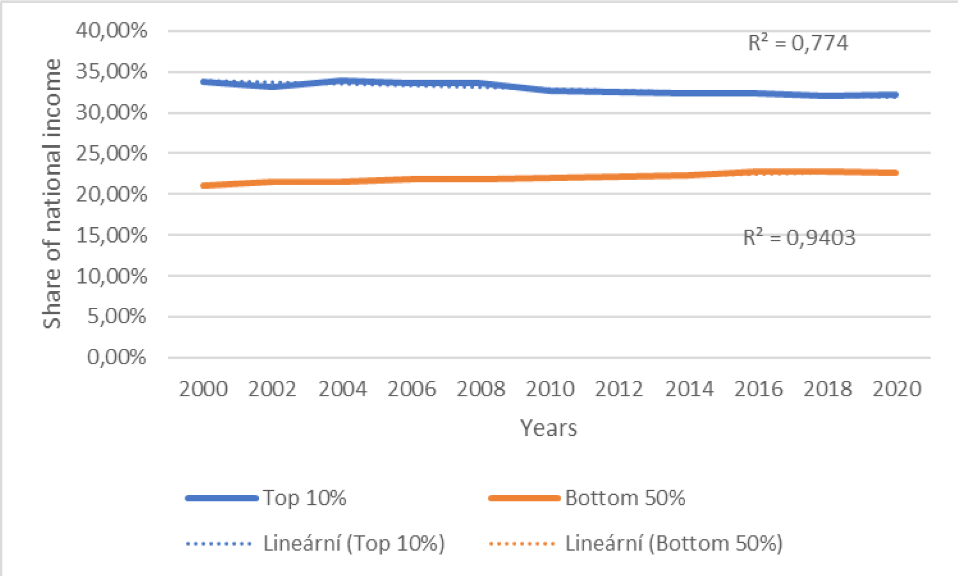
Graph 27: Germany's percentage of total population living in poverty (2000-2020)

Source:https://data.worldbank.org/indicator/SI.POV.NAHC?end=2018&locations=DE&start=2000 (Own interpretation).

4.2.2. Redistribution of the state income and income inequality in France

Nowadays, many citizens of France are divided about the benefits of their country's economic progress. While many inhabitants believe it is an essential condition for development, others believe it contributes to social and economic disparities. Nonetheless, the current relatively modest GDP growth and a significant rise in inequality are starting to raise the critical question of improving France's social model and boosting its economy to such an extent that these issues would be reduced to the minimum.

The reasoning for such an approach is simple. The current issue with annually decreasing GDP growth can be responsible for the decline of the so-called citizen's well-being. This is alarming and very connected to the redistribution of the state income because the less GDP the product will equal fewer citizens' income. Therefore the state will have smaller tax revenue which would inevitably affect future income distributions on which many public goods are dependable. The possible solutions which were mostly implemented in recent years for this problem are firstly fighting inequality through taxes and secondly by government transfers. But this endeavour still did not help at all. The income inequality decreased but only for the top 10% of the citizens, the bottom 50% is still experiencing year to year increase which is also presumed would continue in the near future as well.



Graph 28: France's income inequality the top 10% and the bottom 50% (2000-2020)
Source: https://wid.world/country/france/ (Own interpretation).

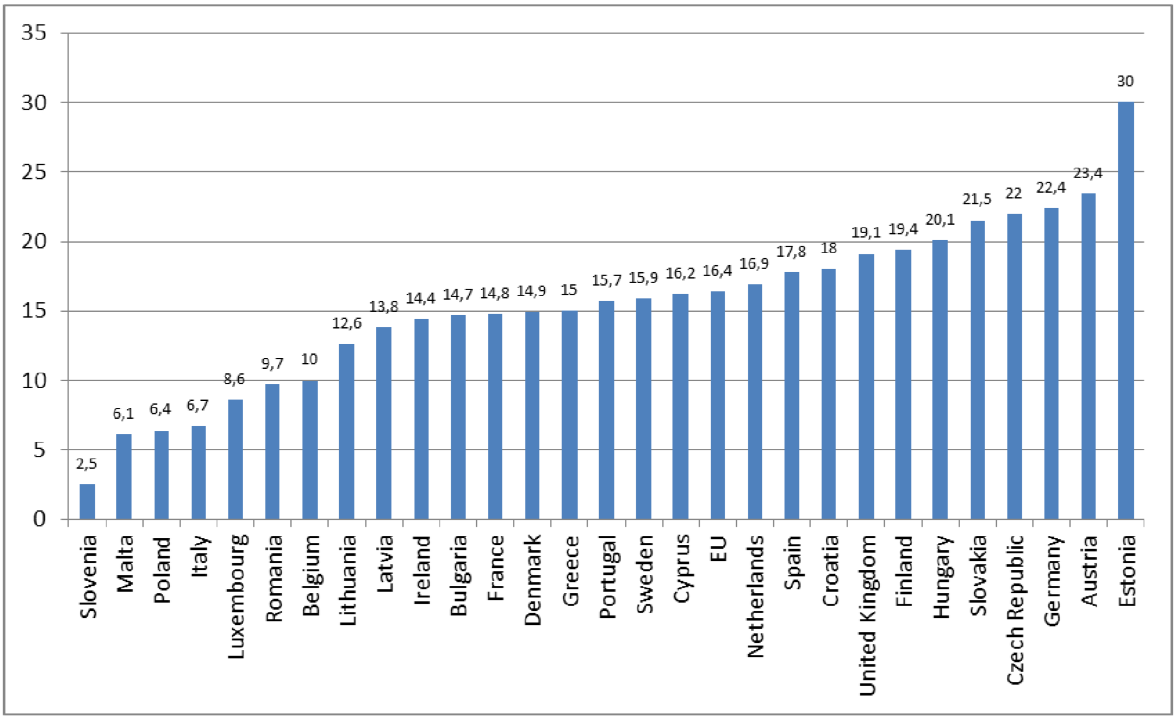
Lastly, let us take a closer look at the income distribution itself. The wealth distribution of France is quite similar to in any other democratic state. Most of the funds go towards the health system, social systems, military expenses, state education, state infrastructure, and environmental safety. The state wealth is distributed towards the local governments through state policies.

4.2.3. Redistribution of the state income and income inequality in Austria

Austria as a country is considered one of the best in the world in the scale of quality of their citizen's life. While well-being is internationally praised, the statistics show the side of Austria, which might not be considered positive. First, let us establish which factors are affecting the distribution.

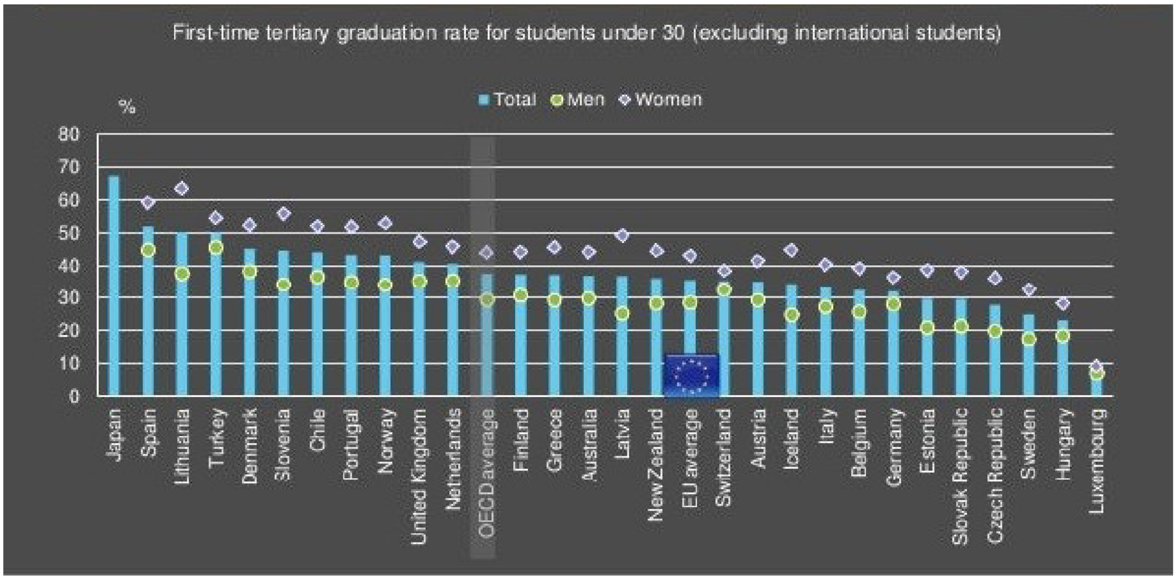
The income distribution within Austria is mainly impacted by structural changes in population demography, education, migration, household dynamics, and the labour market. These factors constantly vary; therefore, the percentages of income inequality do as well.

In a further detailed comparison, income in Austria is not shared equally. This can be summarized in many recent studies. They show that around 10% of Austria's population earns more than three times the Austrian average and even seven times more than the bottom half of the state population. The reasons for this are that the financial crisis initially lowered income inequality, but since 2012, it has increased significantly again. Secondly, the real income stagnation, in a nutshell, means that almost the entire drop in affordability for the poorer half of the population and young people under the age of 30. This phenomenon can be caused by real estate market frictions resulting in considerable house prices and affordability variation. Other interesting data points out that around 12% of the Austrian population are at risk of poverty, whereas 33% of non-national migrants are already at risk. However, the problem with income inequality does not end only here. Nowadays, Austria is facing the challenge with its so-called obsolete social model, which can be described as very conservative and primarily supports old and traditional gender division, which is not up to date with modern changes in this area.



Graph 29: The pay gap in member state of the European Union.
Source:https://www.neweurope.eu/article/gender-pay-gap-stagnates-across-eu/.

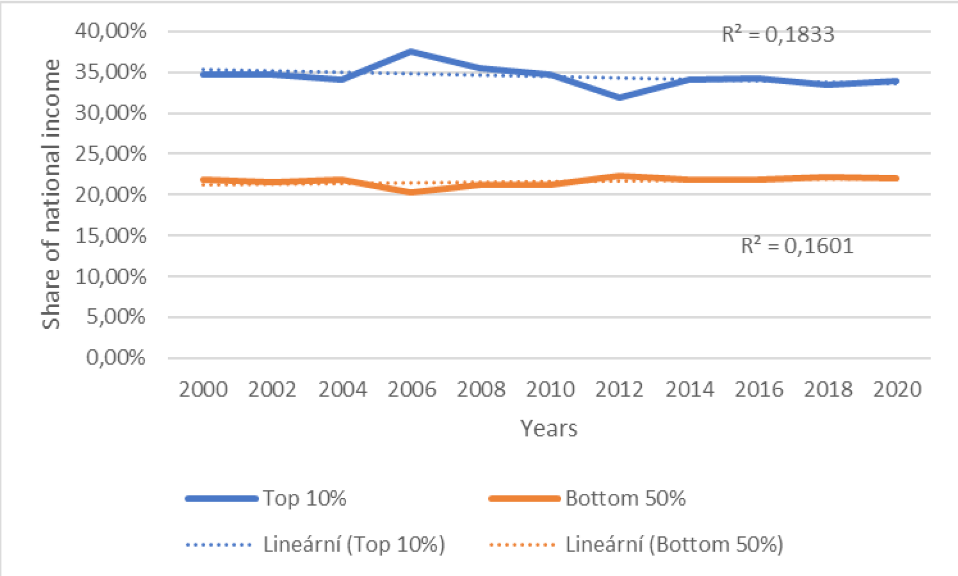
This finding is also supported by 2019 surveys, which found that Austrian women are more university-educated than men. However, still, women earn 23.4% less per hour than their male colleagues. Another interesting finding is that children of university graduates are more likely to start their college study 2.5 times higher than the children who never studied college.



Graph 30: Graduates of tertiary education under the 30 and by their gender. Source:https://www.slideshare.net/OECDEDU/education-at-a-glance-2020-european-union-launch.

Because as in many societies, education is determined by the size of the initial income. For example, according to statistics, each additional year of higher education increases income by about 5.4%. The situation is significantly worse for the newcomers and migrants because their education is often not recognized and valid. They often are unable to participate in the Austrian one, making them less successful in the labour market and less able to achieve high or even decent income.

In regards to the income inequality, Austria as a country is not experiencing that large case of it in comparison to other OECD countries but still its inequality problem is quite persistent over the years ranging from 3-4% percentage changes either in decrease or increase in most of the researched years. In this case, there are a couple interesting findings such as in 2006, the share of capital in both top 10% and bottom 50% changed. In the case of top 10% its share went up over 37% and in the case of bottom 50% it went down under 20,50%. And in 2012 it again changed in both cases, but this time in reverse, which means in top 10%, the share went down under 32% while on the other in case of bottom 50% the percentage went up to close to 22,50%. These changes could be explained as in 2006, income inequality increased in both the top and bottom halves of the distribution, but consumption disparity increased only in the top half that's why the share went up mostly in top 10% and bottom 50% it went down. In the case of the year 2012 the return on capital grew larger. The capital is mainly owned by the top 10%, which can explain why their inequality went down. On the other hand, the share of national income going into labour had fallen tremendously in that year, resulting in a lot of unemployment and even weakening the position of people who had sustained their work, resulting in a higher rise of the inequality between the bottom 50% of the population.



Graph 31: Austria's income inequality the top 10% and the bottom 50% (2000-2020)
Source: https://wid.world/country/austria/ (Own interpretation).

4.3. The Government interventions

This part of the thesis clarifies why and where the individual governments of the studied countries should intervene in their public finances and what steps could be recommended for their improvement.

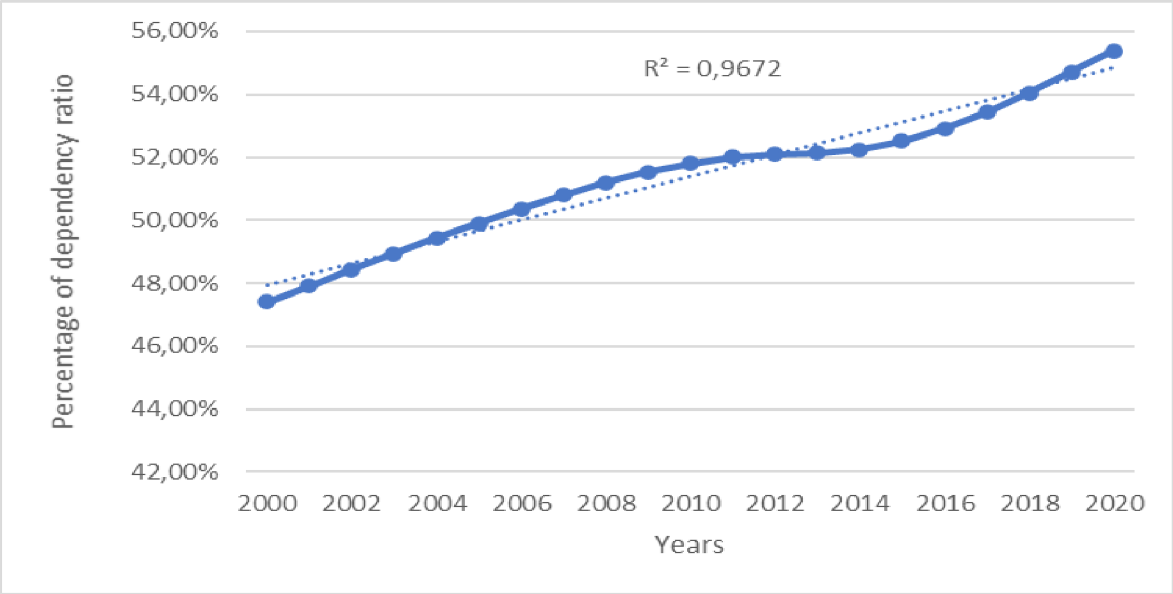
The importance of this part of the work lies in its need to point out that no system of public finances is perfect. It is always necessary with the modernization of the state and its economic system to improve its monetary relations. In our case, it is the relationship between public administration and state citizens.

4.3.1. State interventions in German public finances

Germany is a country which is one of the best performing with their public finances sector in this research. This can be observed for example in their previously mentioned several-year surplus, which indicates a precise state financial management and long-term ability to repay country's public debt. This can also be due to the so-called debt brake rule, which mandates that the structural deficits are limited to 0.35% of GDP in Germany's federal government and 0% for state governments.

However, where German public finances could face a potential problem in the future is firstly the inflation effect. This problem has already shown its presents in the recent past years and its effects were fought by lowering the value-added tax to push the inflation into the negative.

The other pressing issue is the future demographic change, this is resulted by the ongoing ageing of the German society, which can be reflected in the rising dependency ratio. This demographic indicator ratio shows the number of persons of retirement age compared to the number of persons of working age. In the year 2000 the ratio was only 47.4%. Still, around 2019 it subsequently rose to 54.7%, and by the year 2040, it is expected to grow even significantly more. This could radically lesser the GDP growth because of a decrease in labour force.



Graph 32: Germany's percentage of dependency ratio through years (2000-2020)

Source:https://data.worldbank.org/indicator/SP.POP.DPND?end=2020&locations=DE&start=2000, (Own interpretation).

The solutions in Germany case can be summarized in few options. The first is to reinforce birth rate by supporting young families and better integration of incoming emigrants.

Germany has a long history with migration problems. The country itself is one of the most popular options for many emigrating families from Africa and Eastern Europe seeking a better life for them and their children. The integration programs are excellent, but the trouble lies in the number of refugees. The Federal Office does not have enough capacity to attend all of them, resulting in some of the incoming refugees not being properly integrated into the social programs to help them in the beginning of their journey. This help is performed by giving them a chance to join the workforce or education facilities as soon as possible and the starting accommodation in some of the collective accommodation centres. But lately these centres have mostly been closed except few exceptions that are still running today. What in this case could be done with this problem is that the government should raise the number of workers dealing with the integration process to help integrate more refugees. Also a reopening or possibly establishing of more new accommodation centres which would further help the new emigrants to make their integration easier by offering them a place to live temporarily until they are able to move to another accommodation. Another difficulty is the overall restrictive asylum policy for the emigrants this particular issue is nowadays changed for better, for example people who got a refugee status now can bring their relatives to Germany as part of family reunifications. In addition to such reforms, a new citizenship law is set to be enacted, making it simpler for millions of emigrants in Germany to achieve citizenship after only three years in the nation. All of these could potentially help emigrants to establish a life in Germany much quicker and therefore boost the population numbers in the future.

In the case of support measurements for young families, here Germany has already a quite well-established system of supporting social programs, therefore, in this case there is no need for some suggestions regarding possible changes or improvements because the system is good enough to persuade young people to not be afraid of financial risks in the case, they decide to start family.

Examples of such social programs can be for instance child benefits which is paid amount related to all children up to age of 18 or unemployed children up to age of 21 or if the child is participating in higher education or schooling it that case it even goes to the age of 25, another example is parental allowance which is intended to allow parents to spend time with their child, particularly during the infant's first year, without incurring loss of money. Last but not least the maintenance advance can be mentioned, this type of support is specially to help single parents with children under 18, which do not receive any alimony from the other parent. This is exceptionally helpful for example for the mothers who have to raise their children who do not receive financial aid of their fathers whether it is intentional or not.

4.3.2. State interventions in French public finances

French public finances can be defined as quite successful in their functioning, although their quality is significantly worse to the other countries surveyed. France's persistent problem with the year-on-year decline in GDP growth and the continuing rise in public debt is a sign of a severe problem for the state's financial management. In terms of the adequate solution to this issue, it would be sensible for the country to introduce and then adopt new fiscal changes and rules for their state budget as soon as possible and seek to increase annual real GDP growth by reducing interest rates to increase the amount of money in the economy and to make them readily available to be borrowed by companies, allowing them to buy more raw materials and increase the manufacture of their product.

As for public debt, the primary problems causing it to rise continuously are recurrent primary budget deficits and slow economic growth; if the country first resolves its economic growth, only budget deficits would remain. This can be solved by raising taxes, issuing bonds, or just simply instituting large cuts in government spending. However, in the case of France, raising taxes could undermine the GDP and even economic growth by simply taking money from the producers and the companies.

Therefore this procedure should be considered cautious and instead approached only as a last resort. In the case of the bonds, the French government already introduced this step many times before; the latest one was in the 2017 when the government issued its first sovereign green bonds for an amount of 7 billion euros, with a maturity of 22 years and a yield at the issue of 1.741 %. However, from an overall perspective of the situation, the frequent and recurring issuing of these and previous bonds indicates that this debt reduction method is more than less also unsuccessful.

Therefore, the only possible solution is again, as in the GDP growth, that the country needs to strongly re-valuate the fiscal policy and possibly cut its government spending in certain budget areas.

4.3.3. State interventions in Austrian public finances

Within the research scope of this diploma thesis, Austrian public finances can rank next to the German ones, their efficiency and overall management are for the most part flawless, but like in everything, even in this part of the state management, there can be found problematic parts and places that need a necessary improvement. However, which is now the most alarming problem in terms of public finances is the vast majority of Austria's ageing population. The problem with this situation occurs in a logical assumption that in the future, is it clear that a considerable amount of the elderly will significantly increase the state's public spending on their pensions, health care, and even long-term care, while simultaneously tax and social security revenues would fall.

A few potential resolutions can help solve this type of problem. The first of the potential solutions is new birth policies that will encourage people to have more than two children for the single-family household. This can also be supported by new cuts in the tax system and possibly even complemented by state aid to achieve affordable housing, especially for young families. In this way, the country can fulfil the necessary threshold numbers needed to replace the current working population, sustain its economic growth, and save its social systems from future financial overload.

The second solution is a high level of support of migrant's integration into society; this can be done through better access to language and vocational higher education, then to employment opportunities and subsequently to full citizenship. However, this approach has several problems. The first is that even these migrants will grow old over time, and unless they have a large number of their children, this approach will only result in a future burden on social systems. The second problem is the possibility of high abuse of this simplified integration approach for ulterior motives. And the third problem which must be taken into account in particular, is the employment opportunities that these migrants will be able to pursue

It is well-known that for migrants it is very difficult process to integrate into working environment or education system of the new country. And there is also a high risk that if this endeavour will go unsuccessfully then the previously mentioned employment opportunities for the migrants would be severely limited to only very low paid jobs which are mostly those that locals do not want to do, this could potentially make it even more difficult for families of consisted of migrants to raise children in their household without creating additional socially-economic problems. Thus generating further burden for the overall system.

Therefore, in the final comparison, the best solution of the two proposed is the combination of both of them with the support of young families by advanced cuts in the tax system and state aid to achieve affordable housing as previously mentioned but also to continuously reinforce the integration of the migrants into society to prevent potential new burdens on the social system.

5. Results and Discussion

In this part of the thesis, we now get to the analytical research of pre-selected variables, either directly related to public finances or describing the country's economic situation under the research. All obtained results will be used mainly for discussion, which will deal primarily with meeting the requirements of the stated objectives.

These variables include population, GDP of billions of dollars, GDP per capita, size of government debt, inflation, unemployment level, surplus or deficit of the state budget, health expenditures, tax revenues, total state expenditures, total social expenditures, and lastly state expenditure on pensions. In addition, all these variables are supplemented by their percentage rate of growth or decline over the years.

Each of them will be individually described and supplemented by a table representing the period from 2000 to 2020 for each respected country. Subsequently, the results based on the econometric analysis of individual correlations between specifically selected variables will be interpreted and described in more words.

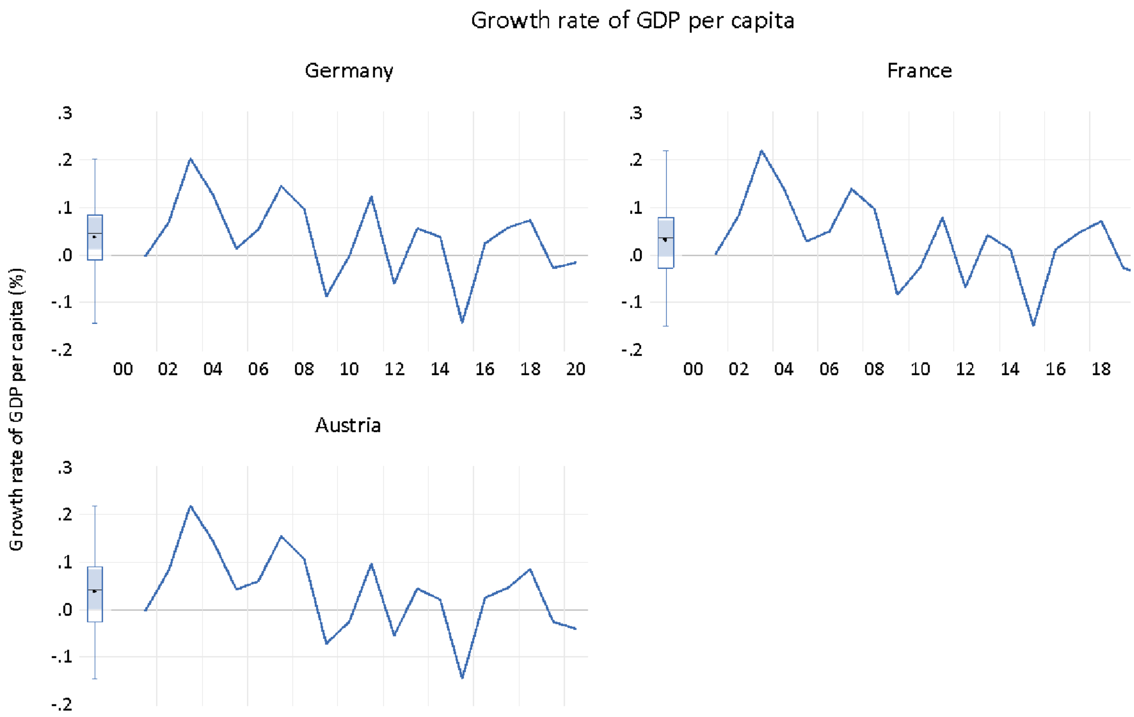
5.1. Researched variables

This part of the work deals with a brief introduction of individual variables and a description of the recorded changes in the examined period. The variables will be presented in their given order from the previous introduction of the chapter, and then they will be added to the obtained data processed in the table, where their order will start first with Germany, France and then Austria. All the data discussed in this chapter are shown in the tables at the end of the thesis in the appendix section.

First, let us start with the main one: the population. This concept can be described as a variable number of inhabitants living in individual countries, which we study. In the case of Germany, the population ranges from 8.1 to 8.3 million people with mostly consistent growth each year, except a few minor declines between years 2009 and 2013. As for France, the population grows from 5.9 to 6.5 million with absolutely no numerical declines. As for Austria, the population is also growing steadily as in the previous case, ranging from 8.06 to 9 million of citizens.

Another variable examined was the annual GDP of each of the selected countries in the current prices. In almost all three cases, it can be said that the GDP of these researched countries is mainly growing year after year without many downfalls except for a few years for example, in all three cases during the years 2009 to 2012, presumably because of the economic crisis in the year 2008. However, the phenomenon of mostly constant growth during the rest of the future years can largely be explained due to the several factors such as rapid and continuously rising economic power of these countries, immense development of their primary industries, great geographic position for trade with other highly developed countries, structural changes in investment and possible new export possibilities.

The following variable in the list is GDP per capita which is gross domestic product divided by the number of citizens in the year. This variable and its annual changes are generally very similar to the previous table because they are based on it.



Picture 1: Graphs of Growth rate of GDP per capita (2000-2020).

The size of government debt is expressed in billions of Euros. The term state debt refers to all loans made or guaranteed by the state, and its total amount results from the accumulation of past state deficits. In the case of researched countries, the state debt is, unfortunately, steadily going up most of the years. The main for this is the rapid economic growth of these countries, which essentially requires borrowing a large amount of capital. This trend is subsequently seen at the same relative pace through the whole table. However, for example, in the years of the ongoing crisis such as 2008, or years immediately after it as in the example of the year 2020, after the 2019 pandemic outburst, in both of these cases, it is possible to record a significant percentage increase in government debt compared to previous years due to an increase in the appearance of closely related crisis problems that states have to deal with primarily financially.

The next variable in sequence is inflation. Inflation is in short explanation the gradual loss of purchasing power of a currency and which therefore has significant effect on the citizen's purchasing power which subsequently declines. In case of our researched states, the inflation ranges from mostly from 1 to 3%, and in the comparison with each other they do not differ so significantly meaning that these researched countries are more than less very similar in their monetary policies.

The unemployment rate measures the proportion of the workforce that is unemployed, and it can also be said that it is a lagging indicator, which means that it rises or even falls as a direct response to changes in economic conditions. In cases of our research, in both Germany and France, the unemployment rates started in relatively high percentages at the beginning of 2000. However, as time progressed, Germany made those numbers go down by half. Unfortunately, in the case of France, their unemployment rate still stays around 8%, which is not a significant change from their beginning which was around 9,2% and in the future the country government should probably consider some kind of new measures that could effectively contribute to the gradual reduction of this rate and also simultaneously improve their workforce situation. As in the case of Austria, there the unemployment rate went slightly up from the starting amount on which it began in the year 2000. However, the overall status of the situation is not catastrophic as it seems. The unemployment rate for the most part ranges between 4 to 5% with few minor exceptions such as slight percentages rise ups in the years from the 2013 to 2016 followed by another modest decrease in the next years.

The next following variable after the unemployment rate is the surplus or deficit of the state budget. If we examine the table, we can safely pinpoint that the deficits are in much larger numbers than surpluses in all three cases. From a logical standpoint, this situation is not that unusual. Most of the countries in the world are in a financial deficit than in the opposite due to their excessive spending and not well-optimized fiscal policy. However, what is also very important to emphasize are the cases where the state can create a long-term surplus, such as Germany, which has created a surplus as a result of its excellent economic policy, even for several consecutive years from 2012 until the beginning of the pandemic crisis. As for France, the country is in consistent financial deficit through the examined period with repeated percentage increases and decreases. Austria is in a very similar situation as France, with the difference of a few years of surplus before its economics goes back to the deficit state due to pandemic financial consequences.

The other variables on our list are health expenditures. These can be summarized as spending on all privately and publicly funded personal health care services and products such as hospitalization, medical services, prescription medicines, etc. In the cases of the researched states, all three of them remarkably show a significant increase within the monetary amount of their health expenditures during the financial crisis in the year 2008. This can be caused by a large portion by a higher rate of people are reported to have a worse health condition during the financial crisis due to clear correlations between the highly stressful situations which can cause a bad state of people health, therefore, more considerable expenses to remedy it. On the other hand, an interesting detail is that in 2015 when the refugee crisis was in motion, there is over 10% decrease for each state in their health expenditures in all three cases again.

The following variables are the tax revenues. These can be briefly introduced as revenues gathered through income and various state profit taxes. In our three cases, mostly all the tax revenues are perpetually rising except the years right after the financial crisis in the year 2008 or the year after the pandemic outbreak of 2019. This outcome can be quite easily explained as the states are usually forced to rethink their tax systems due to the additional need for broader revenues from them to compensate for the financial difficulties which were created during the crisis and to get the further funds to sustain the country's operations as much as possible.

Another variable in our ranking is government spending. This type of spending can be explained as spending to ensure the functioning of the public sector of goods and services, such as education, healthcare, and defence. In the cases of the researched countries, the government expenditures differ a bit. In the case of Germany, the expenditures during the researched years are starting around 47,80% of GDP, in other years they are sustainably around 46% and further going lower to the period, where in the years 2012 to 2018 they stay around 44% except of course the year 2020 where they again reach even 51,10% as a resulting from ongoing pandemic. In the case of France, the country, in the beginning has a much larger amount than for example Germany. In the year 2000 France expenditures start around 51,70% of GDP this number is further rising throughout the years to the point where in 2014 it has reached 57,20% which is the highest of all the researched years except of course 2020 where due to pandemic effects on public finance it goes to 62,10%. In the case of Austria, their government expenditures are ranging from 51% in 2000 to then slowly rising and falling throughout the next years by mostly 1-2%, with again very exceptional 19% rise from 2019 to 2020 due to pandemic.

Descriptive Statistics

	N	Range	Minimum	Maximum	Mean	Std. Deviation	Variance
Germany government spending as % of GDP	21	7,70%	43,40%	51,10%	46,0429%	1,99363%	3,975
France government spending as % of GDP	21	10,40%	51,70%	62,10%	55,2190%	2,56897%	6,600
Austria government spending as % of GDP	21	9,30%	48,60%	57,90%	51,3286%	2,09431%	4,386
Valid N (listwise)	21						

Picture 2: Descriptive statistics of government spending as % of GDP all three countries

The table above (picture 2) shows descriptive statistics od government spending as percentage of GDP, these consist several categories, first N, which stands for the size of the dataset in all three cases it is 21 variables which are years. The range which shows the difference between the largest and smallest value, in the case of Germany it is 7,70%, France has it 10,40% and Austria around 9,30%, minimum shows the lowest percentage, and maximum the highest. In the case of Germany the minimum is 43,40% and the maximum is 51,10%, in the case of France the minimum is 51,70% and the maximum is 62,10%, and in the case of Austria, the minimum is 48,60% and the maximum is 57,90%. The mean stands for average of a data set, which shows the most common value in the collection of numbers from the research, in the case of Germany the mean is 46,04%, in the case of France it is 55,21%, in the case of Austria It is 51,33%. The standard deviation measures of the data's dispersion in regard to the mean, in case of Germany and Austria the deviation is around 2% and in the case of France it goes even to 2,5%. The variance estimates of variance from the mean.

Now we come to the part of variables where the previously expressed variables will be supplemented by another table expressing their share as a percentage of GDP. This part will start with annual surplus or deficit as % of GDP, tax revenues as % of GDP, then government debt as% of GDP, health expenditures as% of GDP, government expenditures as% of GDP.

Then follows the part of the thesis, where the previously described variables are taken and will be subjected to tests to determine the possible correlation between them and the subsequent comparison of the results obtained from those tests. Lastly, all data for the following operations are taken from the tables at the appendix of the diploma thesis.

As mentioned before in the methodology paragraph, Pearson's correlation coefficient will be used for this testing procedure. The coefficient itself has a correlation interval from ⟨-1,1⟩. The value of 0 indicates no linear correlation relationship between the variables. As the numerical value gets closer to 1 or -1, the more it is certain that there is either a positive or a negative linear correlation between researched variables.

Correlation	Surplus and GDP growth	GDP growth and debt growth	GDP and government spending growth
Germany	-0,31023225	0,74187917	0,40266692
France	-0,01324059	0,03346271	-0,29796714
Austria	-0,18839679	0,72638691	-0,22464061

Table 5: Pearson correlation results of the selected variables .

p-value	Surplus and GDP growth	GDP growth and debt growth	GDP and government spending growth
Germany	0,1831	0,0002	0,0784
France	0,9558	0,8886	0,2020
Austria	0,4264	0,0003	0,3410

Table 6: Pearson correlation results of the selected variables p-value.

t - value	Surplus and GDP growth	GDP growth and debt growth	GDP and government spending growth
Germany	-1,38451	4,69406	-1,86637
France	-0,05618	-0,14205	-1,32432
Austria	-0,813874	4,48401	-0,978067

Table 7: Pearson correlation results of the selected variables t-value.

Table of types of correlations according to its strength

Range of the correlation (+/-)	Type
0,00 - 0,19	Very weak
0,20 - 0,39	Weak
0,40 - 0,59	Medium
0,60 - 0,79	Strong
0,80 - 1,00	Very strong

Table 8: Types of correlations

Source: https://mathstat.econ.muni.cz/media/12657/pear_cor.pdf (Own interpretation).

First of all, the author focuses on Germany. In the case of surplus and GDP growth, the correlation coefficient is around -0,31, which shows that there is a negative linear correlation between these variables, and the type can be classified as weak. That means that in the case of Germany, the surplus has a weak correlation with the growth of their GDP.

In case GDP growth and debt growth, the coefficient is around 0,74, which shows that there is a strong level of positive linear correlation between these variables. It means that GDP growth and debt growth are closely connected. The relationship between

GDP and government spending growth was also tested. The coefficient is around -0,40, which shows a medium positive correlation between these two variables. Therefore, Germany's GDP growth and government spending have some specific connections.

The second analysed country was France. In the case of surplus and GDP growth, the coefficient is around -0,01, which means no correlation.

In the case of GDP and government spending growth, the coefficient is around -0,03, suggesting no correlation.

In the case of GDP and government spending growth, the coefficient is around -0,3; this exhibits a negative, weak linear correlation between GDP growth and an increase in government spending.

The last analysed country was Austria. In the case of surplus and GDP growth, the coefficient is around -0,19, which means a negative and very weak correlation between Austria's surplus growth and its GDP growth.

In the case of GDP growth and debt growth, the coefficient is around 0,73, which demonstrates a strong correlation between these two variables.

In the case of GDP and government spending growth, the coefficient is around -0,23. This illustrates that there is also a negative, weak correlation between Austria's GDP and government spending growth.

6. Conclusion

The diploma thesis focused on the sustainability of public finances and their comparison within three chosen countries in a researched period from 2000 to 2020. Those specifically chosen countries were Germany, France and Austria. At the start of the research, each of these countries had a different set of challenges within their particular public finance sector. For these sectors, the government of those countries created their own distinct solutions implemented during the research years to make their public finance more efficient.

These solutions, better called individual government decisions, substantially shaped each of these public finances for those countries. They helped establish the overall ground for this research. Therefore, let's now focus on the final thoughts behind the results and answers obtained from the overall research and deduce if the proposed hypothesis turned out to be true or false.

In the case of **Germany**, the country can be considered as most efficient with their public finances. Its excellent fiscal policy and calculated management of its state resources resulted in a state budget that had surpluses over deficits for most of the researched years. Their state budget obtains its financial means mainly from taxes. The most significant part has the social insurance tax, then the consumption and individual taxes. The country has experienced positive GDP growth t for most of the researched years, with its annual range between 2-4% except for the year 2020. Due to the pandemic, it went to -5%. In the case of export of goods and services, Germany has accomplished chiefly growth in this area. The range of percentage in this instance is around 40-46% throughout the years, with nearly no significant decreases. The debt to GDP ratio increases only within the crisis years. It decreases years after, which can be defined as another sign of well-managed fiscal policies. And lastly, for Germany's government spending, the country, in this case, the country does not exceed the 50% threshold except in the recent pandemic crisis. However, the spot where Germany's public finances have an issue is the income inequality that has started rising again, especially within the 50% bottom group, which the state definitely needs to improve shortly.

In the case of France, its public finances cannot be specified as efficient but somewhat profoundly problematic. For most of the researched years, the country has its state budgeting within extensive and continuous deficits. The state budget primarily obtains its funds from taxes as well as in the previous case. To be more precise, the most percentage comes from social insurance and taxes, including consumption taxes. The country's GDP growth is for most of the years around 1-2%, with annual repetitive increases and decreases except, of course, during the pandemic year. In the case of exporting goods and services, France has a stable trend where they are around 25-30% of their annual GDP for most of the researched years. Unfortunately, the country's debt to GDP ratio is another issue that France is currently facing. Throughout the research years, the debt was consistently rising. Even during the pandemic year, it went over 100% of its GDP. This development is signalizing a quite severe fiscal problem for the country. Its lowering in the future should be definitely put as a priority goal. As for government spending, the country ranges between 50-60%, which can be considered not as much problematic but high. France's income inequality is rising only within the bottom 50%. Still, the percentages of that increase are not that much of a change throughout the years. Therefore, it should not be considered one of the most necessary problems. It should not be something that the government would neglect in the future.

In the case of Austria, their public finances can be regarded as highly efficient and stable. The vast majority of their income comes from taxes as well. Consumption taxes follow the social insurance payments. In terms of GDP growth, its range is between 2-4%. In the case of exporting goods and services, Austria is within the scope of 45-55%, with a few annual increases immediately followed by subsequent decreases. Therefore, the country's export is not that highly volatile in the overall analysis. The country's debt to GDP ratio has increased by almost 10%, which is generally not that much. But it should not be neglected possibly; the state shall make an effort to reduce this increase. Austria has a relatively stable level of spending. Still, in the overall analysis, the country is not spending more than 54% of its annual GDP, which can be considered an intermediate level of spending. The income inequality in Austria is for both groups in low percentage. It does not increase much from its initial points in the early 2000s. But the difficult part of Austria's public finance is the ageing issue within their population. This is something that government absolutely should not underestimate or neglect because it could significantly influence the future development of the country and, therefore, the sustainability of their public finance.

At the beginning of the thesis, two null hypotheses were chosen. They have been analyzed to whether they can be accepted or subsequently rejected. The first hypothesis was, the value-added tax is not the most important tax revenue of the state budget of these countries. And the second hypothesis was that most governments create a financial deficit rather than a budget surplus.

In the case of the first null hypothesis, the statement was proven to be true because the value-added tax belongs to consumption taxes. In all three cases, the consumption taxes are not the primary tax source of revenues but the second one within their respective budgets. Therefore the null hypotheses can be accepted.

In the case of the second null hypothesis, it was also proven that the hypothesis states was correct. All states have initially created more budget deficits than surpluses during their years of managing state financial resources. Therefore, the null hypothesis can not be rejected.

In the summary of this diploma thesis, the public finances of the chosen countries are different in specific parts and very similar in others. They face particular challenges that force their respective governments to figure out unique approaches to make those problematic parts of these finances improve for better and maintain their overall long-term sustainability to ensure the quality financial functioning of those states.

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Appendix

Table of population of researched countries through the years.

	Germany			France			Austria	
Year	Population	Growth rate		Population	Growth rate		Population	Growth rate
2000	81400882	-		59015096	-		8069276	-
2001	81453885	0,07%		59384132	0,63%		8097748	0,35%
2002	81535122	0,10%		59803441	0,71%		8134412	0,45%
2003	81614380	0,10%		60251588	0,75%		8175852	0,51%
2004	81646474	0,04%		60697981	0,74%		8216805	0,50%
2005	81602741	-0,05%		61120127	0,70%		8253650	0,45%
2006	81472226	-0,16%		61508926	0,64%		8285343	0,38%
2007	81277830	-0,24%		61869227	0,59%		8313737	0,34%
2008	81065752	-0,26%		62209207	0,55%		8341532	0,33%
2009	80899961	-0,20%		62542900	0,54%		8372663	0,37%
2010	80827002	-0,09%		62879530	0,54%		8409949	0,45%
2011	80855632	0,04%		63222227	0,55%		8453501	0,52%
2012	80972628	0,14%		63564221	0,54%		8502227	0,58%
2013	81174367	0,25%		63893525	0,52%		8556189	0,63%
2014	81450378	0,34%		64193550	0,47%		8615214	0,69%
2015	81787411	0,41%		64453200	0,40%		8678660	0,74%
2016	82193768	0,50%		64667596	0,33%		8747301	0,79%
2017	82658409	0,57%		64842509	0,27%		8819901	0,83%
2018	83124418	0,56%		64990511	0,23%		8891388	0,81%
2019	83517045	0,47%		65129728	0,21%		8955102	0,72%
2020	83783942	0,32%		65273511	0,22		9006398	0,57%

Table 9: Table of population of researched countries through the years (own interpretation).

Table of GDP of researched countries through the years.

	Germany			France			Austria	
Year	GDP in billions of Euros	Growth rate		GDP in billions of Euros	Growth rate		GDP (in billions of Euros)	Growth rate
2000	1 684,06	-	1 180,62	1 365,64	-	170,56	197,29	-

2001	1 682,17	-0,11%	1 191,01	1 377,66	0,88%	170,75	197,51	0,11%
2002	1 796,88	6,82%	1 297,99	1 501,41	8,98%	185,34	214,39	8,55%
2003	2 162,71	20,36%	1 594,64	1 844,54	22,85%	226,74	262,27	22,33%
2004	2 433,05	12,50%	1 901,62	2 199,63	19,25%	260,62	301,46	14,94%
2005	2 461,16	1,16%	1 899,30	2 196,95	-0,12%	273,27	316,09	4,85%
2006	2 588,97	5,19%	2 006,15	2 320,54	5,63%	290,72	336,28	6,39%
2007	2 961,47	14,39%	2 300,13	2 660,59	14,65%	336,46	389,19	15,73%
2008	3 237,84	9,33%	2 533,29	2 930,30	10,14%	373,51	432,05	11,01%
2009	2 949,09	-8,92%	2 334,97	2 700,89	-7,83%	347,33	401,76	-7,01%
2010	2 939,07	-0,34%	2 286,81	2 645,19	-2,06%	339,13	392,28	-2,36%
2011	3 241,34	10,28%	2 476,98	2 865,16	8,32%	373,20	431,69	10,05%
2012	3 049,27	-5,93%	2 320,08	2 683,67	-6,33%	353,93	409,40	-5,16%
2013	3 227,93	5,86%	2 430,92	2 811,88	4,78%	371,91	430,19	5,08%
2014	3 362,18	4,16%	2 469,03	2 855,96	1,57%	382,62	442,58	2,88%
2015	2 902,69	-13,67%	2 108,72	2 439,19	-14,59%	330,22	381,97	-13,69%
2016	2 999,74	3,34%	2 137,92	2 472,96	1,38%	342,21	395,84	3,63%
2017	3 183,67	6,13%	2 243,55	2 595,15	4,94%	360,71	417,24	5,41%
2018	3 426,75	7,64%	2 410,15	2 787,86	7,43%	393,43	455,09	9,07%
2019	3 338,00	-2,59%	2 347,61	2 715,52	-2,59%	384,78	445,08	-2,20%
2020	3 290,40	-1,43%	2 250,34	2 603,00	-4,14%	370,85	428,97	-3,62%

Table 10: Table of GDP of researched countries through the years (own interpretation).

Table of GDP per capita of researched countries through the years.

	Germany			France			Austria	
Year	GDP per capita in Euros	Growth rate		GDP per capita in Euros	Growth rate		GDP per capita in Euros	Growth rate
2000	20 688,50	-		20 005,37	-		21 137,03	-
2001	20 651,79	-0,28%		20 056,04	0,15%		21 086,20	-0,27%
2002	22 038,13	6,64%		21 704,34	8,19%		22 785,15	8,02%
2003	26 499,13	20,29%		26 466,29	21,99%		27 732,51	21,74%
2004	29 799,86	12,53%		31 329,17	14,07%		31 717,60	14,23%
2005	30 160,25	1,21%		31 074,88	2,87%		33 108,40	4,14%
2006	31 777,32	5,31%		32 615,53	4,89%		35 088,44	5,86%
2007	36 436,41	14,54%		37 177,21	13,95%		40 470,53	15,36%

2008	39 940,92	9,54%		40 722,17	9,52%		44 777,69	10,67%
2009	36 453,57	-8,69%		37 333,82	-8,30%		41 483,62	-7,26%
2010	36 362,51	-0,19%		36 368,14	-2,54%		40 325,18	-2,59%
2011	40 088,02	12,35%		39 178,94	7,79%		44 147,78	9,68%
2012	37 658,07	-6,10%		36 499,75	-6,79%		41 628,30	-5,59%
2013	39 765,43	5,57%		38 046,39	4,24%		43 466,38	4,46%
2014	41 278,93	3,73%		38 462,21	1,09%		44 411,89	2,08%
2015	35 490,71	-14,41%		32 717,09	-14,90%		38 049,60	-14,66%
2016	36 496,01	2,51%		33 060,08	1,12%		39 121,83	2,52%
2017	38 515,99	5,74%		34 600,01	4,64%		40 897,41	4,68%
2018	41 224,31	7,31%		37 084,68	7,13%		44 248,78	8,54%
2019	39 967,94	-2,81%		36 045,19	-2,81%		42 967,60	-2,63%
2020	39 272,48	-1,60%		34 475,51	-4,35%		41 176,49	-4,02%

Table 11: Table of GDP per capita of researched countries through the years (own interpretation).

Table of amount of state debt of researched countries through years.

	Germany			France			Austria	
Year	Government debt in billions of Euros	Growth rate		Government debt in billions of Euros	Growth rate		Government debt in billions of Euros	Growth rate
2000	994,692	-		691,969	-		112,780	-
2001	974,559	-2,02%		694,858	0,42%		113,936	1,02%
2002	1072,834	10,08%		782,167	12,56%		123,682	8,55%
2003	1369,237	27,63%		1027,187	31,33%		149,320	20,73%
2004	1581,185	15,48%		1208,305	17,63%		169,893	13,78%
2005	1657,520	4,83%		1279,812	5,92%		187,579	10,41%
2006	1726,967	4,19%		1296,187	1,28%		195,681	4,32%
2007	1895,200	9,74%		1484,422	14,52%		218,806	11,82%
2008	2121,572	11,94%		1742,412	17,38%		256,608	17,28%
2009	2152,574	1,46%		1938,952	11,28%		277,358	8,09%
2010	2419,368	12,39%		1949,639	0,55%		280,445	1,11%
2011	2584,800	6,84%		2175,709	11,60%		307,692	9,72%
2012	2472,345	-4,35%		2102,103	-3,38%		289,946	-5,77%
2013	2539,076	2,70%		2270,765	8,02%		302,231	4,24%
2014	2542,308	0,13%		2342,829	3,17%		321,584	6,40%

2015	2099,077	-17,43%		2015,485	-13,97%		280,335	-12,83%
2016	2078,122	-1,00%		2094,232	3,91%		283,486	1,12%
2017	2072,682	-0,26%		2205,867	5,33%		283,093	-0,14%
2018	2117,129	2,14%		2363,502	7,15%		291,313	2,90%
2019	1990,980	-5,96%		2302,946	-2,56%		271,324	-6,86%
2020	2296,282	15,33%		2616,861	13,63%		311,205	14,70%

Table 12: Table of amount of state debt of researched countries through the years (own interpretation).

Table inflation of researched countries through years.

	Germany			France			Austria	
Year	Inflation %	Growth rate		Inflation %	Growth rate		Inflation %	Growth rate
2000	1,44%	-		1,68%	-		2,34%	-
2001	1,98%	37,50%		1,63%	-2,98%		2,65%	13,25%
2002	1,42%	-28,28%		1,92%	17,79%		1,81%	-31,70%
2003	1,03%	-27,46%		2,10%	9,38%		1,36%	-24,86%
2004	1,67%	62,14%		2,14%	1,90%		2,06%	51,47%
2005	1,55%	-7,19%		1,75%	-18,22%		2,30%	11,65%
2006	1,58%	1,94%		1,68%	-4,00%		1,44%	-37,39%
2007	2,30%	45,57%		1,49%	-11,31%		2,17%	50,69%
2008	2,63%	14,35%		2,81%	88,59%		3,22%	48,39%
2009	0,31%	-88,21%		0,09%	-96,80%		0,51%	-84,16%
2010	1,10%	254,84%		1,53%	1600,00%		1,81%	254,90%
2011	2,08%	89,09%		2,11%	37,91%		3,29%	81,77%
2012	2,01%	-3,37%		1,95%	-7,58%		2,49%	-24,32%
2013	1,50%	-25,37%		0,86%	-55,90%		2,00%	-19,68%
2014	0,91%	-39,33%		0,51%	-40,70%		1,61%	-19,50%
2015	0,51%	-43,96%		0,04%	-92,16%		0,90%	-44,10%
2016	0,49%	-3,92%		0,18%	350,00%		0,89%	-1,11%
2017	1,51%	208,16%		1,03%	472,22%		2,08%	133,71%
2018	1,73%	14,57%		1,85%	79,61%		2,00%	-3,85%
2019	1,45%	-16,18%		1,11%	-40,00%		1,53%	-23,50%
2020	0,51%	-64,83%		0,48%	-56,76%		1,38%	-9,80%

Table 13: Table inflation of researched countries through years (own interpretation).

Table of percentage of unemployment of researched countries through years.

	Germany			France			Austria	
Year	Unemployment %	Growth rate		Unemployment %	Growth rate		Unemployment %	Growth rate
2000	8,0%			9,2%			3,9%	
2001	7,8%	-2,50%		8,5%	-7,61%		4,0%	2,56%
2002	8,6%	10,26%		8,3%	-2,35%		4,4%	10,00%
2003	9,7%	12,79%		8,5%	2,41%		4,8%	9,09%
2004	10,3%	6,19%		8,8%	3,53%		5,5%	14,58%
2005	11,0%	6,80%		8,9%	1,14%		5,6%	1,82%
2006	10,0%	-9,09%		8,8%	-1,12%		5,2%	-7,14%
2007	8,5%	-15,00%		8,0%	-9,09%		4,9%	-5,77%
2008	7,4%	-12,94%		7,5%	-6,25%		4,1%	-16,33%
2009	7,6%	2,70%		9,1%	21,33%		5,3%	29,27%
2010	7,0%	-7,89%		9,3%	2,20%		4,8%	-9,43%
2011	5,8%	-17,14%		9,2%	-1,08%		4,6%	-4,17%
2012	5,4%	-6,90%		9,8%	6,52%		4,9%	6,52%
2013	5,2%	-3,70%		10,3%	5,10%		5,3%	8,16%
2014	5,0%	-3,85%		10,3%	0,00%		5,6%	5,66%
2015	4,6%	-8,00%		10,4%	0,97%		5,7%	1,79%
2016	4,1%	-10,87%		10,0%	-3,85%		6,0%	5,26%
2017	3,8%	-7,32%		9,4%	-6,00%		5,5%	-8,33%
2018	3,4%	-10,53%		9,0%	-4,26%		4,9%	-10,91%
2019	3,2%	-5,88%		8,5%	-5,56%		4,5%	-8,16%
2020	4,2%	31,25%		8,2%	-3,53%		5,3%	17,78%

Table 14: Table of the percentage of unemployment of researched countries through years (own interpretation).

Table of surplus or deficit of researched countries through years.

	Germany			France			Austria	
Year	surplus or deficit in billions Euros	Growth rate		surplus or deficit in billions Euros	Growth rate		surplus or deficit in billions Euros	Growth rate
2000	-0,027	-		-0,016			-0,004	-

2001	-0,051	90,70%		-0,016	5,53%		-0,001	-72,45%
2002	-0,070	36,82%		-0,041	149,72%		-0,003	126,55%
2003	-0,080	15,06%		-0,064	56,10%		-0,004	58,26%
2004	-0,081	1,26%		-0,066	2,75%		-0,013	209,11%
2005	-0,082	0,71%		-0,064	-3,14%		-0,007	-45,26%
2006	-0,043	-47,61%		-0,049	-23,08%		-0,007	7,53%
2007	0,008	-118,05%		-0,061	23,69%		-0,005	-38,17%
2008	-0,004	-148,76%		-0,083	36,35%		-0,006	22,53%
2009	-0,093	2366,13%		-0,168	102,62%		-0,019	231,47%
2010	-0,129	38,51%		-0,157	-6,00%		-0,015	-18,64%
2011	-0,029	-77,80%		-0,128	-18,92%		-0,010	-36,72%
2012	0,003	-109,96%		-0,116	-9,49%		-0,008	-18,70%
2013	0,001	-99,55%		-0,099	-14,09%		-0,007	-6,39%
2014	0,019	1409,65%		-0,096	-2,89%		-0,010	43,99%
2015	0,028	43,09%		-0,076	-20,71%		-0,003	-68,06%
2016	0,035	24,84%		-0,078	1,72%		-0,005	57,44%
2017	0,043	24,57%		-0,066	-14,64%		-0,003	-43,94%
2018	0,063	45,16%		-0,055	-16,79%		0,007	-327,31%
2019	0,051	-19,32%		-0,072	30,91%		0,002	-64,94%
2020	-0,143	-382,43%		-0,207	185,76%		-0,031	-1226,71%

Table 15: Table of surplus or deficit of researched countries through years (own interpretation).

Table of health expenditures of researched countries through years.

	Germany			France			Austria	
Year	Health expenditures in billions of Euros	Growth rate		Health expenditures in billions of Euros	Growth rate		Health expenditures in billions of Euros	Growth rate
2000	130 045 661	-		89 256 798	-		11 857 542	-
2001	130 250 120	0,16%		91 214 756	2,19%		11 871 634	0,12%
2002	142 030 201	9,04%		103 000 198	12,92%		13 024 813	9,71%
2003	173 488 764	22,15%		126 667 648	22,98%		16 127 392	23,82%
2004	186 507 267	7,50%		146 744 585	15,85%		18 568 096	15,13%
2005	191 199 778	2,52%		152 657 536	4,03%		19 461 229	4,81%
2006	197 489 226	3,29%		160 906 584	5,40%		20 615 532	5,93%
2007	223 018 759	12,93%		182 753 361	13,58%		23 850 209	15,69%

2008	249 115 934	11,70%		203 484 911	11,34%		27 231 075	14,18%
2009	276 185 344	10,87%		201 660 348	-0,90%		26 673 548	-2,05%
2010	271 456 004	-1,71%		195 728 810	-2,94%		25 874 129	-3,00%
2011	290 369 042	6,97%		210 576 544	7,59%		27 919 749	7,91%
2012	274 611 664	-5,43%		199 434 044	-5,29%		26 957 888	-3,45%
2013	297 639 976	8,39%		211 563 044	6,08%		28 309 560	5,01%
2014	312 068 765	4,85%		217 959 087	3,02%		29 360 467	3,71%
2015	273 274 688	-12,43%		184 905 057	-15,17%		25 354 122	-13,65%
2016	284 187 313	3,99%		203 617 701	10,12%		26 201 608	3,34%
2017	304 877 280	7,28%		211 491 289	3,87%		27 726 530	5,82%
2018	331 439 306	8,71%		225 414 422	6,58%		30 379 992	9,57%
2019	330 344 481	-0,33%		218 368 176	-3,13%		30 204 927	-0,58%
2020	350 925 346	6,23%		238 450 016	9,20%		32 557 105	7,79%

Table 16: Table of health expenditures of researched countries through years (own interpretation).

Table of tax revenues of researched countries through years.

	Germany			France			Austria	
Year	Tax revenues in billions of Euros	Growth rate		Tax revenues in billions of Euros	Growth rate		Tax revenues in billions of Euros	Growth rate
2000	213,4	-		299,0	-		48,4	-
2001	205,9	-3,53%		310,8	3,95%		53,3	10,09%
2002	205,9	0,01%		309,8	-0,34%		52,9	-0,82%
2003	210,3	2,13%		311,8	0,65%		53,4	1,02%
2004	203,9	-3,02%		326,5	4,72%		55,1	3,20%
2005	210,8	3,38%		340,4	4,25%		56,0	1,67%
2006	223,8	6,13%		360,7	5,98%		58,0	3,50%
2007	244,9	9,46%		371,3	2,92%		62,3	7,48%
2008	252,6	3,12%		379,0	2,09%		66,2	6,24%
2009	245,6	-2,76%		346,6	-8,57%		62,8	-5,15%
2010	248,1	1,02%		378,7	9,27%		64,7	2,96%
2011	267,4	7,77%		388,2	2,52%		68,2	5,42%
2012	275,9	3,18%		406,9	4,80%		71,4	4,77%
2013	282,2	2,30%		424,8	4,42%		74,0	3,56%
2014	290,6	2,97%		430,5	1,32%		76,1	2,86%
2015	300,3	3,34%		440,9	2,42%		79,8	4,94%

2016	306,1	1,94%		445,5	1,04%		78,6	-1,57%
2017	322,5	5,34%		469,3	5,34%		81,2	3,30%
2018	333,3	3,36%		493,8	5,22%		84,7	4,37%
2019	342,5	2,74%		517,4	4,78%		87,9	3,77%
2020	374,9	9,46%		497,5	-3,85%		82,2	-6,54%

Table 17: Table of tax revenues of researched countries through years (own interpretation).

Table of government expenditures of researched countries through years.

	Germany			France			Austria	
Year	Government expenditures in billions of Euros	Growth rate		Government expenditures in billions Euros	Growth rate		Government expenditures in billions Euros	Growth rate
2000	571	-		564	-		85	-
2001	577	1,12%		590	4,60%		89	4,02%
2002	592	2,62%		623	5,55%		90	1,40%
2003	604	1,90%		643	3,30%		92	2,40%
2004	594	-1,54%		663	3,08%		102	10,36%
2005	603	1,49%		689	3,92%		101	-0,97%
2006	602	-0,22%		714	3,64%		105	3,75%
2007	605	0,53%		742	3,85%		108	3,19%
2008	622	2,86%		770	3,76%		113	4,85%
2009	656	5,47%		804	4,45%		119	5,26%
2010	695	5,94%		851	5,84%		119	-0,33%
2011	672	-3,31%		847	-0,47%		122	2,73%
2012	676	0,58%		868	2,50%		127	4,19%
2013	694	2,59%		881	1,49%		131	2,70%
2014	710	2,33%		897	1,86%		137	4,79%
2015	732	3,14%		912	1,64%		138	0,66%
2016	756	3,27%		925	1,42%		139	1,02%
2017	793	4,87%		948	2,43%		142	1,76%
2018	812	2,43%		955	0,82%		146	2,84%
2019	851	4,72%		975	2,08%		149	2,69%
2020	741	-12,84%		906	-7,09%		79	-47,11%

Table 18: Table of government expenditures of researched countries through years (own interpretation).

Table of surplus or deficit of researched countries as % of GDP through years.

	Germany			France			Austria	
Year	surplus or deficit as % of GDP	Growth rate		surplus or deficit as % of GDP	Growth rate		surplus or deficit as % of GDP	Growth rate
2000	-1,60%	-		-1,30%	-		-2,40%	-
2001	-3,00%	87,50%		-1,40%	7,69%		-0,70%	-70,83%
2002	-3,90%	30,00%		-3,20%	128,57%		-1,40%	100,00%
2003	-3,70%	-5,13%		-4,00%	25,00%		-1,80%	28,57%
2004	-3,30%	-10,81%		-3,60%	-10,00%		-4,80%	166,67%
2005	-3,30%	0,00%		-3,40%	-5,56%		-2,50%	-47,92%
2006	-1,70%	-48,48%		-2,40%	-29,41%		-2,50%	0,00%
2007	0,30%	-117,65%		-2,60%	8,33%		-1,40%	-44,00%
2008	-0,10%	-133,33%		-3,30%	26,92%		-1,50%	7,14%
2009	-3,20%	3100,00%		-7,20%	118,18%		-5,30%	253,33%
2010	-4,40%	37,50%		-6,90%	-4,17%		-4,40%	-16,98%
2011	-0,90%	-79,55%		-5,20%	-24,64%		-2,60%	-40,91%
2012	-0,80%	-11,11%		-5,00%	-3,85%		-2,20%	-15,38%
2013	-0,36%	-55,00%		-4,10%	-18,00%		-2,00%	-9,09%
2014	0,60%	-266,67%		-3,90%	-4,88%		-2,70%	35,00%
2015	1,00%	66,67%		-3,60%	-7,69%		-1,00%	-62,96%
2016	1,20%	20,00%		-3,60%	0,00%		-1,50%	50,00%
2017	1,30%	8,33%		-3,00%	-16,67%		-0,80%	-46,67%
2018	1,80%	38,46%		-2,30%	-23,33%		0,20%	-125,00%
2019	1,50%	-16,67%		-3,00%	30,43%		0,60%	200,00%
2020	-4,30%	-386,67%		-9,10%	203,33%		-8,30%	-1483,33%

Table 19: Table of surplus or deficit of researched countries as % of GDP through years. (own interpretation).

Table of tax revenues as% of GDP through years.

	Germany			France			Austria	
Year	tax revenues as % of GDP	Growth rate		tax revenues as % of GDP	Growth rate		tax revenues as % of GDP	Growth rate
2000	36,369%	-		43,430%	-		42,285%	-

2001	35,127%	-3,41%		43,101%	-0,76%		43,886%	3,79%
2002	34,559%	-1,62%		42,404%	-1,62%		42,697%	-2,71%
2003	34,745%	0,54%		42,239%	-0,39%		42,409%	-0,67%
2004	34,329%	-1,20%		42,413%	0,41%		41,958%	-1,06%
2005	34,419%	0,26%		42,904%	1,16%		41,012%	-2,25%
2006	34,938%	1,51%		43,273%	0,86%		40,408%	-1,47%
2007	35,375%	1,25%		42,545%	-1,68%		40,548%	0,35%
2008	35,844%	1,33%		42,332%	-0,50%		41,391%	2,08%
2009	36,682%	2,34%		41,528%	-1,90%		40,980%	-0,99%
2010	35,531%	-3,14%		42,145%	1,49%		40,958%	-0,05%
2011	36,085%	1,56%		43,334%	2,82%		41,119%	0,39%
2012	36,816%	2,03%		44,360%	2,37%		41,767%	1,58%
2013	36,954%	0,37%		45,367%	2,27%		42,635%	2,08%
2014	36,812%	-0,38%		45,449%	0,18%		42,699%	0,15%
2015	37,263%	1,23%		45,281%	-0,37%		43,126%	1,00%
2016	37,722%	1,23%		45,374%	0,21%		41,789%	-3,10%
2017	37,793%	0,19%		46,068%	1,53%		41,757%	-0,08%
2018	38,544%	1,99%		45,926%	-0,31%		42,212%	1,09%
2019	38,812%	0,70%		45,401%	-1,14%		42,444%	0,55%
2020	33,383%	-13,99%		45,316%	-0,19%		42,400%	-0,10%

Table 20: Table of tax revenues as% of GDP through years. (own interpretation).

Table of government debt as% of GDP through years.

	Germany			France			Austria	
Year	government debt as% of GDP	Growth rate		government debt as% of GDP	Growth rate		government debt as% of GDP	Growth rate
2000	59,30%	-		58,90%	-		66,10%	-
2001	58,20%	-1,85%		58,30%	-1,02%		66,70%	0,91%
2002	59,90%	2,92%		60,30%	3,43%		66,70%	0,00%
2003	63,50%	6,01%		64,40%	6,80%		65,90%	-1,20%
2004	65,20%	2,68%		65,90%	2,33%		65,20%	-1,06%
2005	67,50%	3,53%		67,40%	2,28%		68,60%	5,21%
2006	66,90%	-0,89%		64,60%	-4,15%		67,30%	-1,90%

2007	64,20%	-4,04%		64,50%	-0,15%		65,00%	-3,42%
2008	65,70%	2,34%		68,80%	6,67%		68,70%	5,69%
2009	73,20%	11,42%		83,00%	20,64%		79,90%	16,30%
2010	82,50%	12,70%		85,30%	2,77%		82,70%	3,50%
2011	79,90%	-3,15%		87,80%	2,93%		82,40%	-0,36%
2012	81,20%	1,63%		90,60%	3,19%		81,90%	-0,61%
2013	78,80%	-2,96%		93,40%	3,09%		81,30%	-0,73%
2014	75,70%	-3,93%		94,90%	1,61%		84,00%	3,32%
2015	72,30%	-4,49%		95,60%	0,74%		84,90%	1,07%
2016	69,30%	-4,15%		98,00%	2,51%		82,80%	-2,47%
2017	65,10%	-6,06%		98,30%	0,31%		78,50%	-5,19%
2018	61,80%	-5,07%		98,00%	-0,31%		74,00%	-5,73%
2019	59,70%	-3,40%		97,60%	-0,41%		70,50%	-4,73%
2020	69,80%	16,92%		115,70%	18,55%		83,90%	19,01%

Table 21: Table of Government debt as% of GDP through years. (own interpretation).

Table of government health expenditures as % of GDP through years.

	Germany			France			Austria	
Year	government health expenditures as % of GDP	Growth rate		government health expenditures as % of GDP	Growth rate		government health expenditures as % of GDP	Growth rate
2000	9,888%	-		9,584%	-		9,204%	-
2001	9,920%	0,324%		9,706%	1,273%		9,269%	0,706%
2002	10,184%	2,661%		10,022%	3,256%		9,395%	1,359%
2003	10,402%	2,141%		10,083%	0,609%		9,547%	1,618%
2004	10,146%	-2,461%		10,164%	0,803%		9,709%	1,697%
2005	10,311%	1,626%		10,215%	0,502%		9,627%	-0,845%
2006	10,180%	-1,270%		10,393%	1,743%		9,531%	-0,997%
2007	10,051%	-1,267%		10,331%	-0,597%		9,532%	0,010%
2008	10,251%	1,990%		10,512%	1,752%		9,726%	2,035%
2009	11,238%	9,628%		11,297%	7,468%		10,226%	5,141%
2010	11,097%	-1,255%		11,240%	-0,505%		10,221%	-0,049%
2011	10,776%	-2,893%		11,202%	-0,338%		10,026%	-1,908%

2012	10,847%	0,659%		11,313%	0,991%		10,199%	1,726%
2013	10,992%	1,337%		11,436%	1,087%		10,286%	0,853%
2014	11,016%	0,218%		11,581%	1,268%		10,368%	0,797%
2015	11,178%	1,471%		11,466%	-0,993%		10,367%	-0,010%
2016	11,230%	0,465%		11,501%	0,305%		10,352%	-0,145%
2017	11,322%	0,819%		11,391%	-0,956%		10,383%	0,299%
2018	11,430%	0,954%		11,258%	-1,168%		10,326%	-0,549%
2019	11,900%	4,112%		11,500%	2,150%		10,400%	0,717%
2020	12,500%	5,042%		11,300%	-1,739%		11,400%	9,615%

Table 22: Table of government health expenditures as % of GDP through years. (own interpretation).

Table of government spending as % of GDP through years.

	Germany			France			Austria	
Year	government spending as % of GDP	Growth rate		government spending as % of GDP	Growth rate		government spending as % of GDP	Growth rate
2000	47,80%	-		51,70%	-		51,00%	-
2001	47,40%	-0,84%		51,70%	0,00%		51,40%	0,78%
2002	47,90%	1,05%		52,80%	2,13%		51,10%	-0,58%
2003	48,30%	0,84%		53,30%	0,95%		51,30%	0,39%
2004	46,80%	-3,11%		53,00%	-0,56%		53,70%	4,68%
2005	46,80%	0,00%		53,30%	0,57%		51,20%	-4,66%
2006	45,20%	-3,42%		52,90%	-0,75%		50,40%	-1,56%
2007	43,40%	-3,98%		52,60%	-0,57%		49,20%	-2,38%
2008	44,20%	1,84%		53,30%	1,33%		49,90%	1,42%
2009	48,20%	9,05%		57,20%	7,32%		54,10%	8,42%
2010	48,10%	-0,21%		56,90%	-0,52%		52,80%	-2,40%
2011	45,20%	-6,03%		56,30%	-1,05%		50,90%	-3,60%
2012	44,90%	-0,66%		57,10%	1,42%		51,20%	0,59%
2013	44,90%	0,00%		57,20%	0,18%		51,60%	0,78%
2014	44,30%	-1,34%		57,20%	0,00%		52,40%	1,55%
2015	44,10%	-0,45%		56,80%	-0,70%		51,10%	-2,48%
2016	44,40%	0,68%		56,70%	-0,18%		50,10%	-1,96%
2017	44,20%	-0,45%		56,50%	-0,35%		49,30%	-1,60%
2018	44,50%	0,68%		55,60%	-1,59%		48,70%	-1,22%

2019	45,20%	1,57%		55,40%	-0,36%		48,60%	-0,21%
2020	51,10%	13,05%		62,10%	12,09%		57,90%	19,14%

Table 23: Table of government spending as % of GDP through years. (own interpretation).