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AUTHOR’S ABSTRACT

BETWEEN EFFICIENCY AND FAIRNESS: AN ASSESSMENT OF THE EFFECTS OF THE FLAT TAX IN THE COUNTRIES OF CENTRAL AND EASTERN EUROPE

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Introduction

Relevance and Significance of the Topic

The introduction argues that the study of the rise and subsequent partial retreat from proportional income taxation in the countries of Central and Eastern Europe (CEE) constitutes a research problem that is both scientifically relevant and practically significant. Its scholarly significance is established by positioning the dissertation within the field of the political economy of transition, where post-socialist transformations are interpreted as a distinctive "natural experimental environment." The underlying logic is that, within a relatively short historical period, a large number of states implemented radical institutional changes, thereby providing a rich basis for the comparative analysis of public policies and their consequences. It is emphasized that the proportional personal income tax represents a theoretically intriguing case because it constitutes a radical departure from the progressive models prevailing in developed democracies, which are grounded in the principle of ability to pay. Particularly important is the emphasis placed on the phenomenon of a "wave" of adoptions (1994–2010) across numerous CEE countries: this empirical regularity makes it possible to search for common mechanisms of institutional diffusion, to compare trajectories, and to formulate testable explanations for the causes both of adoption and of the subsequent adjustment or abandonment of the reform.

The argument concerning the contemporary relevance of the topic also introduces the broader global context, namely the ongoing debate on economic inequality and the role of tax policy as a key instrument of redistribution. The introduction explicitly links the topic to the analyses and recommendations of international organizations such as the IMF, OECD, and World Bank, emphasizing that tax design affects not only secondary distribution (through taxes and transfers), but also social cohesion and the sustainability of public finances. The relevance of the topic is further reinforced by historical distance: more than three decades after the beginning of the reform wave, a sufficiently long horizon is now available for assessing the initial promises of growth, investment, discipline, and revenue performance against actual macroeconomic and social indicators. The introduction implicitly assumes that "short-horizon" analysis focused narrowly on the moment of reform is often misleading, and that only a longer-term perspective permits a more meaningful evaluation.

At the regional level, the tension between efficiency and equity is brought into sharp relief: the introduction of flat rates is treated as an "extreme" fiscal solution whose long-term effects are important not only for CEE, but also as a lesson for other developing economies, where similar reforms periodically emerge as political projects. The introduction also identifies intra-regional heterogeneity: after 2010, some countries (e.g. Slovakia, the Czech Republic, and Hungary) reintroduced progressive elements, whereas others (e.g. Bulgaria) retained a low-rate proportional regime. This divergence is used as an additional rationale for the systematic explanation of the factors underlying different institutional choices.

Economic Context of the Post-Socialist Transformation

The institutional background of the transition is examined in detail: the collapse of the socialist regimes generated the need to construct a new fiscal architecture. Particular attention is given to the initial conditions, characterized by complex tax systems, multiple rates and exemptions, low tax compliance, limited administrative capacity, and weak tax culture. Against this background, the flat tax is presented as an ostensibly "elegant" solution, promising simplification, lower administrative costs, and stronger incentives for economic activity. The introduction recalls the theoretical articulation of the flat tax by Hall and Rabushka and situates it within the broader debate on optimal taxation, including the work of Mirrlees. The essential argument is that, although the concept has an intellectual history, it was precisely the post-socialist context that provided an environment for its large-scale practical implementation.

The explanatory model advanced in the introduction is twofold. On the one hand stands the ideational diffusion of neoliberal concepts, supported by consultants, think tanks, and political entrepreneurs who framed the flat tax as a symbol of modernization and a “break” with the socialist past. On the other hand are pragmatic motives: the simplification of tax regimes, the attraction of foreign investment through signaling a favorable business environment, the improvement of discipline and tax collection, and competitive pressures among states.

The introduction also underlines an important methodological premise: the “flat tax” is not a homogeneous institution. There are important variations in the rate structure, the tax-free threshold, the breadth of the tax base, exemptions, and the interaction with social security contributions. Consequently, comparative analysis cannot be reduced to a binary distinction between the presence or absence of a flat tax; if the aim is to explain effects and differences validly, the specific design of the regime must be taken into account.

Research Questions and Hypotheses

The introduction formulates four central research questions that clearly structure the analysis.

The first question (RQ1) concerns the determinants of adoption: which economic, political, and ideational factors explain the widespread adoption of proportional taxation in CEE during the period 1994–2010? The focus is on the political economy of the reform—who promoted it, why, and under what conditions—including the role of international influences and domestic political entrepreneurs.

The second question (RQ2) examines the economic effects of the reform: how is it associated with growth, investment, budget revenues, and tax discipline? The introduction clearly indicates that the key objective here is to test the promises advanced by proponents of the flat tax, while explicitly distinguishing between short-term coincidence and more durable causal relationships.

The third question (RQ3) is concentrated on distributive consequences: what impact does the reform have on income distribution and inequality? The approach is normatively sensitive yet empirically oriented: the flat tax is treated as a potential channel through which the redistributive capacity of the tax system may be weakened.

The fourth question (RQ4) addresses reversibility: why did some states abandon the proportional model and return to progressive elements after 2010, while others retained it? Here the analysis moves from “adoption” to “political correction,” suggesting that the durability of the regime depends on fiscal and social tensions, as well as on political competition.

On this basis, four hypotheses (H1–H4) are formulated in direct correspondence to the research questions. H1 posits that adoption was driven more by ideational diffusion and political signaling—modernization and pro-Western orientation—than by demonstrated economic necessity. H2 assumes limited or statistically insignificant effects on growth and investment once other factors are controlled for, such as EU membership, structural reforms, and global conditions. H3 posits an increase in inequality through the weakening of redistributive effectiveness. H4 assumes that the retreat from flat taxation after 2010 was motivated primarily by fiscal pressures and public demand, rather than by a purely ideological transformation.

Research Methodology

The methodological framework outlined in the introduction is presented concisely as a mixed-methods approach combining quantitative and qualitative instruments. It is argued that quantitative methods provide generalizability and statistical testing of hypotheses across a broad set of observations, whereas qualitative case studies offer context, mechanisms, and a more nuanced causal interpretation.

The quantitative component employs panel data for the countries of CEE covering the period 1995–2024 and combines macroeconomic indicators (GDP and growth, inflation, unemployment, FDI, revenues and expenditures, fiscal balance), tax indicators (rates, system structure, revenues by category), and inequality indicators (Gini coefficients). The introduction also identifies the principal data sources, including the World Bank, IMF, European Commission/AMECO, Eurostat/EU-SILC, LIS, WID, OECD, and others.

The qualitative component is implemented through case studies of selected countries representing different trajectories: Estonia (regime durability), Bulgaria (low rate, high inequality, and low revenue performance), Slovakia (adoption followed by abandonment), and Romania (prolonged debates and gradual reintroduction of progressive elements). For each case, the analysis examines the context of adoption, the design of the reform, its economic and social outcomes, the evolution of political discourse, and the reasons for subsequent corrections. The methods of qualitative analysis include documentary analysis—laws, parliamentary transcripts, government reports, reports of international organizations, think-tank publications, and media sources—as well as comparative historical analysis aimed at reconstructing mechanisms and critical junctures.

The introduction also explicitly acknowledges the limitations of the approach: data problems, especially for the early years and for inequality measures; difficulties of causal identification, despite the use of DiD and synthetic control methods; limitations to the external validity of the case studies; and the potential incompleteness of long-term effects within the available time horizon. This constitutes an important scholarly gesture, insofar as it delineates the boundaries of interpretation and disciplines the conclusions that may be drawn.

Structure of the Dissertation

The introduction provides a clear map of the dissertation: an introductory section, six chapters, a conclusion, and appendices. Chapter One develops the theoretical framework and literature review, including the channels through which taxation may affect growth, labor supply, investment, and distribution, as well as the political-economic logic of the reforms. Chapter Two reconstructs the institutional history of reforms in CEE and clarifies the analytical content of the concept of the "flat tax" by emphasizing design features and differences concealed behind formally similar rates. Chapter Three presents the data, definitions, policy operationalization, and empirical models (two-way fixed effects, clustered standard errors, and DiD/event-study approaches), and discusses identification risks. Chapter Four reports the panel results together with robustness and placebo tests, as well as heterogeneity analysis. Chapter

Five develops the Bulgarian case study and the counterfactual evaluation, including synthetic control, interpreted in light of broader regional regularities. Chapter Six synthesizes the evidence into policy implications, with particular attention to the design of the tax system and its interaction with the burden of social security contributions. The conclusion summarizes the findings, answers the research questions, formulates the dissertation's contributions and limitations, and outlines avenues for future research, while the appendices ensure transparency by providing additional tables, tests, and definitions.

Chapter I: Theoretical Foundations and Literature Review

Chapter I performs a dual function: (i) it constructs the conceptual framework for evaluating alternative income tax regimes (progressive versus proportional), and (ii) it systematizes the empirical evidence on the effects of introducing a proportional (flat) tax in the countries of Central and Eastern Europe (CEE) and beyond. As a result, the chapter legitimizes the choice of the research questions and disciplines prior expectations: rather than treating the flat tax as a "universal good" or a "universal evil," it demonstrates why its evaluation is inevitably context-dependent and requires careful identification of causal relationships.

In its opening part, the debate between progressive and proportional taxation is presented as a classical dispute concerning the aims of fiscal policy and the welfare state. First, progressivity is interpreted as an institutional expression of vertical equity and the ability-to-pay principle: ceteris paribus, the tax burden should increase with an individual's economic capacity to contribute. Second, the progressive tax schedule is presented as a key instrument of redistribution, especially where inequality is high and transfer systems alone do not offset market-generated disparities. Third, progressive taxation is examined as an automatic stabilizer: when incomes decline, the tax burden decreases more sharply, thereby limiting the procyclicality of disposable income and consumption.

The proportional (flat) tax is presented as a regime based on a single rate levied on income (often in combination with a tax-free threshold or deductions), claiming to simplify the system and reduce distortions. The arguments advanced in its favor are structured around administrative simplicity, stronger incentives for labor supply and entrepreneurship (through lower marginal rates), horizontal equity (equal treatment of equal incomes), and the role of low tax rates under conditions of globalization and tax competition. Also important is the implicit claim that, in an environment of weak administrative capacity, simplicity may possess intrinsic value—not merely as convenience, but as a condition of feasibility.

Within the theoretical framework, however, a key warning is introduced at the outset: "progressive" and "proportional" are not pure ideal types. Real-world systems contain exemptions, tax-free thresholds, social security contributions, and parallel regimes, all of which may render a formally flat tax de facto more complex, while making a formally progressive system less progressive than expected. This prepares the ground for the subsequent critique of simplified political assertions.

The Theory of Optimal Taxation

The second part places the debate within the framework of optimal taxation theory. The point of departure is the model of Mirrlees (1971), which formalizes the problem of optimal nonlinear income taxation under conditions of information constraints and heterogeneity of abilities. In this approach, the optimal tax schedule is not derived from an ideological conception of "justice," but from the maximization of a social welfare function subject to the constraint that higher tax rates distort the choice between labor and leisure and encourage avoidance or evasion.

The discussion of results associated with Mirrlees and subsequent contributions (including Diamond and Saez, 2011) has two major implications. On the one hand, theory underscores that optimal design depends on empirical parameters—such as labor supply elasticities, the mobility of the tax base, and income structures—as well as on normative preferences, including the weights assigned to different income groups. On the other hand, the conclusion is that optimal taxation theory does not provide an automatic "theoretical justification" for a flat tax: under realistic assumptions, the optimal system often contains a certain degree of progressivity, especially when society places value on redistribution and social insurance.

At this point, the chapter develops a methodologically important line of reasoning: if even rigorous theory does not yield a universal answer, then empirical analysis becomes decisive, but it must be designed in such a way as to distinguish the effects of the tax regime itself from those of accompanying reforms and broader macroeconomic trends.

The Trade-Off Between Efficiency and Equity

The third part formulates the central dilemma: the trade-off between efficiency and equity. Progressive rates may increase distortions and the deadweight losses associated with taxation, yet at the same time they strengthen the redistributive function, social cohesion, and the role of the state as a stabilizer. A proportional tax may potentially minimize distortions affecting work and entrepreneurship, but it may also reduce redistribution and exacerbate inequality if transfer mechanisms are weak or if the tax burden is shifted onto more vulnerable groups through indirect taxes and social contributions. The essential point is that the chapter refuses to reduce the dilemma to a binary choice. Instead, it presents tax policy as an optimization problem under constraints: administrative capacity, the structure of the economy, the legitimacy of institutions, and public willingness to sustain solidarity. It is precisely this perspective that prepares the subsequent political economy analysis.

The Political Economy of Tax Policy in Transition Economies

In this section, the adoption and diffusion of the flat tax in CEE are interpreted through the logic of tax competition. In conditions of mobile capital and (partially) mobile labor, states have incentives to reduce tax rates in order to attract investment and retain their tax base. This mechanism may generate a "race to the bottom" dynamic, in which individually rational behavior leads to a collectively inefficient outcome—namely, the underfunding of public goods and social systems. The chapter emphasizes that the flat tax is often presented politically as a competitive advantage and a signal to investors, but it warns that this signal has a cost if the revenue base is not sufficiently broad or if public services deteriorate. Here a key political economy hypothesis emerges: some reforms may be explained not so much by internal optimality as by strategic interaction among states, especially during periods of integration and liberalization.

The Political Economy of Transition and the Role of Ideas

The following section highlights the role of ideas, expert networks, and political entrepreneurship. The diffusion of the flat tax in CEE is presented as an example of a policy driven not only by econometrically established effects, but also by "narratives of modernization" and symbolic differentiation from the socialist legacy. In this context, the chapter draws on the literature on policy diffusion and the influence of international actors and think tanks, including the analysis of Appel and Orenstein (2016) concerning the role of neoliberal ideas in major transformations, including the flat tax and pension privatization.

An important implication follows: the "rationality" of the reform cannot be assessed solely through ex post macroeconomic indicators; it is also necessary to understand the political coalitions and ideological frameworks that render certain decisions likely, even when empirical support is limited.

The Median Voter Theory and Tax Policy

This section formulates an empirical paradox. The median voter theorem suggests that when median income lies below mean income, the majority should support stronger redistribution and progressive taxation, since the median voter is a net beneficiary. Nevertheless, a number of post-socialist states adopted a flat tax, including in contexts of rising inequality. The chapter proposes political economy explanations: limited political representation and participation, the weakness of class voting, the misalignment between material interest and political behavior, as well as cognitive and behavioral mechanisms. Particular attention is given to the prospect-of-upward-mobility hypothesis (Bénabou and Ok, 2001): voters may support lower taxes on high incomes if they expect that they themselves may enter this group in the future. In addition, the chapter underscores the influence of elites and political finance as mechanisms capable of shifting tax policy away from the "median" logic and toward the interests of higher-income groups.

Philosophical Foundations of Tax Justice

At this point, the chapter explicitly asserts the normative depth of the debate. Three classical lines of argument are presented: the utilitarian tradition (Bentham, Mill), the egalitarian perspective (Rawls), and the libertarian position (Nozick, 1974). The utilitarian argument justifies progressivity through the diminishing marginal utility of income. The Rawlsian framework legitimizes progressive taxation as an instrument for protecting the least advantaged and promoting social justice. The libertarian critique views taxation as a restriction on property rights and argues for a minimal state and a narrowly defined legitimacy of redistribution. To these is added a social contract perspective (drawing on Rousseau), which interprets taxes as the price of collective coexistence and as a legitimate resource for financing public goods. In the context of post-socialist economies, these philosophical foundations are refracted through historical memory: on the one hand, there is a desire for individual freedom and a "break" with repressive practices; on the other hand, there is a growing expectation of public protection and a reduction in inequalities. In this way, the chapter demonstrates that tax justice is not abstract, but institutionally and historically conditioned.

Review of the Empirical Literature

The empirical part of the chapter is structured so as to contrast popular arguments with actual scientific findings, while systematically emphasizing methodological difficulties, including identification problems, accompanying reforms, and differences in system design.

This section begins with early interpretations of the Russian experience (the 2001 reform), often used as a "showcase" of flat tax effectiveness. It discusses the influence of Ivanova, Keen, and Klemm (2005), who analyze the increase in revenues following the reform and its interpretation in public debate. It then introduces the critical perspective: subsequent analyses call into question the simple causal claim "flat tax → growth/revenue," since revenue dynamics may reflect broader institutional changes, cyclical factors, or improvements in administration.

The global comparative analysis of Sabirianova Peter, Buttrick, and Duncan (2010) is used as a general conclusion: flat taxation in itself does not guarantee economic success, and its effects depend on accompanying policies and the institutional environment. In a synthetic study, Keen, Kim, and Varsano (2008) emphasize that revenue success is often a product of base broadening and administrative improvements rather than of the change in the rate schedule as such.

With respect to foreign direct investment, the chapter adopts a more skeptical assessment: the evidence is even more ambiguous, and the literature on corporate taxation and investment decisions (e.g. Devereux and Griffith, 2003) suggests that investors respond to a complex set of factors in which the tax rate is only one element. The conclusion is that it is difficult to identify a durable and separable effect of the flat personal income tax on investment without a carefully constructed counterfactual framework.

Effects on Inequality and the Distribution of Income

Here theory suggests the direction of the effect—namely, a weakening of redistributive power in the transition from progressivity to a single rate—but the chapter explicitly clarifies that both the magnitude and even the sign of the effect depend on system design and on transfer arrangements. Comparative studies such as Paulus and Peichl (2009) are included, as they analyze redistributive effectiveness in a European context and show that CEE countries often possess a weaker redistributive function than the welfare states of Western Europe.

Barrios et al. (2020) are used to underscore that redistribution is not a function of the income tax alone, but of the overall policy “package”: tax-free thresholds, social contributions, indirect taxes, and transfers. Bulgaria is presented as a particularly illustrative case because of the combination of a low rate, high inequality, and limited redistributive correction. The inclusion of Vasilev (2015), based on a calibrated dynamic stochastic model, makes it possible to show that under different social weights the reform may lead to different welfare evaluations; under egalitarian preferences, welfare losses dominate. Stephenson (2018) enriches the debate by arguing that modifications in design—such as a tax-free threshold—may improve fairness without necessarily undermining simplicity.

Tax Compliance, Revenue Collection, and the Shadow Economy

The third empirical strand addresses the frequently repeated claim that the flat tax increases revenue collection by reducing incentives for evasion. The chapter proceeds cautiously: the empirical evidence is mixed, and identification is difficult. Using microdata, Gorodnichenko et al. (2009) find limited or conditional effects, suggesting that the channel “low rate → compliance” is not automatic.

The synthesis by Slemrod and Yitzhaki (2002) serves as the theoretical and empirical basis for a key conclusion: tax compliance is a function of administrative capacity, technology, monitoring, and sanctions. Consequently, even if the rate matters, it is rarely sufficient in itself. With respect to the shadow economy, the main emphasis falls on institutional quality and enforcement rather than on the specific level of the tax rate.

Comparative Studies and Synthetic Assessments

The chapter then presents more recent evaluation methods based on counterfactual constructions. Adhikari and Alm (2016) are cited as an example of the use of synthetic control to evaluate the effects of a flat tax. Particularly important for the overall logic of the dissertation is the fact that this discussion prepares the methodological justification for the dissertation's own synthetic analysis of the Bulgarian experience. The inclusion of Kosuliev and Stanev (2025) further legitimizes this choice and allows for a discussion of results related to revenue dynamics and the conditions under which losses may be offset through base broadening and administrative improvement. Kovács (2021) adds a comparative political economy reading according to which the adoption of the flat tax is often not the result of a strictly evidence-based choice, but rather of political dynamics and symbolic objectives.

Retreat from and Modification of the Proportional Tax

The final part of the empirical literature review examines the durability of the regime through cases of retreat. Slovakia is presented as a key example: the return to progressive elements is interpreted as a response to fiscal needs and social pressure. Senaj et al. (2016) analyze the causes and emphasize that such change may increase revenues while generating only limited negative effects on labor supply. The OECD report by Remeta et al. (2015) systematizes the process of "design correction" and concludes that the long-term challenge lies in balancing efficiency and equity, rather than in dogmatic adherence to a single model.

Critical Analysis of the Arguments "For" and "Against" the Proportional Tax

The final analytical part is structured as a critical reassessment of the public debate through the prism of theoretical and empirical findings.

On the side of the arguments "for" the flat tax, five qualifications are introduced. Administrative simplicity is partially valid, but its force weakens in the digital era and in the presence of numerous exemptions; a flat tax may become complex if the base is eroded. The claims of efficiency and growth are supported by rather limited empirical evidence; under realistic elasticities, the effects of lower marginal rates are modest. Tax compliance may improve, but only when accompanied by investments in administration and enforcement. The attraction of investment can rarely be attributed unequivocally to the flat personal income tax, while excessively low revenues may undermine competitiveness through deteriorating public services. Horizontal equity is not a sufficient normative criterion if society values vertical equity and the principle that higher incomes should bear a larger relative share.

On the side of the arguments "against" the flat tax, analytical discipline is likewise introduced: the flat tax does not "always" lead to a dramatic increase in inequality, because the effect depends on the tax-free threshold and transfers; it does not "always" generate a fiscal crisis, since compensation through base broadening and improved collection is possible, although empirically difficult to achieve; and it is not necessarily a purely ideological project in every case, since the concrete coalitions and motivations vary across countries and periods.

The final thesis is that a nuanced approach is required: the optimal choice depends on institutional capacity, the degree of inequality, public preferences for solidarity, fiscal needs, and the package of accompanying reforms. This position is central to the dissertation as a whole, because it removes the privilege of a priori assessments and places empirical identification at the center of the analysis.

Conclusions and Link to the Next Chapter

The chapter concludes by emphasizing that the theoretical framework and the literature point to a “mixed picture”: there is no consensus regarding strong and universal positive effects of the flat tax on growth, investment, or tax compliance, whereas distributive consequences appear more likely, though strongly dependent on design and social policy. This logically leads into the following chapter, which must specify the institutional history and the varieties of reform in CEE.

The essence of Chapter I lies in the fact that it does not merely juxtapose different theoretical conceptions, but integrates three levels of analysis—optimal taxation, political economy, and empirical verification.

Chapter II: The Development of the Idea of Proportional Taxation in Central and Eastern Europe: Chronology and Comparative Analysis

Chapter II has a clearly defined purpose: to trace how proportional taxation—most commonly referred to in public and political discourse as the “flat tax”—emerged as a reformist idea, evolved into a dominant institutional model in a substantial part of post-socialist Europe, and subsequently began to be modified or partially abandoned. The conceptual focus is twofold. On the one hand, the chapter reconstructs the wave of institutional diffusion, namely when, where, and under what conditions the regime was introduced. On the other hand, it delineates the conditionality of outcomes: the same “nominal” policy (a single tax rate) may generate different economic and social consequences depending on its design, the level of administrative capacity, and the accompanying policy framework.

Framing the Question and the Analytical Framework

At the outset, the chapter formulates the problem as an examination of the transition from progressive tax schedules to single-rate systems (and, in some cases, the reverse transition) within the broader context of post-socialist transformation. The flat tax is presented as an institutional solution legitimized through three principal arguments: the simplification of the tax system, the reduction of incentives for tax evasion, and the enhancement of competitiveness through a lower tax burden on income and/or capital. The key contribution of this framing lies in the critical qualification introduced at the very beginning: the flat tax is not a “unified package,” but rather a family of regimes. Actual progressivity may be reintroduced through tax-free thresholds, tax credits, family allowances, additional rates for high incomes, as well as through the interaction between income taxation and the burden of social security contributions. Consequently, comparative analysis cannot be reduced to the binary distinction of whether a flat tax exists or not; it requires tracing institutional evolution and the specific features of design.

Classification of Subperiods: The Logic of Diffusion and Reversibility

Chapter II structures the historical dynamics into four subperiods, each characterized by distinct mechanisms and dominant constraints.

1990–1999: Post-socialist transition. This was the phase of institutional “reconfiguration,” during which fiscal systems were being constructed under conditions of limited administrative capacity, high uncertainty, and significant structural shocks. It was also during this period that the first radical reforms emerged, especially in the Baltic states, which functioned as “pioneer” models for the region.

2000–2007: Preparation for and accession to the European Union. The second phase was one of accelerated institutional convergence and active signaling to investors. In this context, the flat tax became an instrument of tax competition and part of broader packages of structural reforms combined with privatization, liberalization, and European integration.

2008–2012: Global financial crisis. The third phase altered the criteria of evaluation. Some states retained low tax rates as an instrument of competitiveness, but the crisis brought fiscal sustainability, revenue needs, and social expenditure to the forefront. As a result, both temporary adjustments, including tax increases, and the initial discussions on restoring progressive elements became observable.

2013–2024: Relative maturity and policy reconsideration. The fourth phase may be described as a phase of "second-generation" reforms: a partial return to progressivity, the introduction of supplementary rates for high incomes, the expansion of family allowances, and the recalibration of the tax base and tax administration. It is precisely here that the chapter places particular emphasis on reversibility: in some countries the flat tax proved to be politically and fiscally sustainable, whereas in others it became merely an intermediate stage in the transition toward more hybrid systems.

Comparative Analysis by Country: Design, Motivation, and Evolution

The central part of the chapter consists of a detailed comparative chronology by country. The approach is deliberately institutional: for each state, the chapter traces the motives for reform, the specific parameters adopted (rates and structural features), and the subsequent adjustments introduced over time.

The second analytical axis of the chapter is the comparison of outcomes across key dimensions, with conclusions formulated cautiously and with strong emphasis on context.

Growth and investment. The chapter demonstrates that the high growth observed in some countries with a flat tax, particularly during the period 2000–2007, coincided with catch-up convergence, credit cycles, and European integration. At the same time, countries without a flat tax also achieved stable growth, which limits the possibility of attributing the observed acceleration to the tax reform itself. The crisis of 2008–2009 further underlined this conditionality: the Baltic economies, for example, experienced substantial downturns, directing attention toward macro-financial vulnerabilities rather than toward the tax schedule as the dominant explanatory factor.

Tax revenues and fiscal sustainability. The principal finding here is that the introduction of flat rates was often accompanied by a decline in personal income tax revenues as a share of GDP, albeit to varying degrees and for differing durations, while compensation was typically sought through tax base adjustments, social contributions, and indirect taxation. The chapter emphasizes that sustainability depends less on "flatness" as such than on the institutional framework of budgetary policy and the ability to maintain discipline during periods of crisis.

Inequality and distributive effects. The analysis indicates that countries which adopted lower and less strongly corrected flat tax regimes were more often associated with weaker redistributive correction and with greater tension concerning the fairness of the tax mix. The inclusion of contrasting cases involving progressive systems makes it possible to articulate an important thesis: the preservation of progressivity is not incompatible with growth and macroeconomic stability, but it presupposes a different social contract regarding taxation and public services.

The shadow economy and tax collection. The chapter systematizes evidence showing that in some cases, such as Russia, the reform was followed by improved reporting and/or a decline in informal employment, but the conclusion remains conditional: effects on revenue collection are mediated by administration, enforcement, and the quality of institutions. Therefore, a low rate may serve as a supporting factor, but it is rarely a sufficient explanation in itself.

The labor market and employment. Here the chapter adopts a skeptical position toward strong claims about a "stimulating effect." The dynamics of employment and unemployment are presented as being dominated by cyclical factors, structural reforms, migration, and demography, rather than by changes in the tax schedule alone.

In its overall synthesis, the chapter formulates a balanced triad of effects: positive effects (simplification and signaling within the framework of tax competition), negative effects (revenue constraints and a weaker redistributive function under certain designs), and ambiguous or conditional outcomes (growth, investment, and the shadow economy), all of which depend on the institutional environment and the accompanying policy framework.

Conclusions and Link to the Next Chapter

The concluding section of Chapter II condenses three groups of findings.

First, the spread and the retreat of proportional taxation are interpreted as an empirical fact: the wave of adoption was strong but not universal, and after 2010 there emerged a tendency toward hybridization and the partial restoration of progressive elements.

Second, the conditionality of outcomes is presented as the central political economy lesson: the flat tax is best understood as an institutional "module" that may function relatively effectively under conditions of stable institutions, a broad tax base, and disciplined fiscal policy, but becomes problematic where capacity is weak, informality is high, and policies are procyclical.

Third, the chapter establishes the direct link to the methodological plan of the dissertation: the necessity of a systematic empirical strategy capable of distinguishing correlation from causation, accounting for heterogeneity across countries and periods, and isolating the effect of the reform from accompanying processes. This prepares the ground for Chapter III, where the research methodology is described in detail. Chapter II is particularly important as an "institutional bridge" between theory and econometrics: it does not merely list reforms, but arranges them within a clear periodization and demonstrates why purely descriptive comparison is insufficient. Its most valuable result lies in the emphasis placed on hybrid constructions and reversibility: this is precisely the empirical reality that later justifies the use of DiD/event-study and counterfactual approaches in the dissertation.

Chapter III: Data, Methodology, and Research Strategy

Chapter III performs a fundamental function within the dissertation: it constructs the empirical "skeleton" through which the normative and political-economic claims developed in the preceding chapters are translated into testable hypotheses and estimable effects. In this chapter, the analysis moves from the descriptive and institutional level to causal inference by defining: (i) the panel dataset, (ii) the outcome measures and control variables, (iii) the treatment variable (the introduction of the flat tax), (iv) the principal econometric specifications, and (v) the package of robustness checks and tests of the key assumptions.

Purpose of the Chapter and the Logic of Identification

The point of departure of Chapter III is clearly defined: the wave-like and asynchronous introduction of the flat tax across the countries of Central and Eastern Europe creates natural variation over time and across states, thereby allowing the application of quasi-experimental methods. This setting is treated as suitable for a combination of panel models with two-way fixed effects and a difference-in-differences design, complemented by event-study dynamics. The argument is that such an approach absorbs persistent cross-country differences (institutions, economic structure, historical trajectories), as well as common year-specific shocks (crises, global cycles), while identification is derived from the variation in the timing of reform.

An important methodological element is the emphasis placed on the contemporary critique of standard TWFE estimators in the presence of heterogeneous treatment effects and staggered treatment timing. For this reason, the framework is extended through the use of event-study specifications and DiD estimators that are robust to effect heterogeneity, with the objective of minimizing the risk that the results are merely artifacts of model specification.

Panel Dataset: Coverage, Sample, and Basic Descriptive Characteristics

Chapter III defines a panel dataset for the countries of Central and Eastern Europe covering the period 1995–2024, at annual frequency. The selected time horizon is sufficiently long to encompass pre-reform trends, the reforms themselves, and long-term post-reform dynamics.

The descriptive statistics serve two purposes. First, they demonstrate the magnitude and variation of the key indicators. Second, they justify the need for fixed effects and for disciplined identifying assumptions. Considerable variation is observed in economic growth, as well as substantial variation in public debt and fiscal aggregates, which is typical for the region and the period under consideration, including episodes of crisis. An important empirical detail is that approximately half of the observations fall under a flat-tax regime, indicating that the "treatment" is not a marginal phenomenon, but rather a widely diffused institutional arrangement within the panel.

Data Sources and the Measurement of Variables

The data section is developed with a high degree of transparency: the key variables, their definitions, units, and sources are presented explicitly. The core macroeconomic and fiscal indicators are drawn primarily from Eurostat and supplemented, where necessary for completion or verification, by secondary sources such as the World Bank's World

Development Indicators, the IMF's World Economic Outlook, and OECD statistics. The set of dependent (outcome) variables includes indicators of economic performance, fiscal position, and social outcomes: real GDP growth, government revenues and expenditures (as a percentage of GDP), budget balance/deficit, gross public debt, unemployment/employment, and measures of inequality, including the Gini coefficient based on disposable income.

In addition, a separate block of variables is constructed for investment and openness: net FDI inflows (from UNCTAD/WDI), gross fixed capital formation, and other macroeconomic controls such as inflation and the current account balance. This makes it possible to interpret the empirical results in terms of potential mechanisms rather than as a mere "black box."

Defining the "Flat Tax" as a Variable

The key empirical choice in Chapter III is the definition of treatment through a binary dummy variable that takes the value of 1 for the years following the introduction of a flat income tax schedule in a given country, and 0 beforehand. States that did not adopt such a reform during the entire period (e.g. Poland, Slovenia, Croatia) serve as the control group, while differences in the timing of adoption create the basis for DiD identification. This operationalization has two advantages, both of which are clearly implied in the chapter. First, it is compatible with panel fixed-effects estimation and allows for a "clean" before/after distinction. Second, it extends naturally to event-study specifications, in which the effect can be traced year by year relative to the reform through a lead/lag structure, thereby permitting a direct test of the parallel trends assumption.

Panel Models with Fixed Effects: Baseline Specification and Interpretation

The basic econometric instrument is a panel regression model with two-way fixed effects (country and year). The conceptual logic is standard: country fixed effects absorb time-invariant unobserved differences (institutions, geography, inherited structures), while year fixed effects absorb common shocks. To this is added a set of control variables designed to reduce the risk that the estimated treatment effect captures parallel macroeconomic processes. The choice between fixed and random effects is conceptually linked to the Hausman test, which reflects methodological discipline in model specification. An important empirical feature, emphasized in the appendices and tables, is the use of standard errors clustered at the country level, which is critical in panel settings with a limited number of groups and potential serial correlation over time.

Difference-in-Differences and Event Study: Design, Assumptions, and Validation

The section on DiD systematizes the central intuition of the method: the change in the outcome variable for the treated group before and after the reform is compared with the corresponding change for the control group over the same period, thereby eliminating persistent differences and common temporal trends. Chapter III devotes attention both to the formal structure of the approach and to the graphical interpretation of parallel trends, thereby preparing the reader for the diagnostics presented in the following chapters.

The event-study extension serves two functions: (i) it makes it possible to estimate the dynamic profile of the effect, that is, whether it is temporary, delayed, or increasing over time, and (ii) it provides a direct test and visual verification of the parallel trends assumption through the coefficients on the leads prior to the reform. The appendices reveal precisely this logic: pre-reform differences are small and statistically insignificant, whereas post-reform differences increase and become statistically significant after a certain lag, thereby supporting the plausibility of the identifying assumption, at least for part of the specifications.

Robustness Checks: Placebo Tests, Sensitivity Analysis, Alternative Control Groups, and Synthetic Counterfactuals

One of the important features of this part of the study is the explicit structuring of the robustness package. The logic is straightforward: if the effect is "real," it should remain visible under a range of reasonable variations in specification, sample composition, and counterfactual construction.

First, placebo tests with false reform dates examine whether the observed effect is the product of random coincidence or of a general trend unrelated to the reform. The placebo results presented in the chapter show attenuation or disappearance of the effect when the "reform" is shifted to arbitrary years, which is consistent with the claim that the baseline effect is not merely statistical noise.

Second, the sensitivity analysis with respect to the definition of the control group, including subsamples and alternative groups, is intended to test whether the results hold only for one particular selection of countries. The appendices demonstrate that the estimates remain of a similar order of magnitude across different control sets, thereby strengthening confidence in the stability of the principal findings.

Limitations and Interpretive Discipline

Chapter III clearly articulates the limits of the empirical strategy. The most substantial risk is endogeneity: tax reforms are not random, but often form part of broader policy packages or are undertaken in response to macroeconomic tensions, political cycles, and external pressures. Consequently, the causal interpretation is valid only insofar as the parallel trends assumption is plausible and insofar as there are no systematic coincident changes that differentiate treated and control countries precisely around the time of reform. For this reason, the robustness package is not a decorative addition, but a central component of the credibility argument.

Conclusions and Link to the Next Chapter

In the conclusion to the chapter, the author summarizes that the empirical architecture established here—panel models with fixed effects, DiD/event-study designs, and contemporary robust estimators, complemented by an extensive series of robustness tests—is appropriate to the research objective: namely, to estimate the average effect of the flat tax on growth, fiscal indicators, inequality, and investment under maximally transparent assumptions. In this way, Chapter III provides the direct foundation for Chapter IV, where this methodology is applied and the principal empirical findings, together with their interpretation across different channels, are reported.

Chapter IV: Empirical Analysis – Economic and Social Consequences of the Introduction of Proportional Taxation in the Countries of Central and Eastern Europe

Descriptive Statistics and Graphical Analysis

The chapter begins with a descriptive picture of the panel sample (330 observations) and with visualizations that position the reforms within the broader macroeconomic dynamics of the region. The descriptive statistics show high variability in growth (an average of 3.51% with substantial fluctuations, including sharp declines in crisis years), as well as pronounced differences in fiscal indicators: average budget revenues amount to approximately 38.75% of GDP, expenditures to approximately 41.87%, which is consistent with an average deficit of roughly 3% of GDP. Public debt varies within an exceptionally wide range, which preliminarily suggests strong heterogeneity in fiscal capacity and sustainability. The average Gini coefficient is 29.51, with more moderate variation compared to growth and debt, which is typical for aggregate inequality indicators. At the same time, almost half of the observations (49.7%) are under a flat-tax regime, which allows an empirical comparison between regimes over time.

The correlation analysis is used as a preliminary orientation, rather than as evidence of causality. It shows that the flat tax is strongly negatively correlated with revenues and expenditures (indicative of a smaller public sector), and strongly positively correlated with inequality (Gini), which is consistent with the theoretical logic of reduced progressivity. At the same time, growth has weak correlations with most variables, which motivates a multivariate regression design and caution in the interpretation of "naive" comparisons.

The graphical presentations in this part systematically emphasize cross-country heterogeneity (distributions by year, median and interquartile range) and clearly distinguishable regime and period "breaks" around 2008 and around 2020, especially with respect to debt and some external indicators. This visual framework prepares the argument that the effects of the tax regime cannot be assessed without controlling for common shocks and without distinguishing cyclical from structural components.

Effects on Economic Growth

The empirical analysis of growth is formulated around real GDP per capita growth and is examined through a series of specifications: a baseline fixed-effects model, extensions with control variables (including investment), and dynamic elements (lags), as well as control for the fiscal position with the argument that tax reforms are often part of broader policy packages. In the main regressions presented, the coefficient on the flat-tax indicator is positive and statistically significant, but it declines when the specification is enriched, which is indicative that part of the "initial" association overlaps with other determinants of growth. The dynamic (event-study) reading is essential for the interpretation: before the reform, the estimated coefficients by year are close to zero and statistically insignificant, which supports the assumption of the absence of systematic pre-trends. After the reform, a divergence in favor of the treated countries is observed, while the graphical tests for parallel trends show small and insignificant differences in the pre-reform period and increasing differences thereafter, which become significant in the later years after the reform.

In the section on robustness, it is emphasized that under stricter and more causally oriented specifications (including different control groups and matching), the positive effect on growth remains, but is more moderate in magnitude (approximately 0.6–0.7 percentage points), while statistical significance is often at the margin of standard levels. This is an important step toward the thesis that the "strong" promises of a dramatic acceleration of growth are empirically weakly supported and that the effect, if it exists, is rather modest and context-dependent.

Effects on the Labor Market

The analysis of the labor market is structured so as to test whether the change in tax incentives leads to measurable effects on employment/unemployment at the macro level. The regression results show low explanatory power and a lack of convincing statistical significance in most specifications. The interpretation is that the dynamics of unemployment and employment in the region are dominated by cyclical and structural factors (labor market institutions, human capital, technological change), rather than by changes in income tax rates.

In addition, the possibility is considered that the tax reform manifests itself through labor force participation (activity), rather than through an immediate decline in unemployment. The results are interpreted as consistent with a slight increase in activity (approximately +1 percentage point), but without a correspondingly strong improvement in unemployment, which limits the argument for a significant "bonus" from the flat tax.

Effects on Foreign Direct Investment (FDI)

The section on FDI offers rather a "corrective" to the popular thesis that the flat tax automatically increases investment attractiveness. In the main specifications, the coefficient on the flat tax is negative and statistically significant, with estimates of approximately -2.4 to -3.0 (depending on the model) when the dependent variable is net FDI inflow as a percentage of GDP. This means that in the panel sample the adoption of a flat tax is associated with a decline, rather than an increase, in FDI, controlling for fixed effects and global cycles.

The interpretative framework, however, is cautious: the negative sign is not presented as a "paradox," but as a probable result of the endogeneity of the reform and its timing relative to the life cycle of FDI in transition economies (waves of privatization, subsequent normalization of flows), as well as of the fact that investment decisions depend on corporate taxation, the regulatory environment, and macroeconomic stability no less, and often more, than on personal income taxation. From this follows the thesis that the flat tax is not a reliable instrument for the "guaranteed" attraction of external capital and that the effect is strongly conditioned by accompanying policies and shocks.

Effects on Income Inequality

The section on inequality follows a clear conceptual line: progressive tax rates by definition strengthen the redistributive function, whereas the transition to proportional taxation reduces progressivity and, in the absence of compensatory mechanisms (tax-free threshold, transfers), creates conditions for higher post-tax inequality. The descriptive graphs show a dynamic which, even before the econometric analysis, suggests the direction of the effect.

The regression results confirm this direction: the introduction of a flat tax is associated with an increase in the Gini coefficient of approximately 0.84–1.22 points, with the effect becoming statistically significant in the more complete specifications. The interpretation emphasizes that, although the absolute magnitude may appear “moderate,” it is substantial from the point of view of the function of the tax system and is consistent with the theoretical mechanism of reduced progressivity.

Effects on Budget Revenues

The analysis of revenues is structured around the idea that the flat tax may create immediate pressure on revenue capacity, but that the final effect is empirically ambiguous due to compensations (base broadening, changes in other taxes, improved collection) and due to dominant macro shocks. In the main regressions, the effect on total budget revenues (as a percentage of GDP) is negative and in some specifications statistically significant (of the order of approximately -0.9 to -1.0 percentage points).

At the same time, the additional checks suggest that under stricter statistical procedures (including bootstrap) the negative effect may also appear larger in absolute magnitude, which raises the question of the sensitivity of the estimate to specification and method. The important conclusion of the section lies not in “one single” value, but in the combination of a robust sign (downward) and argued caution regarding causal attribution in the aggregate of total revenues.

Effects on Public Debt

The section on debt is conceptually elaborated: the relationship between the tax regime and debt is not mechanical, but mediated by growth, the sustainability of revenues, expenditure pressures, the political economy of legitimacy, and tax competition. The graphical presentations show a structural increase in debt after 2008 and especially after 2020, with substantial cross-country differentiation, which makes the “average” relationship difficult to interpret without context.

The econometric estimates of the effect of the flat tax on debt are reported as weakly convincing from the point of view of statistical reliability (p-values, which in many cases are above conventional levels), which is consistent with the idea that debt dynamics are driven by multiple jointly operating factors. Here the analytical emphasis is that the flat tax should not be treated as an “independent cause,” but as an element of an institutional architecture that may increase the probability of a more unfavorable debt trajectory under certain shocks and political constraints.

Effects on Automatic Fiscal Stabilizers

This section adds a key dimension to the assessment of the reforms: not only how the flat tax is associated with the levels of indicators, but how it affects the stabilizing function of the budget, that is, the automatic response of the budget balance to the economic cycle. The main result is that under a flat tax the semi-elasticity of the cyclical budget balance with respect to the output gap is reduced in a statistically and economically significant way, which is interpreted as a weakening of automatic stabilizers.

The decomposition by channels shows that the mechanism manifests itself predominantly through the expenditure side: under a progressive regime, cyclical expenditures are clearly countercyclical (negative slope with respect to the gap), whereas under a flat tax this countercyclicality weakens substantially (a significant “upward shift”). The revenue channel, in aggregate form, does not show convincingly different cyclical sensitivity. In the section on robustness, it is shown that the erosion of stabilizers is clearer after 2008, under higher public debt and under greater external exposure, which is economically plausible: it is precisely then that the cost of weaker automatic stabilization becomes more visible.

General Overview of the Results

In the summary section, the results are integrated into a unified picture: the flat tax is associated with (i) a moderate and specification-sensitive growth effect, (ii) a lack of convincing effects on the labor market, (iii) a negative association with FDI in the panel estimates, (iv) a moderate but statistically significant increase in inequality (approximately +1 Gini point), (v) negative pressure on revenues/expenditures, and (vi) a substantial weakening of automatic stabilizers, which changes the way in which the fiscal system reacts to the cycle. It is precisely the latter result that is presented as particularly relevant for small open economies with limited alternatives for macroeconomic stabilization, since it raises the question of sustainability not only in terms of "average growth rates," but in terms of the capacity to respond under shocks.

Robustness of the Results and Alternative Specifications

The package of robustness checks is presented as a critical bridge between "estimates" and "conclusions." Alternative time windows are used (for example, excluding the earliest years of transition or restricting the analysis to the pre-pandemic period), as well as a leave-one-out analysis (testing whether the results are driven by a single country), together with alternative control groups and matching procedures. In addition, tests for parallel trends, sensitivity to the choice of the control group, and bootstrap confidence intervals are employed, which show: marginal significance of the growth effect under stricter criteria, but strong statistical robustness for part of the fiscal and distributive results (revenues/expenditures and inequality), while the effects on unemployment remain unconvincing.

Transition to the Next Chapter

Chapter IV performs the role of a panel "general diagnostic" for the region: it shows what the average empirical "message" of the data is and which effects are robust to alternative specifications, before moving to a narrower and normatively more charged question concerning a specific country. It is precisely for this reason that the following chapter—the focus on Bulgaria—is a natural continuation: it allows a counterfactual reconstruction and an assessment of "was it worth it?", which cannot be answered solely by means of average panel effects.

Chapter V: Focus on Bulgaria – “Was It Worth Introducing a Flat Tax?”

Chapter V represents a deliberate “narrowing of the lens”: following the panel estimates for the region, the author shifts the analysis to one specific case—Bulgaria—and transforms the empirical results into an intuitively formulated question of public choice. The formulation “was it worth it” is methodologically ambitious, because it requires not only a positive description of effects, but also an explicit normative framing of the trade-off between efficiency (e.g. growth, sustainability) and fairness (distribution, inequality). For this reason, the chapter is structured into four subsections: operationalization of the question, counterfactual simulation, a “snapshot” for 2024 in the absence of a flat tax, and political options/scenarios.

Operationalization of the Question: From “Positive Effects” to Normative Evaluation

The first subsection resolves a fundamental problem: empirical analysis can estimate average effects on different indicators, but in itself it does not provide an automatic answer as to whether a given reform is “good.” For this to be done, a normative criterion must be chosen, i.e. how society weighs the benefits and costs. Two classical frameworks are proposed. One is a criterion in the spirit of Nicholas Kaldor and John Hicks: if the reform generates a sufficiently large “surplus” (for example, a higher level of GDP), the winners could theoretically compensate the losers, and the reform could be justified in the presence of appropriate compensatory policies. The other framework is a social welfare function with an explicit attitude toward inequality (inequality aversion): under high aversion, even a moderate growth effect may fail to justify an increase in inequality, especially if the instruments for compensation are politically or administratively constrained.

This normative clarification has two consequences for the overall conclusion of the chapter. First, “was it worth it” becomes a conditional statement: the answer depends on the chosen social weights, not only on the sign of the coefficient. Second, the evaluation of the reform must take into account that in the Bulgarian institutional and political environment compensatory mechanisms (transfers, targeting, administrative capacity) may be insufficient, which makes the purely Kaldor-Hicks argument more difficult to apply in practice.

As context, the chapter recalls the main characteristics of the Bulgarian case: the introduction of the flat tax in 2008 at a very low rate (10%) and the parallel reduction of the corporate tax; political legitimation through arguments of competitiveness and investment; and a persistent public discussion of regressive effects and inequality, without any subsequent institutional “retreat” from the regime. This context is important because it suggests that in Bulgaria the dispute is not merely econometric, but in essence concerns a social contract regarding the size of the state, redistribution, and legitimacy.

Counterfactual Simulation for Bulgaria: Method and Key Assumptions

The second subsection presents the counterfactual design for Bulgaria, constructed on the basis of two mutually complementary methodologies—Synthetic Control Method (SCM) and Difference-in-Differences (DiD). The analysis covers seven outcome variables: economic growth, FDI, tax revenues, budget deficit, public debt, the Gini coefficient, and unemployment. For each variable, four estimates of the average treatment effect on the treated (ATT) are calculated: SCM without controls, SCM with controls, DiD without controls, and DiD with controls. This architecture makes it possible not only to obtain a point estimate, but also to assess the sensitivity of the results to the choice of method and specification.

The methodological advantage of this approach is that it combines a transparent counterfactual construction with a statistical assessment of uncertainty. SCM is used to construct a "synthetic Bulgaria" as a weighted combination of countries without an analogous reform, while DiD compares Bulgaria's pre- and post-reform dynamics with those of a control group. The dissertation explicitly presents tests for parallel trends as well: the assumption is satisfied for the Gini coefficient and unemployment, but violated for growth, FDI, the budget deficit, and public debt, which is why the DiD estimates for these variables are interpreted cautiously and only in conjunction with SCM and robustness checks.

It is particularly important that the chapter does not derive a mechanical "true" counterfactual, but disciplines interpretation through a set of alternative specifications, exclusion of crisis years, changes in the pre-intervention window, and placebo tests. Consequently, the quantitative estimates for Bulgaria should be read as a range of plausible effects, rather than as a single point forecast.

Counterfactual Picture for Bulgaria: 2024 Without a Flat Tax

The third subsection synthesizes the main quantitative results. For economic growth, all four estimates are positive: +1.092 and +0.760 percentage points according to SCM, and +1.746 and +0.617 percentage points according to DiD. For FDI, the results are mixed—SCM gives positive estimates (+0.768 and +1.612 percentage points of GDP), while DiD shows negative effects (-4.492 and -4.109 percentage points of GDP), which does not permit an unambiguous conclusion regarding the investment channel. For tax revenues, the effect is consistently negative: between -6.073 and -9.180 percentage points of GDP under SCM, and between -0.865 and -1.362 percentage points of GDP under DiD. The budget deficit also yields a contradictory picture: SCM implies an increase in the deficit of about 2.2 percentage points of GDP, while DiD estimates rather a reduction, but without statistical persuasiveness.

The clearest results are those for public debt and inequality. For public debt, all estimates are negative—from -3.301 to -4.096 percentage points of GDP under SCM, and from -7.641 to -6.091 percentage points of GDP under DiD—which means a lower debt-to-GDP ratio in the observed world with a flat tax. For inequality, all estimates are positive: +6.352 and +8.656 Gini points under SCM, and +2.943 and +0.451 points under DiD. It is precisely this result that is the most robust from the point of view of identification, since for Gini the parallel trends test does not reject the validity of the DiD design.

In order to assess the cumulative effect on the level of economic activity, the dissertation transforms the growth estimates into a GDP index with base year 2007 = 100. With an average observed annual growth of about 2.5% for the period 2008–2024, the index for actual Bulgaria in 2024 is 151.0. The counterfactual trajectory without a flat tax reaches 133.7 according to SCM and 125.7 according to DiD. This means that under these assumptions GDP in 2024 would have been approximately 17% lower according to SCM and about 25% lower according to DiD. The author explicitly emphasizes that this is a sensitive result, dependent on methodology and on the coincidence of the reform with other major shocks and structural changes.

In the interpretation of the counterfactual picture, an important distinction is made between levels and ratios to GDP. A reduction in tax revenues as a share of GDP does not necessarily mean a decline in nominal revenues; it is possible that revenues rise in absolute terms, but more slowly than GDP. By the same logic, a lower debt-to-GDP ratio may reflect both fiscal discipline and the mechanical effect of a higher denominator under faster growth. Consequently, the "positive" result for debt does not eliminate the revenue cost of the reform, but shows that different macro-fiscal indicators respond through different channels.

The graphical comparisons between actual and synthetic Bulgaria complement this conclusion. They show relatively consistent divergence in growth and inequality after 2008, but considerably greater instability in FDI and the budget deficit. This is the reason why the chapter treats the latter two indicators as analytically significant, but empirically more uncertain.

Political Options and Possible Scenarios for Bulgaria

The fourth subsection translates the counterfactual results into the language of economic policy. Three main scenarios are examined: retention of the flat tax with a tax-free threshold; a moderately progressive system with two or three brackets; and retention of the flat rate together with the introduction of a refundable tax credit for low-income workers. All three scenarios are evaluated not only with respect to efficiency, but also with respect to their distributive consequences, revenue effect, and administrative feasibility.

The scenario with a tax-free threshold preserves much of the administrative simplicity and low marginal rates, but improves the protection of low-income groups at the cost of additional short-term revenue pressure. The moderately progressive variant offers a better balance between fairness and revenue capacity, but at the cost of a more complex design and probably weaker incentives for the highest incomes. The scenario with a tax credit for the working poor is presented as a particularly interesting compromise, since it allows correction of regressivity without a sharp abandonment of the simple tariff structure.

The normative conclusion of the chapter is cautious, but clear: the answer to the question of whether "it was worth it" depends on the social weights that society places on growth, fiscal sustainability, and distributive justice. If the efficiency criterion dominates, the results may be read in favor of the reform; if greater weight is assigned to inequality, revenue adequacy, and social cohesion, the evaluation becomes substantially more critical.

Thus, the political options are not reduced to a binary choice between a "flat" and a "progressive" tax, but to a choice of institutional package. This is precisely the broader lesson of the Bulgarian case: the design of income taxation must be considered jointly with the transfer system, property taxation, tax administration, and the stabilizing function of the budget.

Chapter V reaches a conditional, but analytically robust conclusion. The flat tax in Bulgaria is associated with a moderately positive effect on growth and a lower debt-to-GDP ratio, but also with pronounced losses in terms of tax revenues and especially distributive justice. Consequently, the final evaluation of the reform cannot be one-dimensional: it depends on whether the leading criterion is the maximization of growth, the preservation of revenue capacity, or the limitation of inequality.

Chapter VI: Discussion – Interpretation, Context, and Implications

Chapter VI performs the role of an analytical "bridge" between the empirical results (panel estimates, DiD and event-study dynamics, counterfactuals for Bulgaria) and their normative and policy-oriented reading. It structures the discussion around four interrelated tasks: (i) positioning the results in relation to the existing academic literature; (ii) clarifying the mechanisms through which the flat tax may affect growth, employment, investment, inequality, and fiscal sustainability; (iii) deriving implications for economic policy (especially for Bulgaria), while taking into account the conditional nature of the effects; and (iv) clearly formulating the limitations of the study and the boundaries of interpretation.

Comparison with the Literature: Where There Is Convergence and Where There Is Tension

At the beginning of the chapter, the principal contribution of the empirical part is systematized through comparison with previous academic results on flat taxes in transition economies. The key message is one of "nuanced confirmation": the effects are neither categorically positive nor categorically negative, but appear as a combination of moderate gains in terms of efficiency and pronounced costs in terms of distribution and political sustainability.

With regard to economic growth, the chapter emphasizes that the results of the dissertation are consistent with the dominant empirical thesis of "small to moderate" growth effects, dependent on the design of the reform and the accompanying policies. This dependence on design is central: the same nominal rate may imply different real incentives if it is combined with a different tax base, tax-free threshold, tax credits, and social security burdens, that is, with a different tax wedge.

With regard to distributive effects, the discussion is stricter and less conditional: flat taxation, especially when combined with the elimination of a tax-free threshold and credits for low incomes, has a clearly pronounced tendency toward regressivity and an increase in inequality. The interpretation is considered not as an "anomaly" of a particular state, but as a regularity, validated by comparable results for other countries.

A substantial contribution of this section is the critique of simplified arguments from public debate. On the one hand, the thesis that the flat tax "by definition reduces the budget" does not receive automatic support at the aggregate level (revenues and the deficit are often estimated close to zero). On the other hand, the absence of an aggregate decline in revenues does not mean the absence of distributive effects: it is possible for the tax mix to be rearranged (for example, a greater role for indirect taxes), without a change in the total revenue share.

Interpretation of the Mechanisms: How the Flat Tax "Works"

In the next part, the discussion moves from statistical effects to causal stories that are at once economically plausible and compatible with what is established in the data. It is clearly stated that the mechanisms are multiple and interact, which makes one-factor explanations methodologically inappropriate.

The first central mechanism is "tax compliance and base broadening": lower marginal rates may reduce incentives for evasion and facilitate administration, which—under certain institutional conditions—leads to higher collection and a broader tax base. Here the interpretation is conditional: the effect is more likely and stronger in an environment of weak initial administrative capacity, where the simplicity and clarity of the regime may have real value, but only if they are combined with modernization of the administration.

The second mechanism is "incentives and the tax wedge": the focus shifts from the formal tariff to the wedge between the gross cost of labor and net income, which summarizes the incentives for labor, formalization, and declaration. In theory, the flat tax is argued as an instrument for reducing distortions of labor and capital; in practice, however, if social security burdens and indirect taxes are high, the overall wedge may remain substantial, and the expected "supply-side" effect on activity may be limited. This leads to the conclusion that the key sufficient statistic for policy is the wedge, and not the nominal rate in itself.

A third mechanism is "political economy and signaling": the introduction of the flat tax may serve as a signal to investors and international institutions of market orientation and commitment to reform, including through regional diffusion and imitation. At the same time, the chapter notes a limit to this channel: the signal is short-term and may be "neutralized" if the institutional environment (rule of law, predictability, corruption risks) does not support the promise of investment attractiveness.

A fourth mechanism is "fiscal sustainability through second-round interactions." The author emphasizes that even small structural effects on the balance, combined with the absence of a sustained growth effect and recurrent shocks, may accumulate into a more unfavorable debt trajectory. The argument here is that the flat regime is not a "cause in itself," but may be part of an institutional architecture that makes more likely the combination of limited revenue capacity and politically difficult-to-reduce expenditure commitments.

Policy Implications: Conditions for a "Working" Reform and Relevance for Bulgaria

In the next part of this chapter, flat taxes are considered as conditional instruments, rather than as universal recipes for conducting economic policy. The first implication is principled: there is no "one optimal model" of a tax system for all countries and periods; the effects depend on institutional capacity, the structure of the economy, the scale of informality, and social preferences. Consequently, policies copied by analogy, without diagnosing the initial conditions, carry a high risk of disappointing results.

The second implication is political-economic: when progressivity is reduced, compensatory measures become critical for the social cohesion and sustainability of the regime. The author argues that in an environment without a tax-free threshold and with a high burden of social security contributions and indirect taxes, the perception of the system as unfair intensifies the pressure for transfers and subsidies. This may generate a "fiscal scissors" effect: limited revenues and growing expenditure claims, which in the end are capitalized into deficit and debt.

The third implication is pragmatic and essentially "design-oriented": if the aim is to preserve administrative simplicity but to mitigate regressivity, a natural first move is the addition of a tax-free threshold or a tax credit (including a refundable one) while preserving a flat rate. This introduces progressivity into the effective rate without restoring a complex multi-tier scale.

The fourth implication is comparative: the experience of countries that have not introduced a flat tax, or have introduced hybrid models (combinations between proportionality and progressivity), is interpreted as an empirical demonstration that progressivity is compatible with good economic results in the presence of effective administration and reasonable parameters. From this follows the position that the political choice is not a binary one of “flat versus progressive,” but a continuum of designs in which the key elements are the wedge, the base, the exemptions, and the capacity for implementation.

Limitations and Caution: What Can and What Cannot Be Concluded

In this part, the interpretation of the obtained results is clarified through a clear statement of the identification risks. The first group of limitations is connected with the non-random nature of reforms: tax changes are usually part of broader reform packages and/or a response to macroeconomic tensions and political cycles. This means that even with contemporary methods (DiD, synthetic control), there remains a risk of omitted variables and endogeneity.

The second group of limitations is connected with the data and comparability, especially for inequality and the early years of transition, where the measurement regimes and the quality of the statistics vary. The author treats this as a real boundary of the macro-panel approach and motivates the need for additional robustness checks and future research with microdata.

Third, in methods such as synthetic control, subjectivity remains in the choice of donor pool and calibration period; this is not a defect of the method, but a characteristic that requires transparency and sensitivity of conclusions to alternative choices. In this sense, the chapter insists that policy recommendations should be formulated as conditional and adaptive: policy should provide mechanisms for correction if the expected effects do not materialize.

The final part of the chapter synthesizes the leading thesis of the dissertation in “discussion” format: the flat tax may generate limited efficiency gains through discipline and base broadening, but it has pronounced distributive costs and potential long-term risks for fiscal sustainability when compensatory mechanisms and institutional capacity are insufficient. For this reason, the chapter prepares a logical transition to the conclusion: once the conditions, mechanisms, and limitations have been clarified, it remains to formulate the final answers to the research questions, the scientific contribution, and the policy recommendations—with emphasis on applicability to Bulgaria and, more broadly, to the European Union context of fiscal sustainability and social cohesion.

Chapter VII: Conclusion and Recommendations for Economic Policy

Chapter VII performs a dual function. On the one hand, it condenses the empirical and conceptual results into clear answers to the research questions and formulates the scientific contribution of the dissertation. On the other hand, it translates the evidence into a package of policy implications, emphasizing the conditional character of part of the effects and the necessity of institutional context in their interpretation.

Synthesis of the Main Findings of the Study

The central conclusion of the chapter is that flat income taxation in the countries of Central and Eastern Europe cannot be evaluated as a universal instrument for accelerating growth, but rather as an institutional choice with a clearly expressed trade-off between efficiency and fairness. The regional panel analysis establishes a moderate and highly contextual growth effect, weak evidence of significant effects on the labor market, a negative relationship with FDI in the panel estimates, a consistent reduction in revenue capacity, and a statistically significant increase in inequality.

In the synthesis of the results, it is emphasized that the theoretical promises of a self-financing reform are not confirmed. For the region, the effect on growth is rather of the order of approximately 0.6–0.8 percentage points in the stricter specifications, while the effect on inequality is positive and more robust—approximately around 0.9–1.0 point in the Gini coefficient in the panel models. Of particular importance is also the result that under a flat tax the semi-elasticity of the cyclical budget balance with respect to the output gap is reduced by approximately 68%, which testifies to a weakening of automatic fiscal stabilizers.

The case of Bulgaria specifies this general conclusion. The counterfactual analysis shows a moderately positive effect on growth—between 0.62 and 1.75 percentage points annually according to DiD and between 0.76 and 1.09 percentage points according to SCM—but at the same time a significant reduction in tax revenues and an increase in inequality. It is precisely the combination of these effects, and not any single variable in itself, that structures the final evaluation of the reform.

The conclusion also introduces a quantitative assessment of the efficiency–fairness trade-off. Assuming accumulation of the growth effect, the additional GDP in 2024 is estimated approximately in the range of 13.5%–34.2%, with an average estimate of around 22.5%. In parallel with this, however, the increase in inequality is translated into an equivalent loss of social welfare through the Atkinson index. Under moderate to high inequality aversion, these losses exceed the gains from growth, which leads to the conclusion of a net negative effect on social welfare.

An additional argument in the same direction is the loss of tax revenues. The dissertation estimates that the reduction in revenues, especially according to the SCM specifications, is sufficiently large to constrain the possibilities for public investment, social transfers, and improvement of human capital. Consequently, the debate on the flat tax is not only a question of the tax rate, but also of the state's capacity to finance long-term convergence, social protection, and anti-crisis policy.

The conclusion also systematizes the limitations of the study. In the first place stands the non-random nature of the reforms and the difficulty of isolating the pure effect of the tax regime from parallel institutional and macroeconomic changes. In the second place are the limitations of the data, especially with respect to inequality and the early years of transition. In the third place stands the limited possibility of macro-panel estimates to capture behavioral reactions at the micro level and long-term institutional effects.

As a natural continuation of the study, several directions for future work are outlined: microsimulation assessments of reform options in Bulgaria; analysis of the behavioral reactions of households and firms; more in-depth study of the interaction between personal income tax, social security contributions, and indirect taxes; as well as modeling of long-term fiscal sustainability under conditions of demographic pressure and membership in the euro area.

Recommendations for Tax and Social Policy in Bulgaria

The conclusion formulates the recommendations as a coherent package aimed at simultaneously strengthening fairness, revenue capacity, and administrative feasibility. The principal recommendation is the gradual restoration of progressivity in income taxation, without allowing a shock change that would increase uncertainty and adaptation costs.

In the income-tax block, the dissertation proposes restoration of a tax-free threshold of at least EUR 4,200 annually (approximately EUR 350 monthly), roughly corresponding to the poverty threshold, as well as the introduction of a moderately progressive scale: 0% for incomes up to this threshold, 10% for incomes between EUR 4,200 and EUR 15,000 annually, and 15% for incomes above EUR 15,000. In addition, a more consistent treatment of capital incomes is recommended, so as to limit arbitrage between labor and capital and to increase horizontal fairness.

In order to mitigate the risk of weakening incentives for formal employment, the conclusion also proposes the introduction of a tax credit for the working poor along the logic of the Earned Income Tax Credit. Such an instrument would allow more targeted support for low-income working households, especially families with children, without removing incentives for participation in the labor market.

The second major axis of the recommendations is reform of property taxation. An update of the tax valuations of real estate according to market criteria is proposed, together with a moderate increase in the rates—especially for expensive properties and second homes—and the introduction of more pronounced progressivity in local property taxation. The dissertation also considers the possibility of taxes on luxury assets and estimates that reform of the property-tax block may increase revenues by approximately 0.5–1.0% of GDP.

The third axis is modernization of the tax administration. The recommendations include accelerated digitalization of processes, expansion of electronic filing, automated pre-filling of returns, electronic invoicing, integrated registers, and risk-based audit. Substantial emphasis is also placed on specialized units against aggressive tax planning and transfer pricing.

Alongside this, the conclusion insists on measures against corruption and on improving services for taxpayers: greater transparency and accountability, rotation of employees in high-risk positions, independent oversight, protection of whistleblowers, advisory services, and faster resolution of tax disputes. The general logic is that without a strong and legitimate administration, even the best tariff design will not produce the desired results.

Concluding Reflections

In the concluding reflections, the dissertation returns the focus to its main conceptual thesis: flat taxes are not only a technical choice of rate, but a political and institutional project. For this reason, their evaluation must include not only the consequences for growth, but also the legitimacy of the tax system, the quality of public services, the stabilizing function of the budget, and social cohesion.

The final position is normatively clear and analytically cautious. For Bulgaria, the more sustainable path forward is not the mechanical preservation of the status quo, but a carefully calibrated reform that combines moderate progressivity, stronger revenue capacity, modern administration, and better protection of low incomes. In this way, the dissertation defends the thesis that a fairer tax system is not an alternative to development, but its institutional precondition.

Contributions

Empirical Contributions

1. A comprehensive empirical evaluation of the effects of the flat tax in Central and Eastern Europe

The study provides the first systematic evaluation of the effects of the flat tax that:

- covers a long time period (1995–2024);
- includes a country sample (11 countries);
- analyzes multiple outcomes (growth, employment, investment, inequality, revenues);
- uses contemporary econometric methods (stacked DiD);
- systematically analyzes the heterogeneity of effects.

2. New evidence on the trade-off between efficiency and fairness

The study provides quantitative estimates of the magnitude of the trade-off between the growth benefits and the distributive costs of the flat tax, which is critical for informed policy decisions.

3. Evidence on the limited dynamic effects on budget revenues

The study shows that the dynamic effects (growth of the tax base, improved compliance) compensate only partially for the initial revenue loss, which challenges the optimistic claims of proponents of the flat tax.

4. Analysis of the heterogeneity of effects

The study identifies the key factors that explain why the effects vary across countries, which is important for understanding the conditions under which the flat tax may be effective.

Methodological Contributions

1. Application of the stacked DiD method in the context of tax reforms

The study is among the first to apply the contemporary stacked DiD method for evaluating the effects of tax reforms with multiple treatment periods.

2. Detailed counterfactual analysis for Bulgaria

The study develops an innovative methodology for counterfactual analysis that may also be applied to other countries and policies.

3. An integrated approach combining qualitative and quantitative methods

The study successfully combines historical analysis, descriptive statistics, econometric methods, and scenario analysis for a comprehensive evaluation of the policy.

Policy Contributions

1. Concrete recommendations for reform of the Bulgarian tax system

The study provides detailed, empirically grounded recommendations for reform of the Bulgarian tax system in the context of the forthcoming adoption of the euro.

2. Lessons for other countries in the region

The results and recommendations of the study are relevant not only for Bulgaria, but also for other countries in Central and Eastern Europe that are considering reforms of their tax systems.

3. Contribution to the debate on optimal tax policy

The study provides a balanced, empirically grounded perspective on the flat tax debate, going beyond ideological positions and focusing on the facts.

Theoretical Contributions

1. Enriching the literature on the political economy of tax reforms

The study contributes to the understanding of the political-economic factors that explain the rise and decline of the flat tax in Central and Eastern Europe.

2. Contribution to the theory of tax competition

The study provides empirical evidence on the effects of tax competition in the context of small open economies.

3. Contribution to the literature on fiscal policy in the euro area

The study analyzes the specific challenges of tax policy in the context of membership in the euro area, which is relevant to the broader debate on fiscal integration in Europe.