SCHOOL OF ECONOMICS AND BUSINESS IN SARAJEVO
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Disposition of the PhD Dissertation

ESSAYS ON EFFECTS OF FISCAL POLICY ON ECONOMIC ACTIVITY

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II Introduction, Research Objective, and Motivation

Research proposed here under title Essays on Effects of Fiscal Policy on Economic Activity will explore the empirical relations of economic activity and different aspects of fiscal policy. For parts of the research where longitudinal data is available for developing countries, the impact of fiscal policies on economic growth in the developed countries will be compared to the impact of fiscal policies on economic growth in the developed countries. Essays on Effects of Fiscal Policy on Economic Activity will consist of three essays, each of them looking at different aspects of fiscal policy (measured by different indicators) and their relation to economic activity level. The three essays will be tied together by the common introductory sections on the general research field and literature review on overall fiscal policy, as well as by the concluding sections laying out joint analyses of fiscal policy indicators from all three essays and implied overall fiscal policy recommendations.

Research proposed within Essays on Effects of Fiscal Policy on Economic Activity is motivated by:

1. fluctuation of popularity of fiscal policy studies throughout the last five decades;
2. inconclusiveness of many of the available studies;
3. resurgence of the fiscal policy popularity in the aftermath of the most recent global economic crisis, which has proved the inadequacy of monetary policy to solely influence economic cycles; and
4. scarcity of current research on developing countries (most available research is done for OECD countries), so parts of the research for which data on developing countries are available will take that data into account.

Consequently, research in proposed PhD thesis will aim to add to existing body of knowledge in the area of fiscal policy's influence on economic activity by:

a) examining the most recent data (most of the data will be for the period up to 2010)

b) examining expenditure by two different classifications (economic and functional classification)

c) simultaneously comparing the influence on economic growth of government revenue categories and government expenditure categories (both economic and functional) and comparing their joint correlation with growth to the individual correlations

d) comparing the fiscal policy effects in developed countries to those in developing countries for the indicators available for both developed and developing countries

e) checking for data quality bias by using same analysis for the same periods of the time and for the same countries using different data sources.

This disposition is structured as follows. The next Chapter gives overall description of the general field of research (fiscal policy), literature review, and aimed contribution to the field by the proposed research. The next three Chapters are structured so that the title of the Chapter reflects the titles of the three proposed essays within Essays on Effects of Fiscal Policy on Economic Activity. For each of the proposed three essays, description of the field (more narrow in comparison to the general field discusses in Chapter III), research questions and contribution to the field, as well as the brief indicative overview of the data and methodology are given. Next, the overall structure of the thesis is proposed. Finally, indicative reference list is given.

III General Theoretical Background, Literature Review, and Contribution to the Field

Ever since the first tax was levied to raise funds for the Civil War in the United States (US) in the 1860s, the popularity of the fiscal policy among macroeconomists has been fluctuating. On the wings of the boost of the US economy in the aftermath of the extensive military spending, John Maynard Keynes and his fiscal policy theory became the talk of the time in the 1940s. Keynesian fiscal policy was based on a simple assumption that by increasing its spending, a government adds to aggregate demand and takes the economy out of a business cycle downturn (Nelson, 2006).

However, the increase in both unemployment and inflation in 1960s implied that the Keynesian fiscal policy may be flawed, since the potential for increased government spending to add to aggregate demand may be crowded out by its negative effect on exchange rate through increased long term government debt necessary to finance the initial spending. In addition, it became evident that definite data on the current status of business cycle is not available early enough for the fiscal policy with its long lags to be able to correct for it.

Thus, in the 1960s, the overall focus of counter-cyclical measures was gradually shifted from fiscal to monetary policy, which, through changes in interest rate and inflation targeting, could be adjusted more rapidly and timely than the fiscal policy. While in the 1960s and 1970s, fiscal and monetary policy had roughly equal importance, in the past three decades monetary policy took supremacy over the fiscal policy (Blanchard, Dell'Ariccia, and Mauro, 2010). Theoretical and empirical support for this dominance of monetary policy was given by the New Keynesian model, based on the overall idea that the optimal policy is constant inflation which closes the output gap (Blanchard, Cottarelli, Spilimbergo, & Symansky, 2008) dubbed „divine coincidence".

In addition to the difficulties to react timely to economic downturns due to long lags, fiscal policy was deemed inappropriate due to urge of the Ricardian equivalence argument brought forward by Barro in his seminal 1974 paper. In its essence, this argument states that fiscal policy which worsens long-term budgetary position (by decreasing government revenues and/or increasing government debt) does not boost economic activity, since governments face an inter-temporal budget constraint (Barro, 1974 and Barro, 1996). Furthermore, the fact that the most developed countries were trying to control/decrease their government debt in this period added to the trend of turning towards monetary policy. Perhaps the strongest argument against the fiscal focus was that fiscal policy is entirely subservient to political constraints and possible manipulation.

It needs to be noted that this alienation from the fiscal policy was stronger by the academic community than by the policy makers. Nevertheless, fiscal policy tools for economic cycle control were advised by the international financial institutions (such as the International Monetary Fund) mostly to the emerging countries with weak automatic stabilizers (Blanchard, Dell'Ariccia, and Mauro, 2010).

The following period of low inflation and lower volatility in the business cycle between mid-1980s and the recent crisis was dubbed the Great Moderation (Stock & Watson, 2002) and it seemed to imply the appropriateness of the monetary focus. Consequently, the criticism of the Ricardian equivalence - which includes the finiteness of life, uncertainty about future fiscal policy, tax distortion, and financial market inefficiencies - were pushed aside.

However, this trend of dismissing the fiscal policy tools for cycle adjustment was abruptly put to an end with the most recent global crises appearing in 2007. This crisis proved that low inflation is not always equipped to adjust economic cycle. The downturn was different from the earlier ones, since it arrived in the time of already low interest rates, so there was not much that central bankers could do to alleviate it. The crisis's origin was in the under-pricing of the risk, rather than over-pricing of the interest. As a result, increased default rates and declining real estate values resulted in highly dysfunctional credit market, which would not respond to any changes in monetary policy (Blanchard, Dell'Ariccia, and Mauro, 2010).

With the clear inadequacy of the monetary policy to alleviate the crisis, attention once again turned to the fiscal policy as the policy of choice for influencing economic activity. Fiscal stimulus packages included tax rebates, cash programs, and investment projects. The crisis has demonstrated the importance for governments to having enough fiscal space ready to react to a potential downturn. Countries which employed pro-cyclical fiscal policies (running deficits with high spending and/or low taxation) in the upturn years (for instance some countries in the Eastern Europe) were forced to increase taxes and cut expenditure amidst recession. This may drag out their recovery beyond the recovery of the countries which had fiscal space available for large fiscal stimuli or tax deduction to aid the private sector.

Consequently, the importance of lower government debt is exemplified in the recession years, implying that there may be a need for revision of the acceptable debt benchmarks used previously. In good times, governments may be better advised to pay down their debt, rather than increase spending or cut taxes. In addition, need for fiscal space and lower debt also further points to even greater need for more efficient and effective spending in the public sector. This

issue of better targeted public expenditure has been gradually addressed since the 1990s through the efforts by the governments to introduce performance information into their budget processes, with the main objective to focus on measurable results of money spent (OECD, 1997).

These general implications stemming from the most recent recession now put reenergized emphasis on the need for research of optimal fiscal policies. Overall debate in terms of fiscal policy's influence on economic growth can be summed up in two basic questions: does a fiscal policy affect growth rate, and if so, whether it is conducive or detrimental to growth. At the more detailed level, the debate becomes about optimal level and structure of government revenues and expenditures through analysis of specific fiscal policy indicators and their impact on economic activity.

Conceptual links between fiscal policy and growth are plentiful, even in Solow's neoclassical model, which argues that growth is only responding to technological progress and population growth. Since fiscal policy influences technological progress through, for instance, expenditure on technology, it is intuitively plausible to expect fiscal policy to ultimately influence growth. Within the endogenous growth theory, intuitive importance of fiscal policy is strengthened in comparison to Solow model, since endogenous growth theory rests on the importance of new technology and human capital, which both clearly can be affected by the government policy in terms of innovation, capital investment, and education, just to name a few. Perhaps the most intuitive and direct relationship between the economic growth and fiscal policy comes from the tax policy. By reducing income and profits, taxation shapes the decision people and companies make, hence shaping overall economic activity. Different taxes (i.e. different choices of government's revenue policy) influence the behavior of economic agents in different way and have different effects on growth. This simple concept shapes the research of correlation of the level and different sources of government revenue (revenue structure) with economic activity and growth.

In order to empirically investigate the existence and the extent of the intuitive correlation between economic activity and different fiscal policy indicators (such as revenue level, expenditure level, or different categories of expenditure and revenues), economists usually estimate multipliers (called fiscal multipliers) - the change in gross domestic product caused by a unit change in a fiscal variable (Romer, 2011).

As the most recent crisis waltzed in, different countries took on different strategies in terms of fiscal policies and stimuli. While one group of countries viewed that fiscal loosening should continue, the other opted for tightening (partially also due to their high debt). Some countries tried both, such as the United Kingdom which first tried demand driven strategy (fiscal expansion) and then (in post-2010-election period) switched to fiscal consolidation (Shome, 2010). This lack of consensus on appropriate fiscal stimuli is partially due to lack of clearly empirically proven fiscal multipliers for different fiscal policy indicators in economic research. As the matter of fact, the existing estimates vary from negative to significantly positive values for most fiscal policy indicators (Solow, 2011).

While it is still early to empirically estimate the final effects of the fiscal stimulus packages implemented by the governments in the most recent crisis (due to lag in data and the fact that

the full economic recovery has not been reached yet), the proposed PhD research will aim to add to existing knowledge by:

a) examining the most recent data (most of the data will be for the period up to 2010)

b) examining expenditure by two different classifications (economic and functional classification)

c) simultaneously comparing the influence on economic growth of government revenue categories and government expenditure categories (both economic and functional) and comparing their joint correlation with growth to the individual correlations

d) comparing the fiscal policy effects in developed countries to those in developing countries for the indicators available for both developed and developing countries

e) checking for data quality bias by using same analysis for the same periods of the time and for the same countries using different data sources.

The proposed dissertation aims to contribute to the research on optimal fiscal policies conducive to growth through three essays. Essay 1 of the thesis will examine correlation of the government expenditure level and economic growth, with the aim of identifying the optimal expenditure level. Essay 2 will examine influence of different expenditure categories on growth, looking first at traditional economic classification of expenditure for a broader group of developing and developed countries for the data for years between 1980 and 2010, as well as at functional classification of expenditure for a more narrow group of developed countries for years between 1990 and 2009 (due to data availability constraints). Essay 3 will then turn to examining correlation of government revenue structure (approximating taxation policy) and economic activity. The last part of the thesis will focus on joint analyses of fiscal policy indicators from all three of the essays by simultaneously comparing economic expenditures, functional expenditures, and taxation revenue structure, and comparing their joint correlation to their individual correlation to growth estimated in the three essays. The thesis will wrap up with the implications and policy recommendations stemming from the thesis research.

IV Overall Methodology

Research questions/hypotheses in the three essays will be tested using the following statistical tests and parametars:

- Descriptive statistics;
- Pearson Correlation Coefficients;
- Chi Square tests for categorical variables, which will be created in the joint analyses to distinguish developed from develooing/emerging countries;
- Classical linear regression analysis for one variable model in Essay 1; and

– Multiple linear panel regressions for numerous-variable-model in Essay 2, Essay 3, and final joint analyses of indicators from all three of the essays.

Numerous tests for usual problems with longitudinal panel data will have to be performed and corrected for as necessary and possible, including:

- unit effects (possible remedies – fixed effects, General Least Squares);
- multicollinearity (possible remedies – mean-centering, standardizing);
- serial correlation (possible remedies – lagged reponse, General Least Squares);
- heteroscedasticity (possible remedies – transforming variables, Weighted Least Squares); and
- contemporaneous correlation (possible remedy – Parks model)

V Essay 1: Growth and Government Expenditure Level

Description of the Field

Within the research of how fiscal policy can affect economic growth, largest share of the studies is devoted to defining overall size of the government which is the most conducive to economic growth. Basic intuitive theory for this field of research is the argument that the economic growth is hampered by the increase of taxation necessary to finance large governments. At the same time, in reality, we have been witnessing ever-increasing government expenditure levels throughout the twentieth century.

Overall logic behind thinking that large governments may retard growth is well summarized by Gwartney, Lawson, and Holcombe (1998), who state that:

> "Government provision of both (a) a legal and physical infrastructure for the operation of a market economy and (b) a limited set of public goods can provide a framework conducive for economic growth. However, as governments move beyond these core functions, they will adversely affect economic growth because of (a) the disincentive effects of higher taxes, (b) diminishing returns as governments undertake activities for which they are ill-suited, and (c) an interference with the wealth creation process, because governments are not as good as markets at adjusting to changing circumstances and finding innovative new ways of increasing the value of resources" (p. v).

In their study, they further find that the data from 23 OECD countries show a strong negative relationship between GDP growth and both the size of government and increases in government expenditures.

Similarly, Karras' 1997 research on EU countries' in the period from 1950 to 1990 also suggests that the public sector is more productive when small. Examining the correlation between the government size and growth for OECD countries in the period from 1971 to 1999, Dar and

Khalkhali (2002) also find that the government expenditure level is negatively correlated with growth.

On the other hand, there are also numerous studies showing that this relationship is either ambiguous or even positive (Nijkamp & Poot, 2003). Their results are supported by the economists who subscribe to Wagner's Law, which states that the size of a government needs to increase with higher levels of economic development, due to needs for more administrative and protective state functions.

While there are studies with opposing results, there are overall more studies which find that large government size adversely affects the growth, as found in meta analyses by Nijkamp and Poot (2003). In their analyses of the 41 studies of the growth-government size relationship, 12 found negative relationship, 7 found positive relationship and 22 (more than half) were inconclusive.

The latest research in this field is more inclined to find negative relationship between the government size and growth. For example, Afonso and Furceri in their 2008 research conclude that for OECD and EU countries in the period from 1970 to 2004 overall size and volatility of government expenditure have strong negative influences on economic activity. More specifically, they find that an increase in total expenditure (expressed as share in GDP) decreases economic activity growth by 0.13 percentage points in OECD countries and by 0.09 percentage points in OECD countries.

Research Questions, Hypotheses, and Contribution to the Field

Given the inconclusive existing research on the overall influence of the government size on economic growth, the proposed essay will aim at answering the following questions with the proposed hypothesis:

1. Does the data including the most recent published data (data sample for the 1980-2010 period) show relationship of the economic growth and the total general government expenditure (expressed as a share in GDP) for a diversified sample of countries in terms of development? Null hypothesis is that there is no correlation between growth and expenditure.

2. Do findings differ if we look at the developed countries separately from developing countries? And if so, for which group of countries is general government expenditure more correlated to economic growth? In this case, the first null hypothesis is that findings do not differ for these two groups of countries. If this initial null hypothesis is rejected, the following null hypothesis is that the expenditure is more correlated to growth in developed countries.

3. Do findings differ if we look at different data sources: International Monetary Fund versus Eurostat/OECD data? The null hypothesis is that findings should not differ relative to data sources.

4. If the correlation between the economic growth and total general government expenditure is established, what is implied optimal level of general government

expenditure? And does the optimal level of expenditure vary with different development level? This is to be found by looking at expenditure of the countries with highest growth.

Within Essay 1, this proposed research will aim to add to existing knowledge by: examining the most recent data, by comparing the fiscal policy effects in developed and developing countries, and by checking for data quality bias by using same analysis for the same periods of the time and for the same countries using different data sources.

Methodology and Data

The indicators used in this essay will include total general government expenditure expressed as share of GDP and GDP growth rates. Per capita data will also be used to check whether using variables transferred in that way makes difference for the results. Panel data regression will be performed with GDP growth and change of GDP growth as dependent variables and total general government expenditure and change in total general government expenditure as independent variables.

The research will be based on the most recent data from the World Economic Outlook (from April 2011) published by the International Monetary Fund for the period from 1980 to 2010 for advanced economies and for the developing and emerging countries. All of the countries for which the data on GDP and general government expenditure is available for the whole period will be taken into account. Regression will be done jointly for all of the countries, as well as for separated samples – one for advanced economies and the other for developing/emerging economies.

However, in order to check for data quality biases, additional research using Eurostat and OECD data will also be carried out, for a smaller number of developed countries. Results of the same regression for the same periods of the time and for the same countries using the IMF and EUROSTAT/OECD data sources will be compared.

VI Essay 2: Growth and Government Expenditure Categories

Description of the Field

In addition to the most popular research on the effect on growth of overall government expenditure level, there is also research on effects of government expenditure structure on growth in terms of different expenditure categories. Government agencies, as well as international development agencies, make their decisions based on the belief that the structure of public expenditure matters in the aim to promote development. Special attention is being given to "pro-poor" government expenditure with health and education spending usually used as proxy (Paternostro, Rajaram, and Tiongson, 2007).

Theoretical background for the research on impact of specific categories of government expenditure on growth is found in the intuition that not all government expenditure is equally bad. In other words the structure of expenditure may be more important than the overall level of total expenditure (Nijkamp and Poot, 2003). More specifically, public capital investment is viewed as good kind of expenditure as opposed to current expenditure, due to capital

investments' possibilities to boost private sector development (for instance through a large infrastructure project, which employs private sector construction workers) both directly in the short term, but also indirectly through providing positive spill-over (for instance, a large infrastructure project will cut transportation costs of the private sector companies). Other types of government expenditure should have no effect on growth only if they are not affecting the private sector productivity (Barro, 1990).

Existing research in this field usually deals specifically with capital investment part of the government expenditure. Meta analyses by Nijkamp and Poot (2003) shows that in the existing literature of 39 studies of the growth-infrastructure investment relationship, 28 studies found positive relationship. Even more conclusive is the research on the effect of education expenditure on growth, with 11 out of 12 studies examined by Nijkamp and Poot finding the positive correlation.

However, the literature in this area is not rich in terms of comprehensive studies of government expenditure broken into all of the expenditure categories (rather than looking at only some categories at the time, such as education or capital investments).

One of the few studies taking into account all expenditure categories is the 1994 study by Easterly and Rebelo. They define indicators in terms of expenditure components (total government consumption, consumption excluding defense, general public service, social security expenditure, transfers, as well as capital investment by sector) for 1970-1988 data for around one hundred countries. They find that, aside from capital investment in transport and communication, other variables' influence on growth is fragile. In their analysis on expenditure by functional category for 1970-1988 data categories (general public services education, health, social security and welfare, recreation, culture and religion, agriculture, fuel and energy, and transport and communication), they find that health and social security expenditure is higher in the high-income countries, while most of the other categories of government expenditure are negatively correlated to development.

Furthermore, Castles and Doric (1990) examine the impact of the disaggregated expenditure on health, social transfers, and education on growth (using OECD data for the period from 1960 to 1985), finding that the letter two to be positively correlated with growth.

Research Questions, Hypotheses, and Contribution to the Field

The proposed essay will examine all of the government expenditure categories and their impact on growth, aiming to answer the following questions:

1. Does the data including the most recent published data (data sample for the 1980-2010 period) for economic classification expenditure categories confirm theoretical principals of capital investment being positively correlated to growth and current expenditure being negatively correlated with growth for a diversified sample of countries in terms of development? Null hypothesis is that there is no correlation between growth and any of the expenditure categories.

2. Do findings differ if we look at the developed countries separately from developing countries? Null hypothesis is that the findings are the same regardless of the countries' development level.

3. Is there a correlation between economic growth for the period from 1990 to 2009 (prior detailed data on expenditure categories by functional classification is scarce) and any of the government expenditure functional categories (by COFOC classification including the following categories: general public services; defense; public order and safety; economic affairs; environmental protection; housing and community amenities; health; recreation, culture, and religion; education; social protections; and other expenditure)? Null hypothesis is that there is no correlation between economic growth and any of the government expenditure functional categories. More specifically, do the most recent published data on functional expenditure categories for the period from 1990 to 2009 for EU countries (prior detailed data and data for developing countries on expenditure categories by functional classification is not available) confirm theoretical principals of education and health expenditure being positively correlated to growth? Null hypotheses are that there is no correlation between growth and education expenditure and no correlation between growth and health expenditure.

Within Essay 2, this proposed research will aim to add to existing knowledge by: examining the most recent data, by comparing the fiscal policy effects in developed and developing countries, and by looking at both economic and functional expenditure categories.

Data and Methodology

The indicators used in this essay will include:

1. general government expenditure on current expenditure (possibly for each of the categories of current expenditure, depending on data availability)
2. general government capital expenditure
3. general government expenditure on each of the functional categories (general public services; defense; public order and safety; economic affairs; environmental protection; housing and community amenities; health; recreation, culture, and religion; education; social protections; and other expenditure).
4. GDP growth rates. Per capita data will also be used to check whether using variables transferred in that way makes difference for the results.

All expenditure variables will be expressed as share of GDP, as well as the share in total revenue for categories. Per capita data will also be used to check whether using variables transferred in that way makes difference for the results. Panel data regression will be used in this research, with GDP growth and change of GDP growth as dependent variables and above outlined expenditure categories as independent variables.

The research relating to the first two research questions outlined above will be based on the most recent data on government expenditure economic categories from the World Economic Outlook (from April 2011) published by the International Monetary Fund for the period from

1980 to 2010 for advanced economies and for the developing and emerging countries. All of the countries for which the data on GDP and general government expenditure is available for the whole period will be taken into account. Regression will be done jointly for all of the countries, as well as for separated samples – and for advanced economies and the other for developing/emerging economies.

The research relating to the third research question outlined above will be based on the most recent data on government expenditure functional categories from the Eurostat Outlook (from April 2011) for the period from 1990 to 2009 for EU countries (prior detailed data and data for developing countries on expenditure categories by functional classification is not available).

VII Essay 3: Growth and Government Revenue Categories

Description of the Field

In comparison to the research of the relationship between the government expenditure structure and growth, the research of the relationship between the government revenue categories and growth is even scarcer. However, it has been increasingly recognized in the recent period that the way in expenditures are financed matters too (Nijkamp and Poot, 2003).

Similarly to studies on expenditure, studies on revenues are also more frequent in the area of the level of total revenues/taxation and its impact on growth, as opposed to the studies on the different categories of the revenues. The studies on overall revenue level are not unanimous in terms of findings. For example, while Engen and Skinner (1992) found the negative correlation between the taxation and growth, on the other hand, Koester and Kormendi (1989) and Agell, Lindh and Ohlsson (1997) find no effect of taxation on economic growth.

Basic theoretical background for the relationship between taxation and growth comes from the fact that in the endogenous growth models, growth is spurred by the capital accumulation, which in turn is distorted by the taxation. Since not all kinds of taxation distort the incentives for capital accumulation in the same way (for example, income taxes are expected to distort capital accumulation decisions more than consumption taxes), taxation policy mix should matter for the growth. A number of authors researched the effects of the tax revenue's share of GDP (the average tax rate) on growth of economic activity.

In their 1999 study, Kneller, Bleaney and Gemmer examine the OECD data for the period from 1970 to 1995 and find the evidence for the intuitively logical negative relationship between the distortionary taxation and growth and positive relationship between the non-distortionary taxation and growth. Widmalm in her 2001 research on OECD data for the period from 1965 to 1990 finds that the tax structure affects economic growth, with the proportion revenue from income taxation having a negative correlation with growth.

Nijkamp and Poot found 10 studies on taxes, none of which concluded that higher taxation is correlated with higher growth. At the same, six of the ten studies found negative effect of taxation on growth, while four studies found inconclusive impact. Thus, Nijkamp and Poot (2003) conclude that research on the revenue structure is the „one area where further empirical research and meta-analysis are desirable".

Research Questions, Hypotheses, and Contribution to the Field

The proposed essay will examine all of the government revenue categories and their impact on growth, aiming to answer the following questions:

1. Does the data including the most recent published data (data sample for the 1980-2010 period) confirm theoretical principals of distortionary taxation being negatively correlated to growth a diversified sample of countries in terms of development?

2. Do findings differ if we look at the developed countries separately from developing countries?

Within Essay 3, this proposed research will aim to add to existing knowledge by: examining the most recent data and by comparing the fiscal policy effects in developed and developing countries.

Data and Methodology

The indicators used in this essay will include:

1. general government tax revenue level

2. general government tax revenue for each of the taxation categories (consumption tax, trade tax, personal income tax, corporate income tax, and social contributions).

3. GDP growth rates. Per capita data will also be used to check whether using variables transferred in that way makes difference in terms of the results.

All taxation revenue variables will be expressed as share of GDP, as well as the share in total revenue for categories. Per capita data will also be used to check whether using variables transferred in that way makes difference for the results. Panel data regression will be performed with GDP growth and change of GDP growth as dependent variables and taxation revenue variables and change in taxation revenue variables as independent variables.

The research will be based on the most recent data from the World Economic Outlook (from April 2011) published by the International Monetary Fund for the period from 1980 to 2010 for advanced economies and for the developing and emerging countries. All of the countries for which the data on GDP and taxation revenue variables is available for the whole period will be taken into account. Regression will be done jointly for all of the countries, as well as for separated samples – and for advanced economies and the other for developing/emerging economies.

VIII Structure of the Thesis

Tentative structure of the thesis is as follows:

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1. Introduction
   - 1.1. Overall Research Motivation
   - 1.2. Overall Research Objective
   - 1.3. Thesis Structure
   - 1.4. Summary of the Essays and their Contribution

2. General Background Theory, Literature Review, and Methodology
   - 2.1. Theories of Fiscal Policies' Impact on Growth
   - 2.2. Empirical Evidence
   - 2.3. Fiscal Multipliers
   - 2.4. General Tests and Parameters (description of the methods applying to all essays)

3. Essay 1: Growth and Government Expenditure Level
   - 3.1. Background Theory and Literature Review on Impact of Government Expenditure Level on Growth
   - 3.2. Research Questions and Hypotheses
   - 3.3. Data and Methodology
   - 3.4. Results
   - 3.5. Implications and Recommendations

4. Essay 2 Growth and Government Expenditure Categories
   - 4.1. Background Theory and Literature Review on Impact of Government Expenditure Categories on Growth
   - 4.2. Research Questions and Hypotheses
   - 4.3. Data and Methodology
   - 4.4. Results
   - 4.5. Implications and Recommendations

5. Essay 3: Growth and Government Revenue Categories
   - 5.1. Background Theory and Literature Review on Impact of Government Revenue Categories on Growth
   - 5.2. Research Questions and Hypotheses
   - 5.3. Data and Methodology
   - 5.4. Results
   - 5.5. Implications and Recommendations

6. Joint Analyses of Fiscal Policy Indicators from the Essays

7. Conclusions and Implications
   - 7.1. Research Contribution
   - 7.2. Policy Recommendations based on Research Implications
   - 7.3. Research Limitations

BIBLIOGRAPHY
APPENDICES

The proposed thesis structure outlined above consists of seven main chapters. First introductory Chapter will outline overall motivation for the research in fiscal policy field and research objective covering all essays. Introductory Chapter will close with the thesis structure outline and brief summary of the research, results, and contribution of each of the three essays.

Second Chapter will give general background theory covering overall field of fiscal policy, as well as laying out review of the literature linking fiscal policy indicators with economic activity. Furthermore, the second chapter will also describe general quantitative methodology and empirical evidence in the literature examining fiscal policy indicators' impact on growth. Finally, the second Chapter will also describe general empirical methods, tests, and parameters, which will be used in the three proposed essays of the thesis.

Following the scene-setting first two chapters, the main part of the thesis will be concentrated in Chapters 3, 4, and 5, which will present each of the three proposed essays. These chapters will go into more details with examining specific groups of fiscal policy indicators and their impact on economic activity. For each of the proposed three essays, the respective chapter will give background theory and literature review (more narrow in comparison to the general field which will be discussed in the second Chapter of the thesis, with each of the essays looking at different aspects of fiscal policy and their relation to economic activity level, as explained above in the parts V, VI, and VII of this proposal), research questions and hypothesis, as well as the detailed overview of the data and methodology. Finally, each of the three essays will conclude with the layout of the results, as well as policy implications and recommendations.

The three essays which will be given in the Chapters 3, 4, and 5 of the thesis will be tied together by the common concluding Chapters 5 and 6, laying out joint analyses of fiscal policy indicators from all three essays with description of the overall research contribution to the field, implied overall fiscal policy recommendations, and research limitations.

IX Indicative Bibliography

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CURRICULUM VITAE

1. **Family Name:** ČARŠIMAMOVIĆ VUKOTIĆ
2. **Name:** NAIDA
3. **Date of birth:** 11 September 1980
4. **Nationality:** Bosnia and Herzegovina
5. **Civil status:** Married
6. **Education:**

Institutions (Date from – Date to)	Degree(s) or Diploma(s) obtained:
Economics Faculty, University of Sarajevo, Bosnia and Herzegovina. 2009 - present (expected graduation in 2012)	**PhD Program in Economics** The Third Cycle Bologna-based PhD Program, organized in cooperation with the Economics Faculty of Ljubljana University and School of Economics and Business of Vienna University. All courses completed in December 2010. Thesis in the area of Macroeconomic Effects of Fiscal Policies.
Rollins College, Winter Park, Florida. 2003 – 2005	**MBA in Finance** Concentrations: Finance and Economics Academic Scholarship and Graduate Assistantship awarded. Graduated with honors.
Furman University, Greenville, South Carolina. 1999 –2003	**BA in Economics and Political Science** Degrees: Economics and Political Science Academic Scholarship Awarded. Graduated with honors.

7. **Language skills :** (Indicate competence on a scale of 1 to 5 (1- excellent; 5- basic)

Language	Reading	Speaking	Writing
Bosnian/Croatian/Serbian	1	1	1
English	1	1	1
German	2	3	3

8. **Other skills (e.g. computer literacy, etc.):** Proficiency in Microsoft Windows, Word, Excel, VBA, PowerPoint, Access, SPSS, Microfit, Ibbotson Investment Analysis Software, Research Insight, Morningstar Principia, E-Views, STATA, and INNOPAC.
9. **Present positions:**

   Short-term Expert – Advisor for the State Budget on the *Project of Technical Assistance to BiH Finance Ministries in the Gap between SPEM III and IPA 2010 Public Finance Management Project*, financed by the Swedish International Development Cooperation Agency and implemented by Innova d.o.o., Sarajevo, Bosnia and Herzegovina

   Short-term Expert – Economic and Finance Expert on the regional project *Horizontal Support to Coordination with International Financial Institutions in the Western Balkans and Turkey,* implemented by Project Management Ltd.
10. **Key qualifications:**

- Research and analysis of fiscal and macroeconomic issues, including empirical methods
- Knowledge of global and regional public expenditure systems and reforms
- Multilateral liaison and coordination skills, including policy advice
- Thorough understanding of BiH and Western Balkans fiscal, economic, and political system
- Knowledge of BiH's relations/projects with international financial/donor organizations such as International Monetary Fund, World Bank, Department of International Development of the UK Government, and European Commission
- Knowledge of the process of European Integrations
- General liaison, coordination, problem solving, and mediation in a multilateral context, including ability to moderate communication between and coordinate large numbers of individuals of different profiles
- Teaching, lecturing, capacity building, and holding workshops and seminars
- Professional ability to meet deadlines in a high-pressure environment involving multiple actors
- Communications, coordination, drafting, and writing skills
- Ability to operate independently and self-motivate, excellent time-management skills, and ability to work under pressure

11. **Specific experience in the region:**

Country	Date from – Date to
Bosnia and Herzegovina	2004 - present
Western Balkans Regional Project	2010 - present

12. Professional Experience:

Date from - to	Location	Company	Position	Description
March 2011-present	Sarajevo, BiH	SIDA's *Project of Technical Assistance to BiH Finance Ministries in the Gap between SPEM III and IPA 2010 Public Finance Management Project*, (implemented by Innova d.o.o.), Sarajevo, Bosnia and Herzegovina	**Short-term Expert - Advisor for the State Budget** Contact: Anders Hedlund Director of SIDAin BiH Tel: + 387 33 276 030 anders.hedlund@foreign.ministry.se	**Project of Technical Assistance to BiH Finance Ministries in the Gap between SPEM III and IPA 2010 Public Finance Management Project** ▪ Provided short-term technical support to the Budget Sector of Ministry of Finance and Treasury of BiH in implementing a medium-term, results-based budget planning and preparation process
November 2010 – present	Sarajevo, BiH	*Horizontal Support to Coordination with International Financial Institutions in the Western Balkans and Turkey* (implemented by Project Management Ltd), regional project	**Short-term Economic and Finance Expert** Contact: Rachele Gianfranchi EC-DG Enlargement, Brussels Tel: +32 2 298 7961 Rachele.gianfranchi@ec.europa.eu	**EU Horizontal support to Coordination with International Financial Institutions in the Western Balkans and Turkey** ▪ Prepared the report on "Assessment of Impact of Austerity Measures on National Investment Programs in the Western Balkans" ▪ Collected data and provided inputs to numerous presentations/reports in the socio-economic area for the Western Balkans region
October 2010 – present	Sarajevo, BiH	Sarajevo School of Science and Technology, Sarajevo, Bosnia and Herzegovina	**Lecturer** Contact: Boris Tihi Head of Economics Department Tel: +387 33 563 030 boris.tihi@ssst.edu.ba	**Economics Department** ▪ Teaching Intermediate Microeconomics Course
February 2011-May 2011	Sarajevo, BiH	European Union Special Representative (EUSR) in Bosnia and Herzegovina *Parliament for Europe Project* (implemented by Pi Consulting), Sarajevo, Bosnia and Herzegovina	**Short-Term Expert** Contact: Emina Kadrić Team Leader, Pi Consulting Director Tel: +387 33 55 37 35 e.kadric@piconsulting.ba	**Parliament for Europe project** ▪ Prepared background papers to enhance Parliamentarians' understanding of the current situation and EU requirements in the areas of key EU priorities and economic development ▪ Drafted minutes from Parliament for Europe sessions
March 2009 – March 2011	Sarajevo, BiH	DFID's *Strengthening Public Expenditure Management Project – SPEM III* (implemented by PKF Accountants and Business Advisors), Sarajevo, Bosnia and Herzegovina	**Long-term Senior Expert - Advisor for the State Budget** Contact: Murray Ross PKF (UK) LLP Tel: +44 207 065 0283 murray.ross@uk.pkf.com	**Strengthening Public Expenditure Management Project in Bosnia and Herzegovina** ▪ Provided support and increased capacity of the Budget Sector of Ministry of Finance and Treasury of BiH in implementing a medium-term, results-based budget planning and preparation process that reflects BiH macroeconomic environment, strengthens fiscal discipline, and targets the allocation of limited public resources towards the social and economic development objectives ▪ Acted as a supervisor to Budget Sector staff and directly provided on-the-job technical advice to high-level officials at State Government level ▪ Acted as a liaison with all State institutions, Parliament, Civil Society Organizations, as well as relevant donor-funded projects ▪ Managed numerous project activities and events, lead international study tours, drafted press materials, prepared reports, and gave presentations/workshops to large groups of people ▪ Wrote several reports/manuals providing policy advice and/or training to the Finance Ministries, Budget Users, Parliaments, and Civil Society Organizations in budget planning and management
March 2010 – April 2010	Sarajevo, BiH	*Public Administration Reform Project: Development of the Performance Measurement System in Civil Service Structures in BiH* (implemented by Djikic Consulting Services), Sarajevo, Bosnia and Herzegovina	**Short-term Expert** Contact: Emir Djikic Djikic Consulting Services Tel: +387 33 217 815 emir@djikic.com	**Public Administration Reform Project "Development of the Performance Measurement System in Civil Service Structures in BiH"** ▪ Wrote the Report "Analysis of the Process of Defining Organizational and Human Resource Objective and Linking It to Program Budgeting in the Context of Improving the Performance Management System"
March 2008 and December 2008 – February 2009	Sarajevo, BiH	*EU Support to Directorate for Economic Planning Project*, financed by the European Commission (implemented by PKF Accountants and Business Advisors), Sarajevo, Bosnia and Herzegovina	**Short-term Expert** Contact: Murray Ross PKF (UK) LLP Tel: +44 207 065 0283 murray.ross@uk.pkf.com,	**EU Support to Directorate for Economic Planning in Bosnia and Herzegovina** ▪ Wrote the report on "Inputs Into Situational Analysis of the BiH Public Finance Sector" ▪ Worked with Economic Policy Research Unit's staff covering fiscal issues so as to improve their understanding of the underlying institutional structure and strengthen their analytical skills.

April 2008 – August 2008	Sarajevo, BiH	*EU Fiscal Policy Support Project* (implemented by Human Dynamics), Sarajevo, Bosnia and Herzegovina	**Short-term Expert** Contact: Human Dynamics Tel : +43 1 402 50 20 www.humandynamics.org	**EU Fiscal Policy Support Project** ▪ Wrote a discussion paper on "Reporting Consolidated Fiscal Data in Bosnia and Herzegovina: Current Practices vs. EU Requirements".
July 2007 – October 2008	Sarajevo, BiH	DFID's *Strengthening Public Expenditure Management Project – SPEM II* (implemented by PKF Accountants and Business Advisors in the period up to March 2008 and under a DFID desk contract in the period from April to September 2008), Sarajevo, Bosnia and Herzegovina	**Long-term Expert** Contact: Murray Ross PKF (UK) LLP Tel: +44 207 065 0283 murray.ross@uk.pkf.com	**Strengthening Public Expenditure Management Project in Bosnia and Herzegovina** ▪ Provided support and increased capacity of the Budget Sector of Ministry of Finance and Treasury of BiH in implementing a medium-term, results-based budget planning and preparation process that reflects BiH macroeconomic environment, strengthens fiscal discipline and targets the allocation of limited public resources towards the social and economic development objectives ▪ Acted as a liaison with all State institutions as well as relevant donor-funded projects. ▪ Wrote several discussion papers providing policy advice or training to the Ministry of Finance and Treasury of BiH in the field of budget planning and management.
July 2007- March 2008	Sarajevo, BiH	Open Society Fund, Sarajevo, Bosnia and Herzegovina	**Research Fellow** Contact: Open Society Fund Tel: +387 (0)33 444 488 osf@soros.org.ba	**Open Society Fund Policy Development Research Fellowship** ▪ Wrote the policy study "BiH Corporate Income Taxation: Making It Both Adherent to the EU Standards and Conducive to Improvement of BiH Competitiveness".
June 2005- July 2007	Sarajevo, BiH	Directorate for Economic Planning within the Council of Ministers of BiH (former Economic Policy Planning Unit), Sarajevo, Bosnia and Herzegovina	**Advisor for Public Finance** Contact: Directorate for Economic Planning of BiH Tel: +387 (0)33 225 933 info@dep.gov.ba	**Department for Economic Research of the Directorate of Economic Planning** ▪ Researched and analyzed public finance issues and monitored fiscal reforms. ▪ Prepared the reports and macroeconomic forecasts of fiscal trends ▪ Acted as a liaison with the office of the Chairman of the Council of Ministers of BiH, Fiscal Council of BiH, ministries of finance, Central Bank, Indirect Tax Authority, World Bank, International Monetary Fund, and other institutions relevant for the field of public finance. ▪ Wrote a research paper "Corporate Tax Burden in Bosnia and Herzegovina in Cross-Country Comparison in the field of direct taxation in BiH".
April 2004 – August 2004	Sarajevo, BiH	Economic Policy Planning Unit, Sarajevo, Bosnia and Herzegovina	**Economic Research Intern** Contact: Directorate for Economic Planning of BiH Tel: +387 (0)33 225 933 info@dep.gov.ba	**Economic Policy Planning Unit** ▪ Assisted the Prime Minister's Advisor for Economic and Development Affairs. ▪ Performed research and analysis of macroeconomic and fiscal data of Bosnia and Herzegovina.
May 2003 -April 2004 and September 2004 - May 2005	Winter Park, Florida	Rollins College Finance Department, Winter Park, Florida	**Teaching Assistant** Contact: Crummer Graduate School Tel: + 1 407 646 2405 http://www.rollins.edu/crummer	**Finance Faculty of the Crummer Graduate School** ▪ Taught Accounting to graduate students. ▪ Preformed academic research in the field of finance.

13. Publications/Reports/Inputs to Reports:

i. *Assessment of Impact of Austerity Measures on National Investment Programs in the Western Balkans*, Regional Project EU Horizontal support to Coordination with International Financial Institutions in the Western Balkans and Turkey (May 2011)
ii. *Integrated Budget Manual for Bosnia and Herzegovina Including Program Budgeting Handbook*, DFID's Strengthening Public Expenditure Management Project (February 2011)
iii. *Parliamentary Budget Handbook,* DFID's Strengthening Public Expenditure Management Project (September 2010)
iv. *Citizen Budget Guide,* DFID's Strengthening Public Expenditure Management Project (May 2010)
v. *Analysis of the Process of Defining Organizational and Human Resource Objective and Linking It to Program Budgeting in the Context of Improving the Performance Management System*, Public Administration Reform Project "Development of the Performance Measurement System in Civil Service Structures in BiH (April 2010)
vi. *Brochure for Cooperation of the Civil Society Organizations and Parliament,* DFID's Strengthening Public Expenditure Management Project (January 2010)
vii. *Inputs Into Situational Analysis of the BiH Public Finance Sector*, EU Support to Directorate for Economic Planning in Bosnia and Herzegovina (February 2009)
viii. *Reporting Consolidated Fiscal Data in Bosnia and Herzegovina: Current Practices vs. EU Requirements*, EU Fiscal Policy Support Project (August 2008)
ix. *BiH Corporate Income Taxation: Making It Both Adherent to the EU Standards and Conducive to Improvement of BiH Competitiveness*, Open Society Fund Policy Development Research Fellowship (March 2008)
x. *Corporate Tax Burden in Bosnia and Herzegovina in Cross-Country Comparison in the field of direct taxation in BiH*, BiH Economic Studies (July 2007)