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DEPARTMENT OF FINANCE, MONEY AND PUBLIC ADMINISTRATION

HABILITATION THESIS

Studies on corporate effective tax burden/rates in Romania.

Empirical evidence on how private vices affects public finance worldwide

Abstract

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The research undertaken so far deals mainly with taxation issues from two broad perspectives, namely **corporate taxation and tax policy**, which represent two well-defined and clearly structured research tracks as my publication background shows. While the first deals with the effects of taxation on corporate affairs, the second tackles taxation from policy perspective, thus assuring a constructive synergy over taxation both at micro and macro level. Moreover, even though the two perspectives looks upon taxation from different angles, they also complement each other (i.e. equity of tax system which can be viewed from business perspective, but also from government perspective), thus offering an integrative view over the complex phenomena of taxes.

The starting point of my research was my PhD thesis entitled "The effects of public budgeting on corporate affairs" who was defended in 2008, but the most important scientific achievements were realized as a result of **implementing the post-doctoral research grant** entitled *"The Competitiveness of Romanian Companies under the Incidence of the Fiscal Parameters. Determination of Effective Tax Rates and Assessment of the Impact of Fiscal Incentives on Their Performance"* (PN-II-RU-PD 340/2010)), funded by National Council for Scientific Research of Romania, during 2010 – 2012 with 298.000 RON (approximately 68000 EUR). This grant was the gate to state of the art international research in the field of corporate taxation. Having access to one of the most prestigious research centres in the field of business taxation, namely Center for European Economic Research, Mannheim, Germany had a profound impact on my research skills and constituted a self-reinventing experience in terms of research.

As a result of these experiences, the research achievements were focused on producing **high quality papers in business taxation, which were published in well-established SSCI international journals: *Post-Communist Economies, Eastern European Economics* and *Emerging Markets Finance and Trade*** (the last two are single-authored). All of the papers were dealing with Romania case and up-to-date represent the only papers published in international well established journals that deal with the issue of effective tax rate/burden in Romania. The findings of the research undertaken are useful both for policy makers (in terms of the impact of tax reforms or tax law provisions) and business executives (in terms of business behavior meant to reduce the corporate tax burden). Therefore, the research not only represents a sound documented picture of Romanian taxation, but also provides useful recommendations and policy guidance in real economic life.

In terms of novelties brought to similar research undertaken so far in the world, there are some contributions that need to be highlighted. First, **new measures of effective corporate tax rates were developed**, which include not only profit tax, but also non-profit taxes and labour related taxes. These were especially useful in order to capture the tax burden triggered by other taxes, which may change dramatically the picture of low corporate income tax rate in Romania. Second, when investigating determinants of firm-specific corporate tax rates, **new determinants were introduced** for the first time in this kind of research. I refer to variables that capture the extent of **tax planning activities** and to the **legal differences between financial and tax accounting related to provisions**. If the first one were found as having no effect on effective corporate tax rates, the second one has a significant effect similar to other well-established determinants such as leverage or capital intensity.

The most important pre-requisite for the publication in the above mentioned journals and a critical resource for this type of firm-specific research was the **creation of corporate accounts database called INFIN**, which contains detailed items from balance sheet and income statement for the companies listed at Bucharest Stock Exchange from 2000 onwards. Two of the three papers were based on this database. Moreover, data on **non-profit taxes and labour related taxes were collected**, since this type of tax data are not available in the well-established corporate databases (Orbis, DataStream). This database is continuously updated on yearly basis and represents an important tool for conducting corporate finance research for Romanian listed companies. To my knowledge, this is the single most extended coverage database with corporate accounts for Romanian public companies. One advantage of this database is that it contains information regarding to some tax issues that go beyond traditional coverage (i.e. meal tickets that trigger important corporate tax savings). Moreover, since the IFRS adoption starting from 2012, data collected expanded and now covers also research and development expenditures and intragroup loans, which might be useful in assessing new determinants of firm-specific effective tax rates.

Another achievement was the preparation of a **ZEW Discussion Paper on Romania's effective tax burden using the European Tax Analyzer** model which is an international recognized research tool in assessing effective tax burden for different jurisdictions in the world. Having access to this state of the art research tool which was intensively used by European Commission and modeling dozens of indigenous tax law provisions from 1992 to 2012 opened up new understandings of the incidence of taxes on corporate behavior. As a result of this collaboration, **Romania is the first transition country covered by European Tax Analyzer** and any subsequent tax reforms can easily be modeled in terms of assessing the impact on corporate effective tax burden. This is especially useful for policy makers who may want to know in advance the potential impact of future tax reforms.

The research experience in the field of corporate taxation was beneficial for my **international refereeing activity**, the most prestigious journals for which I had been a reviewer being *International Tax and Public Finance, Accounting and Finance* and *Emerging Markets, Finance and Trade*.

More recently, my research dealt with **tax policy**, namely with determinants of a newly introduced and original concept of **vice-related deficit** (*Emerging Markets Finance and Trade)*. The vice-related captures the net overall effect of vice goods consumption on public finance as the difference between positive effects (cash inflows) of private vices from the revenue side of the budget through excise duties and negative effects (cash outflows) from the expenditure sides through health care expenditures. It is a very simple, but powerful construct which picks up the effect of private vices on public finance. The results showed that **smoking had a negative effect** on vice-related budget balance, while **alcohol and gasoline consumption had a positive effect**. The negative effect of private vices on public finance is stronger for Christian countries than for non-Christian countries.

In terms of current research, I have a paper **"Corporate tax-mix and firm performance. A comprehensive assessment for Romanian listed companies"** who is currently accepted for publication (awaiting production) in *Economic Research-Ekonomska Istraživanja* journal. By corporate tax-mix, I mean all the taxes legally borne by companies (profit tax, non-profit taxes, labour relatd taxes) scaled by total sales, which further was investigated as a first order determinant of firm performance proxied by return on assets. Another development of firm-specific effective tax rates research consists in a paper entitled **"Bank-specific effective tax rates under loan loss provisions. An European investigation"** which for the first time investigates bank entities in terms of determinants of effective tax rates. The paper is available as working paper on the Centre for Research in Finance at our university and is under review at *Economic Systems* journal. Another working paper is entitled **"Taxes and general public services. An empirical investigation"**, which investigates the determinants of taxes collected net of public services for a sample of countries from all over the world over 2007-2014 period. By taxes collected net of public services I mean the difference between taxes to GDP ratio and general public services expenditures to the GDP ratio. Basically, this metric captures the tax related cost of government (the lower the figure, the better) which provides a very informative estimate to the funds available to other government functions (education, healthcare, etc.).

Apart from journal articles, important contributions were also made through **publication of three books in the field of taxation and public budgeting**. A special note goes to *Sisteme fiscale comparate (Comparative Tax Systems)* book, which to my knowledge, represents one of the few indigenous book that deals with comparative taxation.

Another contribution resides in the field of **merging research and teaching**. As a result of my improved research skills and of the experience acquired while I was a visiting researcher abroad, I am presently teaching a new postgraduate course entitled *Taxes and Business Strategy*.

Another achievement was my designation as the **Romanian responsible for the international research project called Observatorio Fiscal**, coordinated by University of Murcia, Spain. My task was to supervise a survey undertaken among the Romanian students in terms of accuracy of questions and answers and to assure the proper conditions for that international survey to be accomplished.

My research work is cited in several SSCI journal articles: *Emerging Markets Finance and Trade* (2016), *Politická Ekonomie* (2012), as well as in one book published at Oxford University Press (Ban, C., Ruling Ideas: How Global Neoliberalism Goes Local, 2016). From another perspective I found that my research was cited in papers published in countries such: USA, UK, Germany, Japan, Poland, Czech Republic, Croatia, Lithuania, Letonia and Turkey.

The main conclusions regarding my research on corporate taxation in Romania can be summarized as follows:

1) The decrease of corporate income tax rate has not been accompanied by a broadening of the corporate income tax base as European Tax Analyzer showed; this is not in line with the widely acknowledged trend of tax rate cut cum base broadening reforms worldwide;
2) The corporate tax burden (expressed in EUR) decreased from 45.293.505 EUR in 1992 to 16.010.902 in 2010, which in relative terms match de decrease in corporate income tax rate from 45% in 1992 to 16% in 2010;
3) When compared with the other six Central and Eastern European member states, the European Tax Analyzer reveals the second position of Romania (only behind Bulgaria) in terms of corporate tax burden. In order to come on top, the Romanian corporate income tax rate should be 9.5% (below that of Bulgaria of 10%), assuming that all other jurisdictions do not amend their tax system.
4) Firm-level evidence from Romanian listed companies shows that corporate effective tax rates declined through the period surveyed (2000 – 2011) in line with the statutory tax rates cuts, both for corporate income tax and social security charges. This suggest an increase of Romania attractiveness as a business location.

5) The overall corporate effective tax rate (computed as total public finance liabilities to companies' turnover ratio) development over time clearly shows that the highest burden belongs to labour related taxes, while the lowest belongs to corporate income tax rate.
6) During the crisis, all versions of corporate effective tax rates increased compared to previous year (2008).This is strong evidence that the government actions (the levy of a corporate alternative minimum tax plus the restriction of deductibility for certain operating expenses together with the increase of social security contributions statutory tax rates) had bad effects on business.
7) Looking on industries, commerce was the least taxed sector, while transportation has to deal with the heaviest tax burden (consistent under all three rates considered).
8) With regard to determinants of firm-specific effective tax rates significant effects were found for capital intensity (-), leverage (-) and profitability (+), while company size and labor intensity renders outcomes without any statistical significance.
9) Tax planning proxied by a dummy variable equal to 1 if the company is part of a multinational company and 0 otherwise was not found as having a significant effect. I did not find any significant company size effect, therefore the hypothesis that larger companies engage more aggressively in tax planning activities is not supported by data on Romanian listed companies. Moreover, profitability positively affects both versions of corporate ETRs, yet the argument that the profitable firms are more dedicated to tax planning activities does not stand either. This lack of tax planning activities in Romania can be explained by one of the lowest statutory tax rates in Europe.
10) Legal differences between financial and tax accounting rules concerning provisions were found as having a positive impact on firm-specific effective tax rates. Provisions enjoys stricter rules for tax deductibility, which makes them a significant determinant of effective tax rates

The main conclusions regarding my research on tax policy can be summarized as follows:

1) Smoking has a positive effect on vice-related budget balance, while alcohol and gasoline consumption both have negative effects;
2) The positive effects of smoking on vice-related budget balance (negative effect on the corresponding deficit) suggests that increasing smoking generates a reduction of vice-related deficit. This suggests that excise taxes are not enough for dealing with its negative effects, since the smokers do not react promptly on shock prices triggered by excise taxes increase. Therefore, recent proposals such introducing a smoking permit (Le Grand and Srivastava 2009) may be more effective.

3) The negative (positive) effects of alcohol consumption on vice-related balance (deficit) suggests that reducing drinking contributes to the reduction of vice-related deficit. As oppose to smoking, alcohol consumption seems not to be a virtue for public finance and consequently governments may have more incentives to fight against it. As for the ways of doing it, the most obvious way is by raising excise taxes, which have been shown to be quite effective. Moreover, bringing this alcohol production into the tax zone, will not only increase excise taxes to GDP ratio, but, as it has no effect on expenditures side of the budget (since it only tax alcohol which was consumed anyway), it also diminishes the vice-related deficit and the corresponding overall budget deficit.
4) Substituting gasoline consumption with green alternatives contribute to a reduction of air pollution, without affecting the GDP dynamics.
5) The negative effect of private vices on public finance is stronger for Christian countries than for non-Christian countries. At the first glimpse, the explanation could be the Islam attitude towards alcohol consumption, but other factors, such as spending on healthcare, usually higher in Christian countries, might turn the scales. Nevertheless, reducing the alcohol and tobacco consumption not only reduce the associated health care costs, but may also improve the public finance balance. If taxes and others measures work poorly in some countries, a reinforcement of Christian dogmas could significantly contribute to the reduction of vice goods consumption (e.g. alcohol)

My future research prospects continue on the research tracks undertaken so far, by taking an in-depth approach to these issues.

With regard to corporate taxation, there are two research ideas that I intend to develop further.

The first one consist in conducting an empirical investigation on the **determinants of corporate effective tax rates at European level**, using data from Orbis database for all European non-financial companies. The data are collected for 2004 – 2013 period, but they need to be sorted by reporting requirements and complemented by country-specific tax related data. Disentangling between companies that **report under Local GAAP and IFRS** is an extremely time-consuming activity since data collection process does not allow for this information to be extracted in the same manner as data from corporate accounts, but it will pay in terms of accuracy of the empirical investigation. With regard to **country-specific tax data**, these are best captured by Devereaux-Griffith effective average tax rates (EATR) which aggregates the most important national tax law provisions on annual basis. EATR is a country-specific tax rate that "depends only on tax legislation" (Devereux and Griffith, 2002). By doing so, we are able to control both for the effects induced by changes in statutory tax rates or surcharges rates (if any) and changes in tax bases (i.e. depreciation rate). Since EATR is finely tuned to capture the most significant country-specific tax changes, it is the best proxy for countries' tax reforms. It does not only capture statutory tax rate changes, which are most visible and have the largest impact on companies, but also slight adjustments in tax bases, which are less visible and have lower impact, but nevertheless meaningful in controlling for country-specific tax reforms related determinants of firm-specific ETRs. Consequently, EATR displays larger variation as compared to countries' statutory tax rates, which make it more suitable for our investigation not only from tax point of view, but also from methodological standpoint. By doing so, I believe that I will be able to provide the most comprehensive research on corporate effective tax rates up to date.

The second research idea is to **link tax avoidance (proxied by the deviation of firm-specific tax rate from country-specific tax rate) to corporate governance** by merging data from Orbis and BoardEx databases. The corporate governance characteristics are divided into 6 broad categories according to the data structure of BoardEx database: 1) Characteristics of directors roles (director type, individual role); 2) Directors experience and characteristics (gender, nationality); 3) Director count totals (total directors, executive directors, independent non-executive directors, executive chairmen); 4) Remuneration data (salary, bonuses, pensions, equity-linked options); 5) Accumulated wealth (shares, long-term incentive plan, options); 6) Audit committee members data (size, remuneration, independence). In this framework, the research will assess the effects of each of the six corporate governance categories on tax avoidance, as well as the overall effect.

With regard to tax policy the main research idea that I want to develop is to investigate the **determinants of taxes collected net of public services** for a sample of countries from all over the world over 2007-2014 period. By taxes collected net of public services I mean the difference between taxes to GDP ratio and general public services expenditures to the GDP ratio. Basically, I want to capture the tax related cost of government (the lower the figure, the better) which provides a very informative estimate to the funds available to other government functions (education, healthcare, etc.). The main determinants looked upon are tax regime (flat or progressive), political stability, government effectiveness, regulatory quality, rule of law and corruption taken from World Bank surveys. In order to control for global economic crisis, year fixed effects are included, while controlling for unobservable country-level factors that are constant over the sample period is done via country fixed effects.

As for teaching, if I were to join the Doctoral School my intention is to develop a curricula targeted for Ph. D, students in Finance, Accounting and Management which **integrates taxation into corporate finance research**. Taxes can have a dramatic impact on after-tax cash flows and knowing how to arrange transactions in order to maximize after-tax cash flows is a skill that certainly makes the difference among Ph. D. students. The course would bridge the gap between taxation and corporate finance by providing a planning approach to taxes, business and investment planning. Students will learn to integrate taxes into the business decision making process and understand how taxes affect the business behavior. They gain a significant competitive advantage over students who know little or nothing about taxes.