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TAX BURDEN IN OECD COUNTRIES:
WTI Application

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Preface

The presented monograph deals with the issue of tax burden in OECD countries. Its content makes it a loose sequel of monograph WTI – World Tax Index by Igor Kotlán and Milan Kaštan, published by VŠB – Technical University of Ostrava in 2010.

The attempts for comparing the tax burden can be motivated by various inducements such as forming macro economical models or comparison of tax burden, e.g. for a purpose of a tax reform carrying. In any case there arises a question of what indicator should be used for the tax burden formulation. The tax quota and implicit tax rates, possibly tax-free day indicator, are the most frequently used. The authors of this publication present their own indicator called World Tax Index – WTI, a summarized multi-criteria tax burden indicator, with the aim of capturing the problem of tax burden in OECD countries more accurately than by using above mentioned indicators.

The monograph is suited especially for specialists concerning with tax issue of a macro economical level, but it can also be suitable for a broader public as a base source while dealing with tax policy, reforms etc.

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Content

Detailed Content

List of Symbols and Abbreviations

AUS	Australia
AUT	Austria
BEL	Belgium
CAN	Canada
CIA	Central Inteligence Agency
CIT	Corporate Income Tax
CZE	Czech Republic
DCO	Excise Duty on Special Consumption
DEN	Denmark
ECC	European Economic Community
ESP	Spain
EST	Estonia
FIN	Finland
FRA	France
GBR	United Kingdom
GER	Germany
GRE	Greece
GTH	Global Tax Handbook
HUN	Hungary
ICE	Iceland
ILO	International Labour Oragnisation
IRL	Ireland
ITA	Italy
ISCED	International Standard Classification of Education
IZR	Izrael
JPN	Japan
KOR	Korea
LUX	Luxembourg
MEX	Mexico
NED	Netherlands
NOR	Norway
NZL	New Zealand
OECD	Organisation for Economic Cooperation and Development
PIT	Personal Income Tax
POL	Poland
POR	Portugal

PRO	Property Taxes
QEO	Qualified Expert Opinion
RCH	Chile
SLO	Slovenia
SOS	Social Security Contribution
SUI	Switzerland
SVK	Slovak Republic
SWE	Sweden
TUR	Turkey
USA	United States of America
VAT	Value Added Tax
WB	World Bank
WTI	World Tax Index

Chapter 1

Introduction

The aim of this monograph is to construct authors’ own tax burden index based on subjective data (qualified experts opinion) and objective data (supported by real tax system characteristics). The secondary aim is to perform a tax burden evaluation and a comparison of studied OECD countries.

The pulication is divided into five main chapters. The first one focuses on the WTI structure, data and methodology used for its calculation. It is only a brief outline when taken into consideration that the methodology part was already described into detail in a separate publication WTI – World Tax Index (Kotlán and Kaštan, 2010).

WTI is a multi-criteria index and so consists of several subindices that can be further divided into lower components. The key chapter of the presented publication is actually a second chapter describing single subindices of WTI into detail. Each subindex is at first shortly described; this is followed by the results of Qualified Expert Opinion that was used for defining the weights of single components for further calculation. Last but not least, the values of each subindex applying for every single OECD country are summarized.

The third chapter focuses on the calculation of WTI in the OECD countries as such. Also in this case the Qualified Expert Opinion is presented, this time expressing partial subcriteria weights followed by calculation of WTI values.

The aim of the fourth chapter is to outline the direction of authors' follow-up research in the area of tax burden measurement while the current findings are also described there. The last fifth chapter also mentions the problem of tax harmonization as one of the factors directly influencing the tax policy and so the tax burden in studied countries.

The conclusion summarizes achieved findings and their arising recommendations for the tax policy in OECD member countries.

Chapter 2

World Tax Index Structure

As it was mentioned in the introduction, the World Tax Index (WTI) is a summarizing multi-criteria indicator of tax burden. It combines tax condition data available from world respected sources with data expressing Qualified Expert Opinion (QEO). Index denotes the total value of tax burden in relation to other studied countries, while higher WTI values indicate higher tax burden.

In the case of WTI, the interpretation of a tax burden does not apply only on the height of the tax selection and its relation to GDP, as it is e.g. in a tax quota (compare with e.g. Kotlán et al., 2011). There is a tendency to implement also other important aspects into the evaluation that are connected e.g. with the administrative demands of a tax collection from a taxpayer viewpoint, with the extent of tax exceptions and with possibilities of managing the tax losses etc.

WTI consists of six subindices. They are:

A) CIT – Corporate Income Tax,
B) PIT – Personal Income Tax,
C) VAT – Value Added Tax,
D) SOS – Social Security Contributions,
E) PRO – Property Taxes,
F) DCO – Excise Duty on Special Consumption.

CIT is a subindex presenting the level of tax burden with regard to the corporation taxation, PIT with regard to the household taxation, VAT with regard to the value added type of tax, SOS with regard to the social security and other compulsory contributions, PRO with regard to the property taxes, and lastly DCO expressing the level of tax burden with regard to the other consumption taxes, always in relation with the other studied countries.

Every single subindex is, on the top of that, a consequence of an influence of several factors that is why also the partial subindices are further divided into several components. In a case of CIT that is e.g. Nominal Tax Rates, Depreciation and Amortization, Incentives, Losses, Administration; in a case of PIT they are Nominal Rates, Progressivity Rate, Personal Deductions, Allowances and Credits, Losses, Administration, etc. These components are paired with concrete figures calculated from available data presented at internationally respected sources and data presented as QEO.

2.1 QEO Data and Methodology

The uniqueness of WTI lies primarily in a fact that it combines hard and soft data for the expression of the overall tax burden. In a first case those are the data from OECD, ILO, WB, CIA databases, but also data published by ministries and other offices of public service of single countries. In some cases the gained data could be directly used (e.g. the Standard Nominal Tax Rate is directly a part of VAT subindex and so also WTI index). In other cases the information was used only for the calculation of a target figure which is a basic unit used for WTI calculation (or rather single subindex). It was a case of e.g. relative time consumption of tax administration of corporate taxes that are a part of CIT index and that must have been calculated based on data provided by World Bank.[1]

Soft data were gained through a questionnaire survey executed exclusively with the aim of obtaining Qualified Expert Opinion (QEO)[2] concerning the problem of tax burden in OECD countries. The execution of QEO survey took place at the beginning of 2010 in OECD member countries, including Slovenia.[3] Overall there were 31 countries out of which, there were according to the unified key, selected tax burden experts and their opinions were used for creating WTI. Altogether over 2,600 experts of stated countries were chosen and asked while opinions of 104 of them were used for compiling WTI index at the end. Experts in this questionnaire survey expressed their opinions on the importance of each WTI subindex and their components from a position of tax burden in countries where they work. The methodology of obtaining QEO for the needs of WTI together with the elaborated results of this survey was described into detail in a separate publication (Kotlán and Kaštan, 2010).

Soft data obtained from the questionnaire survey serve as weights of hard data obtained from the mentioned databases. Single subindex is generally calculated as:

$$S_k = \sum_{i=1}^{N} \left(X_{n_i} \frac{QEO_i}{100} \right), \qquad (2.1)$$

where S_k represents k-th component of a subindex, X_n is a standard value (n stands for standard) of i-th component of a subindex and QEO_i is a value of QEO for i-th component. N is a number of components of a relevant subindex.

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1 Into detail see the chapters concerning the index composition.

2 In general, Qualified Expert Opinion (QEO) is a rational way how to evaluate figure (element) which is inefficient or almost impossible to evaluate in any other way.

3 At a time of initiating the survey it referred to these countries: Australia (AUS), Austria (AUT), Belgium (BEL), Canada (CAN), Czech Republic (CZE), Denmark (DEN), Finland (FIN), France (FRA), Germany (GER), Greece (GRE), Hungary (HUN), Iceland (ICE), Ireland (IRL), Italy (ITA), Japan (JPN), Korea (KOR), Luxembourg (LUX), Mexico (MEX), Netherlands (NED), New Zealand (NZL), Norway (NOR), Poland (POL), Portugal (POR), Slovak Republic (SVK), Slovenia (SLO), Spain (ESP), Sweden (SWE), Switzerland (SUI), Turkey (TUR), United Kingdom (GBR), United States of America (USA). In case of tables and figures that are not directly connected with the survey findings, the data of Estonia (EST), Israel (IZR), Chile (RCH) are also stated.

The summarizing WTI index is then calculated from separate subindices as:

$$WTI = \sum_{k=1}^{6} \left(S_k \frac{QEO_k}{100} \right), \tag{2.2}$$

where QEO_k is a figure of QEO for k-th subindex. The methodology of separate subindices calculation is described in relevant chapters into more detail.

All the tables that appear in the text without data source identification contain own calculations of the authors.

WTI as a whole represents more than 95% OECD tax mixture in studied countries, the remaining part of a tax mixture refers to other taxes so specific for each country that their comparison is almost impossible (if we want to compare also other aspects and not only the amount of the tax collection). WTI so covers a significant part of a tax burden in each country and can so be considered a summarized tax index.