SOCIAL WELFARE AND TAXATION EFFECTS ON INSURANCE. AN INTERNATIONAL EMPIRICAL STUDY

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This paper analyzes the influence of the level of economic development as well as the level of taxation on insurance activity. To this purpose we reviewed the national and international literature and collected data on international level (for both year 2005 and 2007) to check the relationship between them.
Our findings confirm the relationship between economic development and insurance activity, but our data does not support the association between taxation and insurance.

Keywords: insurance, premiums, taxation, economic development
JEL codes: G22, H24, H25

1. Introduction

In today's financial crisis emphasized by high unemployment, fulminate bankruptcy of many firms and impossibility of quantification of negative economic and social consequences, the taxation of insurance represents an important issue both for insurers and the European or/and national supervisory body of insurance market, and also for individuals or/and legal entities.
EU attempts to harmonize first the national legislations regarding the taxation and then those relating to insurance (as specified in the quantitative impact studies QIS 1-4), aiming to ensure the specific solvency of insurance companies. This action encountered serious difficulties arising from the existing differences between regulations, terms of economic and social life, traditions and culture, lack of information regarding the usefulness of insurance and their political group interests. Taking in consideration the significance of fiscal considerations in the decision to subscribe insurances contracts, different European countries, including Romania, have tried and managed through its fiscal laws to apply different ways for fiscal deductibility of insurance expenses. In fact, after 1990, in the majority states worldwide, this form of fiscal relaxation through deductibility stimulated growth of gross premiums subscribed per capita.

2. Fundamental concepts in the taxation of insurance activities

The taxation of insurance should be regarded and analyzed both from the perspective of gross premiums subscribed and received by insurance companies and services from the insurer. Regarding the taxation of insurance, it can be tackled by technical and socio-professional perspectives.
Technical approach to taxation of life and non-life insurance can be achieved through taxation of insurance premiums and/or insurance indemnities. The taxation of insurance premiums summarized either on their deductibility/non-deductibility, either to reduce tax.
The deductibility/non-deductibility of premiums is capped and capping may operate individually or globally in insurance products, in fixed amount (per person, couple, husband and family

member) or percentage of total taxable income and in the form of limiting on bonus, income, premiums and income. Tax reduction instead is always limited, and operate in absolute size, in the percentage share of tax or part of income, in the amount determined by the law.
Tax benefits of the insurer may be achieved through the analysis of rents in the form of payments through periodic sums insured. Periodic payments for operating are different from one country to another, and its taxation may be total, partial differential or exempted. In case of insured sum we find taxation or non-taxation of the amount insured by the insurance policy (known as capital) and/or non-taxation or taxation differences between the amounts paid by the insurer and the total insurance premiums paid by the insured person.
Socio-professional approach concerns taxation of insurance premiums through the different socio-professional categories (natural persons, legal persons, authorized persons) and the pensions insurance.
Insurers' benefits may take various forms (daily allowances, sums insured in case of life or death, rents, amounts provided for single-premium policy, those with capitalization) depending on the policy and concluded the nature of risk covered. Taxation of these benefits are achieved with the principles and logic of tax (a tax or insurance premiums or benefits), but depends on the binding and/or voluntary policy.

3. Literature review

Boyer (2002) presents an interesting case in USA where the taxation of insurance benefits is preferable to the taxation of premiums. When insurance fraud is present - in the form of ex post moral hazard - a tax on insurance premiums increases the number of fraudulent claims in the economy, whereas a tax on insurance benefits may reduce fraud. More importantly, however, policyholders are made better off with a benefit tax than with a premium tax.
Altenburger et al. (2008) develop a common solution for the separation problem in accounting and in taxation which is innovative, theoretically correct and practically applicable. The principal design innovation is the way of distinction of different deposit components and their classification into different types. Dividing them into 'implicit' and 'explicit' deposit components delivers the theoretically correct results for unbundling of insurance contracts both for accounting and tax purposes.
Tzeng and Huang (2004) examine in their paper the impact of tax deductions on optimal insurance contracts. Their results show that the implementation of tax deductions increases the deductible but may or may not decrease the coinsurance.
Grace et al. (2008) using a state-level panel data set from 1992-2004 for the property-casualty insurance industry, find in their paper that the insurance premium tax has a negative but modest effect on employment in the insurance industry.
As the Romanian literature is concerned, the topic of insurance taxation is very vaguely studied.
Stoicescu and Teodorescu (2003) published a research regarding the national insurance market in the context of accession to the European Union, paper which draws a comparison between the insurance system in Romania and other European countries in 2002, where they highlight the low level of insurance premiums subscribed by the population reported, and the low value of the insurance premiums subscribed per capita.
Once with the introduction of the optional insurance premiums (the 3rd pillar of the pension system), the interest for debate over insurance taxation has increased. Various studies have addressed the level of deductibility of voluntary health insurance premiums from the date of introduction of these premiums and concluded that their interest for signing them was well below the level at which employers might be tempted to purchase such policies for their employees (Mosoianu, 2007). After the study was published, the value of deductibility of health insurance premiums was changed, meaning the increase of them.

The low interest for the treatment of the insurance taxation can be explained by the fact that the market mechanisms are not yet sufficiently established, and as an argument we bring the failed action of the Romanian legislator to boost the development of insurance, attempt started in early 2004. Thus was launched the initiative to encourage housing insurance by providing individuals tax deduction who contracted an insurance of dwelling, for amounts paid as insurance premiums, not exceeding a ceiling equivalent to 200 euro. The effects were not those expected, so that in the beginning of next year, the tax deductions for housing insurance premiums were eliminated from the Fiscal Code.

Insurance in our country is characterized by an incipient state of development compared to the developed countries where insurance is part of tradition and education. Factors leading to the limitation in the interest about insurance in Romania concern at least the following courses of action: misunderstanding the role of insurance and thus ignoring the benefits that arise from the signing of an insurance policy, lack of interest in insurance, low proportion of middle class correlated with the financial factor, the existence of unfair competition practices, too little inspired management and focused on immediate advantages, problems related to inflation, unemployment, low income citizens. (Cristea et al. 2008).

Countries that have a culture in insurance activities have implemented certain tax advantages for insured persons, one of which is the deductibility of insurance premiums. By comparison, Romania is situated very low as the deductibility of insurance premiums is concerned and our legal approach tends to develop insurance premiums at a level considered satisfactory compared to the average states of the European Union. Thus, in March 2008 PRIMM magazine published a comparative study of the evolution of insurance in Romania between 1997-2007 (Ghețu and Doreonceanu, 2008) which shows that the evolution of insurance premiums subscribed were growing, but in terms of the degree of penetration in GDP and insurance density per capita, which had a tendency to increase during the period under study, are well below the average of the European Union countries.

4. Hypotheses, variables and data sources

Based on the general economic literature we can suppose that the level of life of the society is linked to the capability of the people to spend for security purposes. This can explain the lack of interest in insurance in Romania, as discussed by Cristea *et al*., 2008. Therefore we issue the following hypothesis:

H1: The level of life is positively associated with insurance activity.

On the basis of the previously presented literature (Boyer, 2002; Grace *et al*., 2008; Stoicescu and Teodorescu, 2003; Mosoianu, 2007) we conjecture a negative relationship between taxation and insurance activities, i.e. as the level of taxation decreases this favors and stimulates the insurance sector. Our next hypothesis is therefore:

H2: Taxation is negatively associated with insurance activity.

Since we are interested on the effect of several factors on insurance activity, we developed the following variables:

- Proxies for insurance activity: *premiums subscribed* (life and non-life premiums, mil. USD), *number of companies* and *number of employees* in the insurance sector;
- Proxy for level of life: *GDP per capita* (USD/inhabitant);
- Proxy for taxation: *premium tax* (life and non-life, mil. USD).

The underlying econometric model is:

$$Insurance\ activity = \alpha_0 + \alpha_1 Level\ of\ life + \alpha_2 Taxation + \varepsilon$$

Our sample comprises 36 countries worldwide. Since these countries are followed by most of the (international) regulators and institutions, we consider them as the most relevant, securing the representativeness of our sample on international level. To enhance the robustness of the research we collected data for 2 years (2005 and 2007) as specified below:

Table 1. Sources of data

Variable	Data source
Year 2007	
GDP, population, premiums	http://www.iii.org/international/toc/
No. of companies, employees	http://stats.oecd.org/wbos/index.aspx?r=341031 http://www.cea.eu/uploads/DocumentsLibrary/documents/1224519688_eif.pdf www.nsi.bg www.csa-isc.ro
Premium taxation	http://www.pwc.com/extweb/pwcpublications.nsf/docid/f5e7616e79072bfcca256fc0000a3ad0 http://www.mabisz.hu/english/publication/yearbook/index.html
Year 2005	
GDP, population	http://server.iii.org/yy_obj_data/binary/772943_1_0/international_fact_book_2006-2007.pdf
premiums	http://server.iii.org/yy_obj_data/binary/789034_1_0/international_fact_book_2007-2008.pdf
No. of companies, employees	http://stats.oecd.org/wbos/index.aspx?r=341031 http://www.cea.eu/uploads/DocumentsLibrary/documents/1224519688_eif.pdf www.nsi.bg www.csa-isc.ro
Premium taxation	http://www.pwc.com/extweb/pwcpublications.nsf/docid/d0f9b818a9d597f9ca25730f0012f17e http://www.mabisz.hu/english/publication/yearbook/index.html

5. Data Analysis and Discussion of Results

For the analysis of our data we used SPSS 16.0 software. Since we lack the necessary space here to discuss the technical issues related to the analysis (please see Table 2 for these details), we explain the steps as we generated the findings.

Two years have been analyzed as we found fiscal data only for these years (Table 1, taxation). For each year we ran four models, testing all the proxies for "insurance activity", such as: life premiums subscribed, non-life premiums subscribed, number of companies and number of employees in the insurance sector and the corresponding dependent variables (see model specifications in Table 2).

According to our findings, GDP per capita is positively associated with the insurance activity proxies on acceptable significance levels (t-values are positive and the computed significance is less than 5%), as is shown by models 1, 2 and 3 in both years, which confirm that the level of life has a significant impact on insurance.

Model 4 behaves differently, where the number of employees is used as proxy for the insurance activity. We believe this is for data management reasons, since the status of 'employment' is

defined differently in the countries worldwide (some count only full time contracts while others include also collaborators), thus the data being heterogeneous.
We therefore accept the first hypothesis, according to which the level of life is positively associated with insurance activity.

Table 2. Results generated

Panel A. Year 2007

Model 1: *Life premiums* = $\alpha_0 + \alpha_1$ *GDP per capita* + α_2 *Life premium taxation* + ε

	Sign	t	Signif.	Adj. R^2
GDP per capita	+	2.182	0.037	0.087
Life premium taxation	-	-0.203	0.841	

Model 2: *Non-life premiums* = $\alpha_0 + \alpha_1$ *GDP per capita* + α_2 *Non-life premium taxation* + ε

	Sign	t	Signif.	Adj. R^2
GDP per capita	+	2.062	0.048	0.071
Non-life premium taxation	-	-0.499	0.622	

Model 3: C*ompanies* = $\alpha_0 + \alpha_1$ *GDP per capita* + α_2 *Non-life premium taxation* + ε

	Sign	t	Signif.	Adj. R^2
GDP per capita	+	2.196	0.039	0.121
Number of companies	-	-1.393	0.178	

Model 4: *Employees* = $\alpha_0 + \alpha_1$ *GDP per capita* + α_2 *Non-life premium taxation* + ε

	Sign	t	Signif.	Adj. R^2
GDP per capita	+	1.240	0.232	0.013
Number of employees	-	-0.970	0.346	

Panel B. Year 2005

Model 1: *Life premiums* = $\alpha_0 + \alpha_1$ *GDP per capita* + α_2 *Life premium taxation* + ε

	Sign	t	Signif.	Adj. R^2
GDP per capita	+	2.639	0.013	0.139
Life premium taxation	-	-0.060	0.953	

Model 2: *Non-life premiums* = $\alpha_0 + \alpha_1$ *GDP per capita* + α_2 *Non-life premium taxation* + ε

	Sign	t	Signif.	Adj. R^2
GDP per capita	+	2.471	0.019	0.120
Non-life premium taxation	-	-0.717	0.479	

Model 3: C*ompanies* = $\alpha_0 + \alpha_1$ *GDP per capita* + α_2 *Non-life premium taxation* + ε

	Sign	t	Signif.	Adj. R^2
GDP per capita	+	2.655	0.015	0.183
Number of companies	-	-1.235	0.231	

Model 4: *Employees* = $\alpha_0 + \alpha_1$ *GDP per capita* + α_2 *Non-life premium taxation* + ε

	Sign	t	Signif.	Adj. R^2
GDP per capita	+	1.580	0.132	0.031
Number of employees	-	-1.078	0.295	

As the connection between taxation and insurance is concerned, our empirical findings do not support the hypothesis we developed (H2), since the t-values of the taxation variable are not significant in neither of the models on an acceptable level (5%). One can observe, however, that the predicted negative sign is always verified (we have negative t-values for the taxation variable).

We believe that this unexpected situation can be explained also by the quality of data; we must admit that we had strong difficulties in collecting the fiscal data for each country, since very legislation has many specific rules, exceptions etc.

We must therefore reject the second hypothesis, according to which the level of taxation is negatively associated with the insurance activity.

6. Conclusions

The taxation of insurance affect the activity of insurance companies through awareness raising policyholders, based on the awareness of their insurance needs headlong into the context of current unstable market economies. This financial instability that characterizes the current economic life is reflected in the level of insurance companies' activity through the changes of essential insurance policies concluded, different from one country to another. Although worldwide in general, especially in Europe (through the forthcoming European Directive on solvency to be implemented in the near future), attempting to achieve and strengthen the solvency of insurance companies, job insecurity and financial difficulties of firms create negative economic repercussions on the insurance. Attractive insurance products designed by insurance companies do not always register the expected success.

A form of fiscal loosening in this field would be very welcome, so that the interest for insurance to be able to record an increase, and we mention the experience of the Central and East European countries, where, especially after 1990, the volume of insurance premiums distributed per capita has increased substantially due to favorable tax deductibility of insurance premiums.

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