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Analysis of insurance companies' efficiency in the Republic of Serbia

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Abstract: Lately, as it is known, considerable theoretical and practical attention has been dedicated to the problems of analysing the business efficiency of insurance companies, both worldwide and in particular countries. In view of this, the paper conveys a complex analysis of the 2016 business efficiency of insurance companies in the Republic of Serbia, using theoretical, methodological and empirical knowledge. Over 60% of Serbian insurance market is controlled by only three insurance companies. Out of the 16 insurance companies, 11 are inefficient. In order to improve their business, it is necessary, above all, to more efficiently manage their operating income and profits, by applying the "new business models" (i.e. cost management concepts, concepts of customer rotation, concept of sustainable development). This also applies to more efficient management of human capital. The significant role of employees in creating the added value for insurance companies in the Republic of Serbia. To this purpose (in order to increase efficiency), significant attention should be paid to life insurance, which has recorded a significant growth, year after year.

Keywords: market share, profit per employee, strategic profit model, DEA model

JEL codes: C61, G22, L25, M41

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1. Introduction

As it is well known, the role of insurance companies has grown considerably lately, including that in financial markets, where "big players" are paying special attention to the analysis of the efficiency of insurance companies in all developed market economies. This is also the case with measuring the efficiency of insurance companies in the Republic of Serbia (Knježevic, 2015). Bearing this in mind, in this paper, efforts are made on the basis of available latest empirical data to investigate the efficiency issues of insurance companies in the Republic of Serbia, using the strategic profit model and the DEA model. Also, based on the obtained empirical analysis results, appropriate measures are proposed to improve the efficiency of insurance companies in the future. This applies in particular to the application of modern concepts of cost management, the concept of customer management, and the increase in life insurance premiums. In relation to comparable countries of developed market economies, life insurance in the Republic of Serbia is at a low level.

In other words, due to its importance and specificity, the analysis of the insurance companies' business efficiency has lately been paid increasing attention to worldwide. In view of this, the paper analyses the insurance companies' business efficiency in the Republic of Serbia. The key subject of the research is to analyse all important factors that largely affect the efficiency of insurance companies business in Serbia. The aim and purpose of the research is to treat the observed problems more comprehensively, from all the relevant performance aspects. In other words, the goal of the work is to see what the current efficiency of the insurance companies is in the Republic Serbia as the basis for improvement in the future by taking appropriate measures. In the years to come, the knowledge of the key factors will be a prerequisite for improving the efficiency of insurance companies in Serbia. This, among other things, reflects the scientific and professional contribution of this paper.

There is abundance of literature dedicated to the problem of evaluating the performance of insurance companies worldwide (Barros, 2010; Beemer, 2012, 2014; Chen, 2014; Chuang, 2014; Cummins, 2010; Dalklic, 2014; Ludwin, 1989; Lu, 2014; Mahlberg, 2010; Peng, 2014; Sinha, 2015; Wise, 2017). It provides a theoretical and methodological basis for the empirical research of the problems treated in this paper. This particularly applies to the use of the DEA model. Recently, modelled of the west, there has been increasing abundance of literature on the analysis of insurance companies' business efficiency in the Republic of Serbia, as well (Knjezevic, 2015; Lukic, 2016a, b). Research through literature, as a special research methodology, is the key starting theoretical, methodological and empirical point for writing on

the observed problems in this paper. The basic research hypothesis of this paper has been defined in accordance with the subject, aim and purpose of the research; it refers to the fact that knowing the primary factors is the key prerequisite for improving the insurance companies' business efficiency in the Republic of Serbia by applying "new business models".

The research methodology has been adapted to the nature, aim and purpose as well as to the defined research hypothesis of the observed problems; it comprises the literature study, application of ratio analysis, *DuPont* analysis, strategic profit model, comparative analysis, descriptive statistics, correlation analysis and DEA model (Data Envelopment Analysis).

For the purposes of research of the observed problems, the relevant original empirical data were collected from the National Bank of Serbia and the Agency for Business Registers of the Republic of Serbia. Such data are completely comparable, which reflects on the quality and validity of the results obtained through the aforementioned research methodology. The problem of restricted usage of the obtained research results for the purpose of improving the insurance companies' business efficiency in Serbia is negligible - it is somewhat caused by an inadequate implementation of a part of the statutory normative regulations.

2. Market position of insurance companies in the Republic of Serbia

The insurance companies play a significant role in creating the added value to the economy of the Republic of Serbia. In 2016, the share of the insurance companies in the total number of companies was 0.02%, employees 1.01% and in total revenues of Serbian economy - 0.80% (Calculation by the author on the basis of data form the 2016 Annual Bulletin of Financial Statements, Belgrade, Agency for Business Registers of the Republic of Serbia).

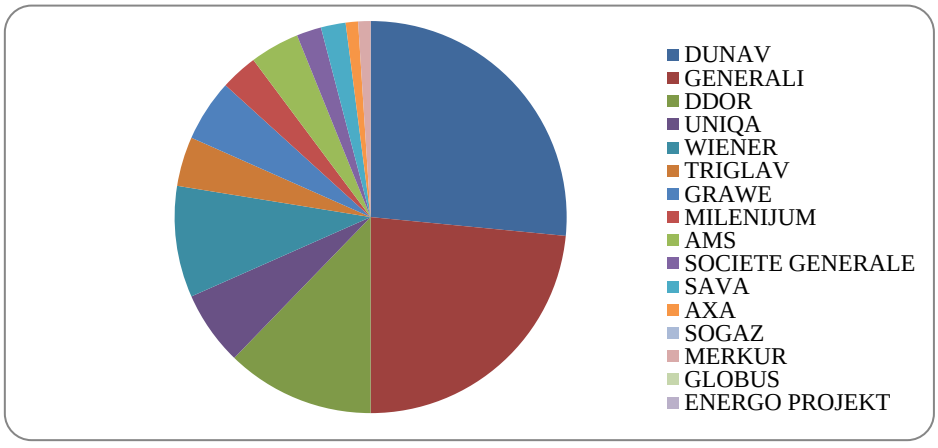

Figure 1. Market share of insurance companies in 2016, total operating income of the insurance sector in the Republic of Serbia

Note: Elaborated by the authors
Source: National Bank of Serbia and Agency for Business Registers of the Republic of Serbia, Belgrade.

In 2016, 16 insurance companies were active in the Republic of Serbia. In order to examine their individual significance, Figure 1 shows their share in 2016 total operating income of the insurance sector in the Republic of Serbia.

The data in the Table and Figure show that three largest insurance companies (Dunav, Generali and DDOR) control the major part of the insurance market in the Republic of Serbia. In 2016, they participated in the total operating income of the insurance sector by 61%.

3. The role of employees in creating the added value for insurance companies in the Republic of Serbia

For analysing the insurance companies' business efficiency in the Republic of Serbia, it is very important, in the author's opinion, to consider the role of employees in creating the added value for insurance companies. For these purposes, Table 1 presents the 2016 relevant data per individual insurance companies.

Table 1. The role of employees in creating the added value for insurance companies in the Republic of Serbia in 2016

Name of Insurance Company	Net Profit/Number of Employees (million dinars)	Total Assets / Number of Employees (million dinars)	Operating Income / Number of Employees (million dinars)	Capital / Number of Employees (million dinars)
DUNAV	0.35452	13.9467	7.985788	4.045006
GENERALI	1.13575	21.89334	7.451939	4.973019
DDOR	0.253754	12.28679	7.003754	3.506757
UNIQA	0.243609	22.89925	7.502256	3.714286
WIENER	0.247971	26.35978	6.328224	3.529306
TRIGLAV	0.219739	11.527	6.350093	2.942272
GRAWE	3.150943	113.8774	16.70755	25.51415
MILENIJUM	0.630631	8.880631	6.040541	1.896396
AMS	0.206161	10.03318	6.763033	2.239336
SOCIETE GENERALE	2.782609	93.73913	65.04348	21.82609
SAVA	-0.02564	8.995338	4.193473	2.454545
AXA	-0.83122	10.46835	4.21519	1.835443
SOGAZ	1.380952	49.2381	7.714286	35
MERKUR	0.09375	27.99219	8.304688	4.046875
GLOBUS	-0.51282	22.20513	5.641026	16.15385
ENERGO PROJEKT	6.272727	104.2727	11.81818	76.45455
TOTAL	0	19.18585	7.38035	4.430949

Note: Calculation by the authors
Source: National Bank of Serbia and Agency for Business Registers of the Republic of Serbia, Belgrade.

As it is well known, more recently, the "profit per employee" indicator has fallen into significant performance measures for all companies, including the ones dealing in insurance. Through it, we perceive the effect of employees' creativity and management capacities (i.e. the "invisible" factors) upon the level of a company's realized profit. Profit per employee (net profit / number of employees) differs per individual insurance companies in Serbia. It is the highest with *ENERGO PROJEKT* (6 272.727 thousand dinars) and the lowest with AXA (-831.22 thousand dinars). The average profit per employee in the insurance sector (all insurance companies) in the Republic of Serbia in 2016 amounted to 975.2 thousand dinars (Table 2). The other presented and analysed variables indicate the significant role of employees in creating the added value for insurance companies in the Republic of Serbia. It is important to compare the profit per employee between Serbian and foreign-owned insurance companies. In this way, a better picture is conceived of the role of employees in creating the added value and improving the overall performance of insurance companies in Serbia.

Table 2. Descriptive statistics on the 2016 efficiency insurance companies' employees in the Republic of Serbia

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Net Profit/Number of Employees (million dinars)	16	-.83	6.27	.9752	1.76562
Total Assets / Number of Employees (million dinars)	16	8.88	113.88	34.9134	35.93758
Operating Income / Number of Employees (million dinars)	16	4.19	65.04	11.1915	14.67054
Capital / Number of Employees (million dinars)	16	1.84	76.45	13.1332	19.70036
Valid N (listwise)	16				

Note: Calculation by the authors, assisted by the statistics software – SPSS
Source: National Bank of Serbia and Agency for Business Registers of the Republic of Serbia, Belgrade.

There is a positive and strong correlation between profit per employee and total assets per employee, as well as equity per employee (at the level of statistical significance, $p < 0.05$). On the other hand, there is a positive weak correlation between profit per employee and operating income per employee in insurance companies in Serbia (not at the level of statistical significance $p > 0.05$) (Table 3). The conclusion is that employees in insurance companies in

Serbia efficiently manage total assets and equity at hand. Adverse environmental conditions in Serbia have influenced the lack of efficiency of insurance companies' employees in managing the operating income and profits. Efficient human resources management is therefore an important determinant of the efficiency of insurance companies in the Republic of Serbia. In the future, it is imperative that employees in insurance companies in Serbia pay more attention to this aspect, which will have a positive effect on their overall performance by application of the "new business models" (customer management, costing by activity, green economy, and others).

Table 3. Correlation analysis of the efficiency of insurance companies 'employees in the Republic of Serbia

Correlations					
		Net Profit/Number of Employees	Total Assets / Number of Employees	Operating income / Number of Employees	Capital / Number of Employees
Net Profit/Number of Employees	Pearson Correlation	1	.877**	.415	.894**
	Sig. (2-tailed)		.000	.110	.000
	N	16	16	16	16
Total Assets / Number of Employees	Pearson Correlation	.877**	1	.594*	.780**
	Sig. (2-tailed)	.000		.015	.000
	N	16	16	16	16
Operating income / Number of Employees	Pearson Correlation	.415	.594*	1	.231
	Sig. (2-tailed)	.110	.015		.390
	N	16	16	16	16
Capital / Number of Employees	Pearson Correlation	.894**	.780**	.231	1
	Sig. (2-tailed)	.000	.000	.390	
	N	16	16	16	16
**. Correlation is significant at the 0.01 level (2-tailed).					
*. Correlation is significant at the 0.05 level (2-tailed).					

Note: Calculation by the authors, assisted by the statistics software – SPSS
Source: National Bank of Serbia and Agency for Business Registers of the Republic of Serbia, Belgrade.

4. Measurement of return on equity - strategic profit model

Using the strategic profit model (*DuPont* analysis), we will study the impact of key factors on insurance companies 'profitability (return on equity - *ROE*) in the insurance sector of the Republic of Serbia. In the mathematical form, it reads:

$$ROE = \frac{Profit}{Sales} \times \frac{Sales}{Assets} \times \frac{Assets}{Capital}$$

The strategic profit model shows that the return on equity (ROE) is a function of three key factors: returns on sales, assets turnover and return on equity. Their adequate control can add up to the realization of the target return on equity. Table 4 shows the strategic profit model of insurance companies in the Republic of Serbia, 2016.

Table 4 . Strategic profit model of insurance companies in the Republic of Serbia, 2016

Name of Insurance Company	Net Profit/ Operating Income	Operating Income / Total Assets	Total Assets/ Capital	Net Profit / Capital
DUNAV	4%	0.5725932	3.447882	9%
GENERALI	15%	0.34037473	4.402425	23%
DDOR	4%	0.57002322	3.503747	7%
UNIQA	3%	0.32762017	6.165182	7%
WIENER	4%	0.24007115	7.46883	7%
TRIGLAV	3%	0.55088853	3.917722	7%
GRAWE	19%	0.14671527	4.463302	12%
MILENIJUM	10%	0.68019275	4.682898	33%
AMS	3%	0.67406708	4.480423	9%
SOCIETE GENERALE	4%	0.69387755	4.294821	13%
SAVA	-1%	0.46618295	3.664767	-1%
AXA	-2%	0.40266022	5.703448	-45%
SOGAZ	18%	0.15667311	1.406803	4%
MERKUR	1%	0.29667876	6.916988	2%
GLOBUS	-9%	0.25404157	1.374603	-3%
ENERGO PROJEKT	53%	0.11333915	1.363853	8%
TOTAL	0	0.38467678	4.329963	0

Note: Calculations by the authors
Source: National Bank of Serbia and Agency for Business Registers of the Republic of Serbia, Belgrade.

The data in the table show that the sales revenues vary (net profit / operating income) by individual insurance companies. They are the highest with ENERGO PROJEKT (53%), followed by GRAWE (19%), SOGAZ (18%), GENERALI (15%) and MILENIUM (10%). The lowest sales revenues are recorded by the insurance companies GLOBUS (-9%) and AXA (-2%). This, together with effective asset management and financial indebtedness, reflects on the return on equity. The return on equity varies by individual insurance companies. It is the highest with MILENIJUM (33%), followed by GENERALI (23%) and SOCITETE GENERALE (13%), and the lowest with AXA insurance company (-45%). Table 5 below shows the results of descriptive statistics of the strategic profit model variables applied to 2016 insurance industry in Serbia.

Table 5. Descriptive statistics on 2016 profitability, efficiency, financial indebtedness and return on equity of insurance companies in the Republic of Serbia

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Net Profit/ Operating Income	16	-.20	.53	.0708	.15502
Operating Income / Total Assets	16	.11	.69	.4054	.19954
Total Assets/ Capital	16	1.36	7.47	4.2036	1.82329
Net Profit / Capital	16	-.45	.33	.0578	.16168
Valid N (list wise)	16				

Note: Calculation by the authors, assisted by the statistics software – SPSS
Source: National Bank of Serbia and Agency for Business Registers of the Republic of Serbia, Belgrade.

In 2016, in the Republic of Serbia, the average sales revenue of insurance companies (net profit / operating income) amounted to 7%, the average assets turnover ratio (operating income / total assets) to 0.40, the average financial indebtedness (total assets / capital) 4.20 and the average return on equity 5.7%. There is a correlation between individual strategic profit model variables applied to the insurance industry in Serbia in 2016, as can be seen from the Table 6.

From the data presented in the table above, it is clear that there is a positive moderate correlation between the sales revenues and return on equity (at the level of statistical

significance p<0.05). Having this in mind, it is necessary to more efficiently manage operating income and, in particular, the expenses of applying the "new business models" in order to increase the return on equity in the insurance companies in Serbia. Thus, for example, the return on equity in insurance companies in Serbia can be significantly increased by using the modern cost management concepts (accounting by core activities and/or customer management) and some Japanese business concepts (kaizen and lean). This applies to the application of modern information and communication technology, as well.

Table 6. Correlation analysis of the strategic profit model variables applied to Serbian insurance industry

Correlations					
		Net Profit/ Operating Income	Operating Income/Total Assets	Total Assets/ Capital	Net Profit/ Capital
Net Profit/ Operating Income	Pearson Correlation	1	-.403	-.412	.513*
	Sig. (2-tailed)		.122	.113	.042
	N	16	16	16	16
Operating Income / Total Assets	Pearson Correlation	-.403	1	.146	.198
	Sig. (2-tailed)	.122		.589	.462
	N	16	16	16	16
Total Assets/ Capital	Pearson Correlation	-.412	.146	1	-.084
	Sig. (2-tailed)	.113	.589		.758
	N	16	16	16	16
Net Profit / Capital	Pearson Correlation	.513*	.198	-.084	1
	Sig. (2-tailed)	.042	.462	.758	
	N	16	16	16	16
*. Correlation is significant at the 0.05 level (2-tailed).					

Note: Calculation by the authors, assisted by the statistics software – SPSS
Source: National Bank of Serbia and Agency for Business Registers of the Republic of Serbia, Belgrade.

The actual return on equity of insurance companies in Serbia was affected by numerous factors, such as: growth rate of gross domestic product, inflation, interest rate, financial market development, high unemployment, low living standards, awareness of the importance of

maintaining an insurance coverage, foreign exchange rate, climate changes, implementation of normative regulations (solvency, financial reporting) and the like. The adequate control of such factors can help achieve the target return on equity in insurance companies in Serbia. The role of the audit and the actuarial assessment in achieving the target return on equity is also significant.

5. DEA Mathematical Models

The general DEAmodel expressed in the form of linear programming is (Ludwin, 1989):

$$\max \sum_{r=1}^{s} u_r y_{rj} \qquad (\text{note: max } = 1)$$

subject to:

$$\sum_{r=1}^{s} u_r y_{rj} - \sum_{i=1}^{m} v_i x_{ij} \leq 0 \quad (\text{j } = 1, \ldots, \text{j'}, \ldots \text{n})$$

$$\sum_{i=1}^{m} v_i x_{ij'} = 1$$

and $ur, vi > 0$

where:

u_r = weight for output *r*

v_i = weight for input *i*

$y_{r\,j'}$ = observed value of output r for DMU *j'*

xij' = observed value of input i for DMU *j'*

n = number of DMU's in the data set.

In this paper, we will conduct an analysis of the efficiency of insurance companies in Serbia, using the presented DEA model. In Table 7, we have, accordingly, defined the input and output elements for analysing the insurance companies' business efficiency in Serbia in 2016. The input components are: total assets, number of employees and capital. Output components are: operating income and net profit.

Table 7. Input and output variables for the analysis of the insurance companies' business efficiency in Serbia by applying the DEA method

DMU	(I)Total Assets (million dinars)	(I)Number of Employees	(I)Capital (million dinars)	(O)Operating Income (million dinars)	(O)Net profit (million dinars)
DUNAV	35.327	2.533	10.246	20.228	898
GENERALI	51.931	2.372	11.796	17.676	2.694
DDOR	16.366	1.332	4.671	9.329	338
UNIQA	15.228	665	2.470	4.989	162
WIENER	29.233	1.109	3.914	7.018	275
TRIGLAV	6.190	537	1.580	3.410	118
GRAWE	24.142	212	5.409	3.542	668
MILENIJUM	3.943	444	842	2.682	280
AMS	4.234	422	945	2.854	87
SOCIETE GENERALE	2.156	23	502	1.496	64
SAVA	3.859	429	1.053	1.799	-11
AXA	2.481	237	435	999	-197
SOGAZ	1.034	21	735	162	29
MERKUR	3.583	128	518	1.063	12
GLOBOS	866	39	630	220	-20
ENERGO PROJEKT	1.147	11	841	130	69

Source: National Bank of Serbia and Agency for Business Registers of the Republic of Serbia, Belgrade.

Table 8 shows the descriptive statistics of the input and output components of the analysis of insurance companies' business efficiency in Serbia by the DEA method.

Table 8. Descriptive statistics of components of the analysis of insurance companies' business efficiency in Serbia by the DEA method (in millions dinars)

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
(I)Total Assets	16	866.00	51931.00	12607.5000	15170.67671
(I)Number of Employees	16	11.00	2533.00	657.1250	797.81074
(I)Capital	16	435.00	11796.00	2911.6875	3545.29097
(O)Operating Income	16	130.00	20228.00	4849.8125	6075.42032
(O)Net Profit	16	-197.00	2694.00	341.6250	683.52614
Valid N (listwise)	16				

Note: Calculation by the authors, assisted by the statistics software – SPSS
Source: National Bank of Serbia and Agency for Business Registers of the Republic of Serbia, Belgrade.

According to the data presented in the table, the insurance companies in Serbia in 2016 accounted (on average, in millions of dinars) for the total: assets - 12.607, number of employees - 657, capital - 2.911, operating income - 4.849 and net profit - 341. In order to gain a better idea of the insurance companies' performance in Serbia, it is important to compare these variables with the insurance companies on the international scale. Table 9 shows the correlation of the input and output components of the DEA model applied in the analysis of the 2016 business efficiency of the insurance companies in Serbia.

Table 9. Correlation of the input and output components of the DEA model applied in the analysis of the business efficiency of insurance companies in Serbia

Correlations						
		(I)Total Assets	(I)Number of Employees	(I)Capital	(O)Operating Income	(O)Net Profit
(I)Total Assets	Pearson Correlation	1	.877**	.959**	.893**	.880**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	16	16	16	16	16
(I)Number of Employees	Pearson Correlation	.877**	1	.919**	.989**	.765**
	Sig. (2-tailed)	.000		.000	.000	.001
	N	16	16	16	16	16
(I)Capital	Pearson Correlation	.959**	.919**	1	.949**	.887**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	16	16	16	16	16
(O)Operating Income	Pearson Correlation	.893**	.989**	.949**	1	.784**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	16	16	16	16	16
(O)Net Profit	Pearson Correlation	.880**	.765**	.887**	.784**	1
	Sig. (2-tailed)	.000	.001	.000	.000	
	N	16	16	16	16	16
**. Correlation is significant at the 0.01 level (2-tailed).						

Note: Calculation by the authors, assisted by the statistics software – SPSS
Source: National Bank of Serbia and Agency for Business Registers of the Republic of Serbia, Belgrade.

Based on the data presented in Table 10, we can conclude that all input and output components of the DEA model applied in the analysis of the business efficiency of insurance companies in Serbia are in a positive strong correlation (at the level of statistical significance,

p<0.05). This points to the fact that DEA model is adequate for evaluating the business efficiency of insurance companies in Serbia. Table 10 shows the results of the analysis of the business efficiency of insurance companies in Serbia obtained by applying the DEA model (CCR-I).

Table 10. Relative Efficiency of Insurance Companies in the Republic of Serbia in 2016

DEA Model = CCR-I			
No.	DMU	Score	Rank
2	GENERALI	1	1
7	GRAWE	1	1
8	MILENIJUM	1	1
10	SOCIETE GENERALE	1	1
16	ENERGO PROJEKT	1	1
9	AMS	0.9811	6
1	DUNAV	0.8256	7
3	DDOR	0.8215	8
6	TRIGLAV	0.7939	9
12	AXA	0.721	10
11	SAVA	0.6719	11
14	MERKUR	0.6693	12
4	UNIQA	0.6568	13
5	WIENER	0.5819	14
13	SOGAZ	0.5164	15
15	GLOBOS	0.3661	16
	Average Max Min St Dev	0.7878 1 0.3661 0.2013	

Note: Calculation by the authors, assisted by DEA model = DEA-Solver LV8.0/ CCR(CCR-I)
Source: National Bank of Serbia and Agency for Business Registers of the Republic of Serbia, Belgrade.

As shown in Table 10, there were five efficient and eleven inefficient insurance companies in Serbia in 2016. Thus, for example, the efficiency of the AMS insurance company

(98%) was lower by 2% than that of Generali insurance company (100%). Similar explanation refers to other inefficient insurance companies. In order to improve their efficiency, it is necessary, first and foremost, to manage, as efficiently as possible, the input components, such as: assets, employment and capital, but also the output components: operating income and profit. This is achieved by applying the "new business model". The application of modern concepts of cost management can significantly contribute to improving the business efficiency of insurance companies in Serbia. This is supported by proper implementation of normative regulations with regard to solvency and financial reporting in insurance companies in Serbia. The business efficiency of insurance companies in Serbia is also largely affected by auditing and actuarial evaluation.

6. Conclusion

In 2016, in the Republic of Serbia, there were 16 active insurance companies. The total premium of the insurance sector had steadily increased over the preceding ten years; up to and including 31 December 2016, it amounted to Euros 721 million. Its contribution to creating an added value for the Serbian economy is not negligible. The three companies (DUNAV, GENERALI, and DDOR) control over 60% of the insurance market in the Republic of Serbia. The role of employees (measured by profit per employee) is significant in creating the added value for insurance companies. More efficient management of assets, capital, operating income (premium income) and profit, by applying the "new business model" (modern concepts of cost management, especially cost accounting by activity and customer management) can significantly affect the increased return on equity in the future.

Of the 16 insurance companies that operated in Serbia in 2016, 5 were efficient, while the remaining 11 were inefficient. In order to improve their business efficiency in the future, it is necessary to manage the asset, employment and capital, but also the operating income and profit as efficiently as possible, which is achieved by applying modern concepts of cost management (especially in life insurance). In view of this, the proper implementation of normative regulations regarding solvency and financial reporting in insurance companies in Serbia is very important. In order to increase the efficiency of insurance companies in the Republic of Serbia, in the future, appropriate simulative measures should be taken in order to increase the income based on life insurance premiums. This, before taking into account the fact that life insurance in the Republic of Serbia is at a very low level in comparison with developed market economies.

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ANALIZA SKUTECZNOŚCI FIRM UBEZPIECZENIOWYCH W REPUBLICE SERBII

Streszczenie

Jak wiadomo, ostatnio, znaczną uwagę w aspekcie zarówno teoretycznym jak i praktycznym poświęca się problemom analizy skuteczności gospodarczej firm ubezpieczeniowych tak w świecie jak i w poszczególnych krajach indywidualnie. Mając to na uwadze, niniejszy artykuł przedstawia kompleksową analizę ekonomicznej skuteczności zakładów ubezpieczeniowych działających na rynku w Republice Serbii w roku 2016, przy wykorzystaniu wiedzy teoretycznej, metodologicznej i empirycznej. Ponad 60% serbskiego rynku ubezpieczeń jest kontrolowane przez zaledwie trzy zakłady ubezpieczeniowe. Z 16 firm ubezpieczeniowych 11 okazuje się niewydolne. Ażeby poprawić ich kondycję, należy koniecznie i przede wszystkim wdrożyć skuteczniejsze zarządzanie ich operacyjnym dochodem oraz zyskami poprzez zastosowanie „nowych modeli biznesowych" (tj. koncepcji zarządzania kosztami, koncepcji rotacji klienta, koncepcji rozwoju zrównoważonego). To odnosi się również do bardziej skutecznego zarządzania zasobami ludzkimi a także do znacznej roli pracowników w tworzeniu wartości dodanej firm ubezpieczeniowych w Republice Serbii. Z uwagi na ten cel (podniesienie wydajności), szczególną uwagę powinno się poświęcić ubezpieczeniom na życie, które odnotowały już znaczący wzrost rok do roku.

Słowa kluczowe: udział w rynku, dochód na pracownika, model strategicznego dochodu, model DEA

Kody JEL: C61, G22, L25, M41

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