

WHO PROVIDES MANAGEMENT SOFTWARE SOLUTIONS IN ROMANIA? A PRELIMINARY ANALYSIS OF INFORMATION MANAGEMENT PRODUCER ORGANISATIONS

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ABSTRACT: The aim of the present research was to offer a general overview of the organisations producing client software solutions in Romania. More specifically, starting from data provided by The Ministry of Public Finance of Romania, following the classification of economic activities in the European Community, tax and balance sheet criteria, we attempt to outline the profile of the registered companies providing order software packages all over Romania. Also, data analysis provide a detailed map of software solutions organisations figuring on the Romanian market, in terms of employee capital staffing, turnover, net profit, and national or foreign capital. The major findings of the study confirm our initial assumption that, despite the hilly skilled resources, the country is still facing a handicap concerning software solutions knowledge and implementation as far as top management and decisive personnel is concerned. Implications of the study for enhancing organisation processes and profit, by means of business management software solutions are been discussed.

KEYWORDS: information management, client software solutions, Enterprise Resource Planning, secondary data, Romania.

1. INTRODUCTION

The dynamics and the complexity of integrated software packages derive not only from the benefits brought to the company itself, but also from its actuality and its coverage all over the world spread in a wide variety of disciplines. Even though, at international level there are plenty of researches debating how to integrate information within organisation [9, 7, 12, 2, 1], concerning the Romanian area, even empirically and practically, such topics still remain underdeveloped [5]. It is commonly accepted among scholars [9, 3] that an organizational performance is influenced mainly by its capacity to integrate itself in the environment, by the efficacy of its actions towards exploiting numerous opportunities, by its capacity to cope with undesired situations and risks that might occur. Therefore, information management in our case is vital, as beforehand collected data are analyzed and used by its managers, in order to take the best decisions. This is one of the reasons why information in management is of vital importance, as it is understood in terms of information needed in decisional management process. Hence, the imperative of studying and understanding information in managerial process is generated by the decisional act, aiming firstly to enhance the procedures and facilities of the organization and afterwards, helping a proper planning, implementation, monitoring and participative evaluation of each organization, even at local or international level. All these are completed if further attention is paid to the cultural and axiological background of each organization [8,7], which was empirically proved to be inherited, rather than educated [10]. An exhaustive presentation of the conceptual and theoretical background that is behind the present analysis does not make the objective of the present study. We consider more useful, in this emerging phase to provide a statistical analysis of public available data.

Therefore, the operational aim of this paper was to raise up the portrait of national software solution providers, using data available from the National Agency for Fiscal Administration of Romania [11]. In fact, the aim of our study was to offer a preliminary reinterpretation of public data as regards the current situation of software market in Romania, selecting several

independent variables, such as: employee capital staffing, turnover, net profit, and national or foreign capital. In order to achieve such aim a research question was addressed.

Research question: *Which is the profile of client software solutions providers in Romania?*

2. MATERIALS AND METHODS

In order to give an answer to our research question we made use of secondary data analysis. More precisely, the source of our empirical study was The Ministry of Public Finance of Romania. The selection of data was done using the classification of economic activities in the European Community, tax and balance sheet criteria [11]. Once centralised, data were analysed using the statistical package for the social sciences (SPSS), through which descriptive statistical analysis (e.g. frequencies, means, sums), independent samples t-tests and correlations were achieved.

3. RESULTS AND CONCLUSION

The operational aim of the present study was to measure and analyse the following dimensions: employee capital staffing, turnover, net profit and national or foreign capital, in order to depict the profile of the oriented client software providers in Romania. Thus, from the total number of registered companies with balance sheet submitted for the year 2014, estimated at 636,847 businesses, we made afterwards the selection of only those companies having as main activity the creation of client oriented software, registered under the Classification of Economic Activities in the European Community (NACE code) no. 6201 (N=5361). In accordance with the selection of capital type criteria, the following distribution of organisations was obtained. (Table 1).

Table 1 Total number of target organisations

Profile	No	%
Organisations with Romanian capital	4.654	87%
Organisations with foreign capital	707	13%
total	5.361	

Therefore, the number of organizations with Romanian capital operating in the field of software production is prevalent (n=4654).

Table 2. General distribution of target organizations following selected indicators

Type Org.	No. Org.	%	No. Employees	%	Turnover (RON)	%	Net Profit (RON)	%	Financial indicators		
									profitability profit / c.a.	profit/employees	c.a./no employees
Romanian capital	4.654	87%	14.019	34,7%	2.827.067.617	35,5%	366.348.946	58%	13%	26.132	201.660
foreign capital	707	13%	26.349	65,3%	5.147.180.644	64,5%	267.182.691	42%	5%	10.140	195.346
total	5.361		40.368		7.974.248.261		633.531.637				

From the table above it can be seen that 13% of companies achieved 65% of turnover and employ 65% personnel in this area. Regarding their profit, things are exactly the opposite, namely: Romanian companies have profitability at a level of 13% compared to 5% obtained by the companies with foreign capital. Here become very transparent the lack of interest of the Romanian state, which is not sufficiently responsive to these indicators and does not support the Romanian capital organizations.

If we state recent data provided by the Romanian journal "Ziarul Național" [6], when analyzing the total number of companies and their declared profit versus turnover, we find that companies with foreign capital companies externalize their profits. Also related to the non-involvement of the Romanian state, we subscribe to the findings of recent article published by Ziarul Financiar on 3rd of April 2016, and written Mr Cristian Hostiuc. The author states the following: "We are discriminated against at home, by the Romanian state. Foreign companies are stretching carpet, while we, the Romanian entrepreneurs, we are "thrown to the dogs". We make profit for years, and multinationals only reported losses, but nobody asks them anything" [6].

Table 3. Overview of organisations using data published by the Romanian journal "Ziarul Național"(personal analysis)

Type	No. organisations	%	No. employees	turnover	profit
Private Romanian organisations	423.000	92%	2.400.000	509.000.000.000	14.000.000.000
Foreign capital organisations	38.000	8%	1.180.000	536.000.000.000	-2.000.000.000
total	461.000		3.580.000	1.045.000.000.000	

In accordance with the data analysis presented above, we can observe that at the same turnover, foreign companies declare losses, in order to avoid paying income tax to the Romanian state. The reference to the article published the Romanian journal "Ziarul Național" was carried out in accordance the total number of private companies from Romania who deposited the balance sheet for the financial year 2014. Inside the same cited article [6], we find a reference to the American state, which supporting US companies in all their major industries, of importance for them, especially in the case of the armaments industry, where all suppliers have American capital. Moreover, in case a non-US company provides products or services in this area, it is considered, by the author to be "a national drama in Congress".

In the following step of analysis we will try to map the profile of Romanian organizations focused on custom software development. Therefore, from the total number of registered companied producing software in Romania, with NACE code no. 6201, we selected only those businesses which registered turnover greater than zero. These were 4508 (N = 4508), of which 86.8% had Romanian capital (figure 1).

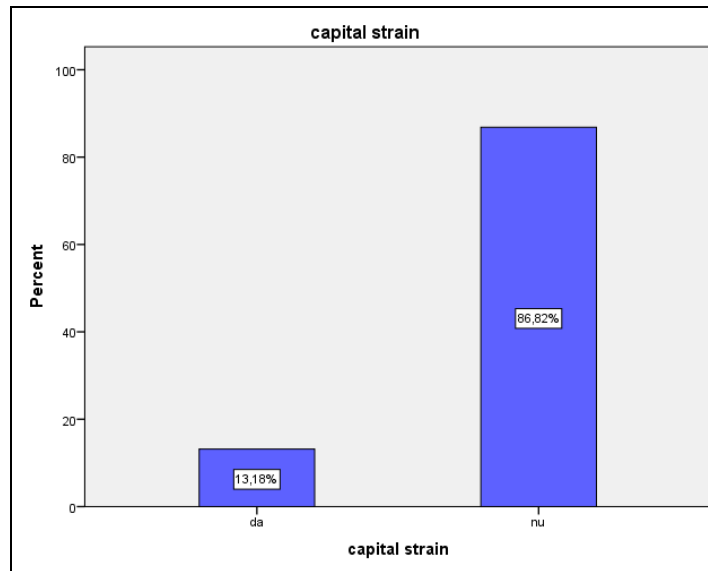


Figure 1. Distribution of organizations producing software in accordance with their capital

Our data analysis reveals that the position of soft producer companies is mainly around the major Romanian university centres, which in fact activate as a dynamic attraction pole for human resources hiring. In other words universities are training highly qualified human capital, essential for such corporations.

Where and when the software companies figure?

The geographic positing of software producer organisations is mainly in Bucharest and Ilfov (35.8%), followed by Cluj (12.7%), by Timisoara, Brasov and Iasi (5%), less by Sibiu (3%) , Targu Mures, Craiova, Oradea, Ploiesti (2%). The remaining districts are slightly represented (1% and less).

Moreover, for our analysis it was also relevant that, the geopolitical features played a significant role in the investment in software market. For example, in 2004, the year of Romania's entry into NATO there were set up only 22.1% of the total number of existing profile companies, while after 2007, when Romania became a new member state, the interest of foreign software companies in the field significantly increased (59%).

Additionally, if we examine the profile of software companies with foreign capital, accordingly to their human capital, we can see that 50% of employees activate in small enterprises. The related graphic representation is presented in the next figure below.

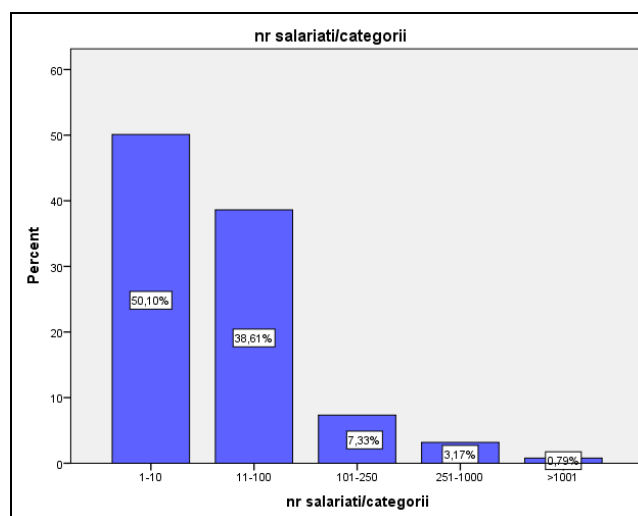


Figure 2. No of employees in foreign capital companies activating in Romania

From the total companies we analysed, it was noted that the majority is owned by Microenterprises (83.7%), of which 2270 with Romanian capital.

Table 4. Distribution of companies following their capital and employees

			No of employees /category					Total
			1-10	11-100	101-250	251-1000	>1001	
Foreign capital	no	Count	2270	231	5	3	1	2510
		% of Total	75,3%	7,7%	0,2%	0,1%	0,0%	83,3%
	yes	Count	253	195	37	16	4	505
		% of Total	8,4%	6,5%	1,2%	0,5%	0,1%	16,7%
Total		Count	2523	426	42	19	5	3015
		% of Total	83,7%	14,1%	1,4%	0,6%	0,2%	100,0%

Once we read the data summarized in the table below (table 5), we can conclude the following: the turnover of software producer micro-enterprises in Romania is 1.301.229.120, and the profit generated by them is 181 133 416, which actually represents approximately 20% of the total turnover achieved by the 4508 key companies of profile. The data relating to companies with 101-250 (small and medium-sized enterprises (SMEs) are set in the next table. In the case of SMEs, their turnover is 2,349,574,634 and their net profit is 178 136 273. As for data available from organisations with more than 1000 employees, it was revealed that that there are only 5, 4 being with foreign capital and one with Romanian capital, achieving a turnover of 1,142,902,562.

Table 5. The profile of soft producer companies with 11-100 employees

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
turnover of the company RON)	426	68.574	187.076.085	2.349.574.634	5.515.433,41	11.505.127,370
net profit (RON)	426	-4.706.978	9.090.735	178.136.273	418.160,27	1.003.508,591
year of starting	426	1991	2014	854.099	2004,93	5,733
no of employees	426	11	99	12.458	29,24	19,429

Table 6. The profile of small and medium-sized enterprises (SMEs)

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
turnover of the company RON)	42	6.381.325	338.077.465	1.427.485.162	33.987.741,95	50.813.329,426
net profit (RON)	42	-3.835.957	14.239.870	91.792.924	2.185.545,81	2.910.912,606
year of starting	42	1991	2014	84172	2004,10	5,750
no of employees	42	102	250	6977	166,12	45,487

Without any doubt, the present preliminary analysis provided new insights concerning the actual statement of software producer organisations activation on market.

In few words, we can conclude that the overall profile of such organisations is geographically located around the major Romanian university centres, being thus an important pole of attraction of hilly qualified human resource; the Romanian capital companies declare much more profitability, than foreign capital, which externalize their profit; the majority of companies declares to employ between 1 to 10 persons, most of them being registered as Microenterprises with Romanian capital.

Despite its limitations, due its methodology based on secondary data analysis and not own collected data, the present still remains an useful tool not only for further deeper personal analysis, but also for economic decisional actors or for interested soft suppliers, users and academia, aiming to improve their organisation processes and profit, by means of better business management and understanding.

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