

## A Business Intelligence Software Made in Romania, A Solution for Romanian Companies During the Economic Crisis

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**Abstract.** The paper focuses on a modern prospective of IT&C sector. The methodology used is both quantitative and qualitative, and the results were obtained with the use of a questionnaire. Our purpose was to demonstrate some hypothesis concerning the size of the organization, the management method and the IT&C based decision. The study is limited to the SIVECO companies portfolio and has a high level of originality, such a study has been never conducted before for computer based advanced management methods implementation. The present interest of the approach consists in the powerful impact IT&C technologies have upon the development of nowadays organizations as well as upon the daily life of each individual; nevertheless, one should not ignore the special condition Romanian economy and especially Romanian society as a whole is confronted with during the current period.

**Keywords:** Decision Support Systems, Business Intelligence, Romanian Companies, SIVECO Business Analyzer

### 1. Introduction

In the present context of economic crisis, considering our opinion and from a managerial point of view, in Eastern Europe regarding the particular case of Romania, one of the solutions for economic revival is constituted by the usage of some advanced management methods, based on IT&C tools and modeling and simulation of the economic and management processes methods that can offer the foundation for a high-performance management.

Using the IT&C systems and their applications in management decision, a company can develop a competitive advantage for the organization. In the 2013 economic crises, the use of the IT&C advanced management methods can be a solution for overcoming this crises.

We are in the middle of an economic-financial crisis and I would say that Romania is affected more due to the defective management of some leaders than to the crisis. In

a country where we ask ourselves if we have more pensioners than employees or if the wages of the public employees are higher than those of the employees from the private or manufacturing or services field, we certainly have to change essential things. One of the ways of doing this is to use some advanced management methods in the Romanian organizations. [2]

The evaluations of the local Business Intelligence (BI) market, carried out by means of the main local implementers indicate an unusual tendency, namely, in the context of a severe reduction of the volume of global sales regarding company informational applications, worldwide business intelligence (BI) software revenue will reach \$13.8 billion in 2013, a 7 percent increase from 2012, according to Gartner, Inc. The market is forecast to reach \$17.1 billion by 2016. [13]

The paper is organized in four chapters and deals with the essential characteristics of the BI concept regarding two aspects, namely the spatial aspect by analyzing the worldwide and national BI market and the temporary aspect regarding design, implementation and maintenance, corroborated with the continuous update to the customer's needs by the analyzed feedback of the support decision systems.

The first chapter highlights the status of the main competitors on the BI market as it is presented in the studies of the prestigious companies IDC and Gartner regarding the years 2011 and 2012. There are presented both the software tools used and the fields of implementation of the informational systems in the BI category. The second chapter expounds the degree of involvement of the four main worldwide players on the BI market, (respectively SAP, Oracle, IBM and Microsoft), on the Romanian market these great actors owning 60% of the entire BI market worldwide. Moreover there is punctuated a problem specific to Romanian economy, valid for all the small and incompletely globalized markets, namely the importance of Small & Medium Enterprises (SMEs). Taking into account the fact that the large Romanian companies represent companies with public capital and subsidiaries of large multinational companies, and the large actors have already managed to implement the assisted managerial decision software within these companies, a market that is very attractive for the companies that create BI and DSS software in the management field is still that of SMEs. This market is the target of both large actors mentioned before as well as the local developers such as SIVECO by SIVECO Business Analyzer, S&T by Micro Strategy, Spectrum Solutions by Oracle BI and Wizrom by Panorama, out of which SIVECO represents by far an autochthonous leader of the Enterprise Resource Planning (ERP) and BI market.[14] The third chapter is dedicated to the BI application of SIVECO, application fully designed in Romania, and describes the main modules and types of analysis proposed by the SBA component such as what if and top bottom analysis and various types of simulations, as well as some design characteristics of the application. The last chapter is a research based on a questionnaire, and represents the essence of the effects induced by the implementation of the BI applications in the Romanian organizations. When quantifying these effects we relied on a questionnaire directed to a population made up of representative companies in the public and private field where SIVECO carried out implementations of company applications. The study is limited to the SIVECO companies portfolio and deals with the dependence between existing computers, software programs and the level of business software implementation of 11 Romanian organizations. Even data were collected only from 11

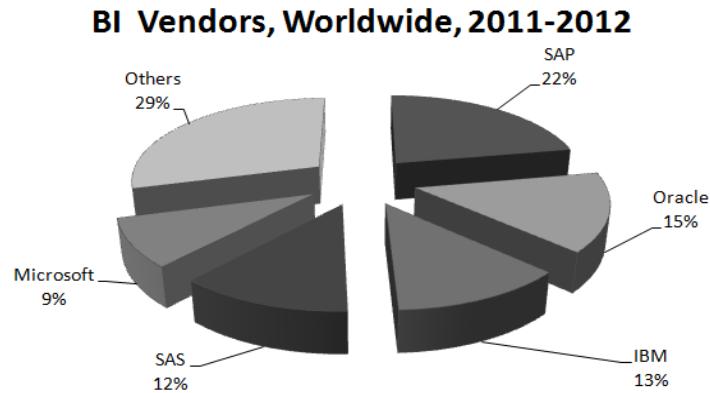
organizations, these are representative for the 2010 Romanian economy, as we have demonstrate it in paragraph 5.1 (respondents).

## 2. The performance of leading worldwide BI tools vendors in 2012

The main objective of any company is to earn profit. In order to achieve it, the company has to be efficient, to bring financial benefit. To that effect, there are necessary models of decision making in order to measure, manage and optimize the performance of different activities in the company. These decisions are made because of information, and BI is exactly the concept that, if implemented correctly, leads to capitalization of the information necessary to measure, manage, make decisions and optimize performances. "Business Intelligence is a set of methodologies, processes, architectures, and technologies that transform raw data into meaningful and useful information used to enable more effective strategic, tactical, and operational insights and decision-making. It allows business users to make informed business decisions with real-time data that can put a company ahead of its competitors." [5]

We can say that the Business Intelligence (BI) has an important role for the performance and competitiveness of the organization rather than marketing or the quality of its products. The actions of the BI are not unknown any more for the current, modern, competitive and efficient organization. Such an organization is considered to be "intelligent" not because it has an intelligent management, where the economic intelligence activities are correctly and realistically exploited in setting and putting the decisions into practice. Business Intelligence is a concept which refers to the way in which decision can be made faster and easier. In the current society the companies collect huge quantities of data daily: information about orders, inventories, and transactions from work sites and of course information about customers. Companies also collect data as demographic data and email lists from external sources. Unfortunately more than 93% of the data are not used in the decision making process. The better consolidation and organization of the date to take a better decision can lead to advantages in what the competence is concerned and these aspects refer to Business Intelligence. The quantity of information and data is growing exponentially, and it is actually doubling each two, three years. More information means more competition. In the informational era due to the explosion of information, the executors, managers, professionals and workers, they all need to be able to make fast decision because now time means money. The BI applications transform information into knowledge. The concept of BI allows us to put the right information in the hands of the right user, at the right moment to be able to take a fair decision.

The essence of BI is to gain information and knowledge from data in order to enable people to make better decisions. Especially in times of economic turmoil, the quality and efficiency of this process can be a crucial advantage for any company. BI is a highly dynamical field and builds an interface of growing importance between IT and management.



**Fig. 1.** Top 5 BI, CPM and Analytic Applications/Performance Management Vendors, Worldwide, 2011-2012 (Source: Gartner, June 2013)

In first place, SAP once again had significantly higher revenue than any other vendor at \$2.9 billion with 22.1 percent of the market, although this was up by just 0.6 percent from 2011. Second-place Oracle's revenue grew by 2.0 percent from 2011 to reach \$1.9 billion. Fifth-place Microsoft enjoyed the highest growth of the top five vendors in 2012, with revenue rising by 12.2 percent compared with 2011, to reach \$1.2 billion. [14]

### 3. Romania Enterprise Application Software Market 2013–2017 Forecast and 2012 Vendor Shares

We tried to identify the main obstacles hindering the penetration of BI solutions on the Romanian market. Therefore, we reached the conclusion that poor technical abilities, poor education in the IT&C field regarding the top management in Romanian companies and the limited budgetary resources are impediments that we are frequently confronted with, when we are talking to a potential customer. This is not, however, a particular situation – it does not happen only in Romania, it is a situation that all the other markets are confronted with. We consider these impediments as opportunities for the solutions we promote. Nevertheless, this does not mean that there are no real obstacles, and the most frequent problem consists of the fact that the direction towards a BI solution is not seen as a business decision, but as one prevailingly technical. Or a successful deployment of a BI solution is always realized when it benefits from the support of those decision persons that are the main beneficiaries and direct users of these types of solutions, that understand the business vision, business strategy and motivation of that precise company.

There are two distinct situations on the Romanian market: the case of local companies that enter the category “large enterprise” that are aware of the necessity for BI tools, and the sector represented by Small & Medium Enterprise, a case in which is difficult to assert that a Business Intelligence solution becomes a “must have”. As for

the segment of large and very large companies and multinational corporations, we can say that they have reached an awareness threshold. There are some market verticals that reached maturation very rapidly and that progressed up to the international standards such as banking, mobile telephony, big retail chains, oil industry, services etc. These verticals (as well as others), where competition is very strong, generate especially the demand for BI. [5]

Admittedly, BI materialization, under the pressure of the economic crisis, is no longer only a simple "sales argument". The concept of operational BI outran the theoretic level, gaining materiality under the pressure of a well defined objective – making the business efficient, starting with the operational level, but without neglecting the tactic level of approaching business policy. Still, remains to be seen how much interested in the new offer is the local market. Traditionally, Business Intelligence was viewed as a complex technology, in most cases destined for large companies, whose main purpose is to provide to the top management the analysis tools that granted strategic or tactic decision making. In other words, it was an abstract concept, having an action area for an unlimited time span, placed in an area hardly accessible for "commoners", that is medium enterprises that do not possess a solid investment budget and/or an extended IT&C department. Lately this view has changed alertly, the worldwide economic crisis constraining vendors to turn their attention towards medium enterprises that need analysis tools in real time in order to cope with the challenges of the market. The worldwide economic context brought about a visible turn of the Business Intelligence solution editors who, during the last two years, forcefully attacked the sector represented by Small & Medium Enterprises (SME or SMB), trying to destroy the myth according to which BI applications are accessible only for the large enterprises that propagate huge volumes of data and own extended IT&C departments. In order to achieve this, the supply addressed to SMBs was considerably diversified, trying to cater for the main "reproaches" that the potential customers in the category of medium enterprises made.

In order to broad the spectra of potential customers, there was a reorientation of the concept of BI, from the traditional "data-centric" to the more pragmatic "process-centric", meant to enable a quicker reaction to the challenges on the market that appeared as a consequence of the economic crisis. Thus, BI applications are not only for business analysts in top management any more, but they are also accessible for executive directors, managers and final users that have the decision making power who can rapidly interpret and analyze relevant information, using it as a basis to be able to make viable decisions. All the great actors of the world on the BI market – Oracle, by Hyperion, IBM by Cognos, SAP by Business Objects, Microsoft etc. – joined this trend, trying to bring supplies as attractive as possible for the SMB sector.

This IDC study provides a detailed overview of the Romanian market for integrated enterprise application software (EAS) suites. EAS vendors tracked in this study include SAP, Siveco, TotalSoft, Oracle, Microsoft, Wizrom, Epicor, Infor, QAD, Transart, EBS, Endava, and SeniorSoftware, among others. "As most clients have limited IT budgets, they prefer to spend them on IT solutions that have a direct impact on business growth, such as cost efficiency, optimization, and consolidation. As a result, vendors should focus on targeting decision makers with solutions that offer fast ROI

and provide an immediate competitive advantage." – Research Analyst Dana Samson, IDC CEMA

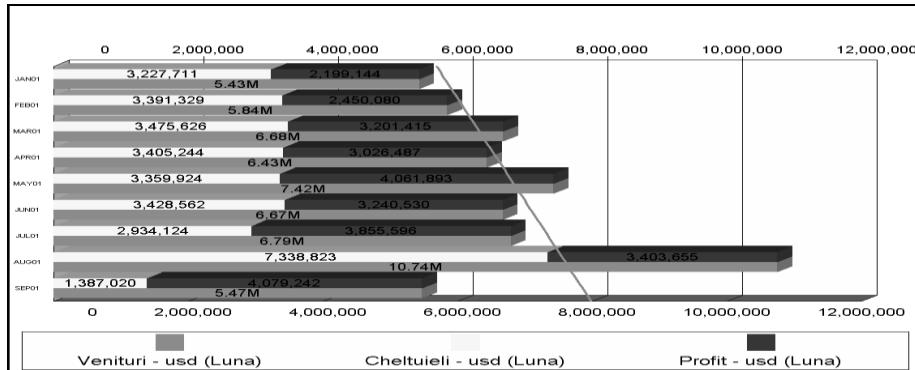
The double perspective would enable speculating the assumption that the Romanian BI market extends due to the large enterprises, or through what is presented as a BI solution in a more elevated reference solution. In the first case we are confronted with a limited manipulation platform, which will not be able to maintain the trend up for a long time. In the second case, there is the hope that the excessive reported data, at some point, will call for a complex analysis tool. Even if "our IMMs are smaller than their SMBs", the recipe applies for Romania as well. [5]

#### **4. SIVECO Business Analyzer a high performance Information Management System**

BI Solutions of SIVECO Romania monitors and correlates all the levels of company's activities, positively influencing its performances. SIVECO Business Analyzer (SBA) is a high performance Information Management System, capable to be adapted and customized according to the business particularities of any company. SBA supports the decision making process during the activities of planning monitoring, controlling and providing information support for the adoption of strategies for cost control and the identification of sources to increase profit. It also provides synthesis, coherent, consistent and real-time information, and represents the requested analyses under the form of graphs and tables in an appealing manner, easy to manage and customize.

The second application in the field of BI is SIVECO Balanced Score Card (SBSC) is a software solution for strategic management and a latest generation information product launched on the Romanian market, able to monitor, analyze and compare the organization's performance in order to improve it. Placing the strategy at the centre, the proposed solution provides the beneficiary with relevant information regarding the manner in which the organization is heading towards reaching its strategic objectives.

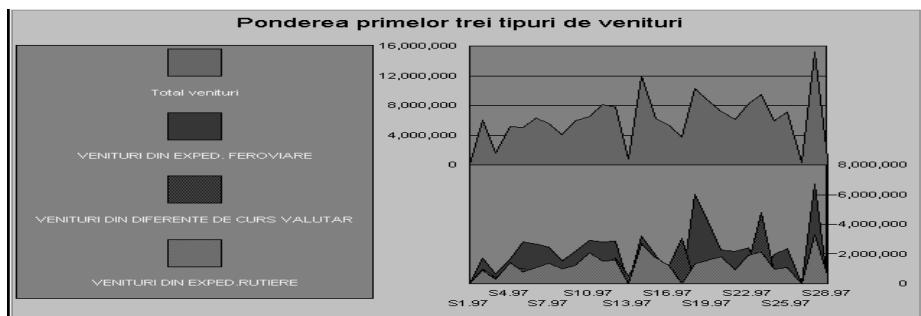
We exemplified four simulation analysis and models of SBA and SBSC that are useful in the management activity and in the research, and which are highly used by the managers of Romanian enterprises that purchased this type of product. The following Fig. 2 illustrates the analysis of the evolution of an indicator, and allows the representation of the values in the database under the form of diagrams or charts.



**Fig. 2.** The status of revenues, costs and profit regarding the entire enterprise, in which the user may change the selection of the displayed values while the program is running ( Source: SIVECO Business Analyzer 3.2.90 )

“What if?” Analysis consists of the possibility to modify the entrance parameters of an indicator and to see how this indicator varies after this modification. One can easily imagine potential situations when this type of analysis would be useful. For example, what happens with costs and profit if there is a certain percentage increase of the salary or power costs? What happens if the number of employees decreases or increases? On the other hand, if the value of certain taxes is modified (VAT, income taxes).

Top/Bottom Analysis. This analysis enables the selection of one of the most important types of incomes or the most important customers. The existence of this possibility is necessary especially in case the dimensions have many values (Customers in the following Fig. 3) that cannot be monitored each at large, but you want to monitor the extreme values: the highest ones and the lowest ones.



**Fig. 3.** Exemplification of Top/Bottom Analysis by the first three types of incomes in comparison to total incomes ( Source: SIVECO Business Analyzer 3.2.90 )

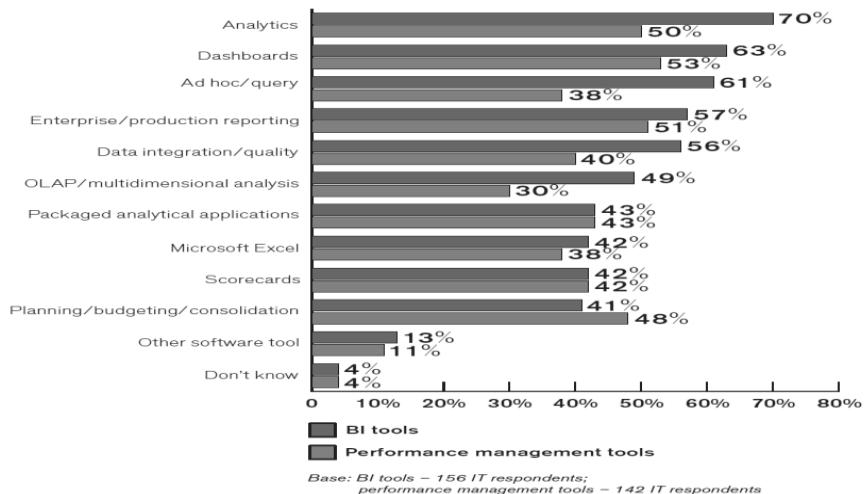
Forecasting is a simulation process in which the forecast values are based on the existing data history and the richer this history is, higher will be the accuracy of the forecast.

## 5. Effects induced by implementing BI applications in Romanian organizations

To start with, we tried to identify the applicability field of different applications and BI tools, the way they are perceived in the view of managers as beneficiaries of BI solutions. For this first questionnaire data were collected from 156 IT respondents. [12]

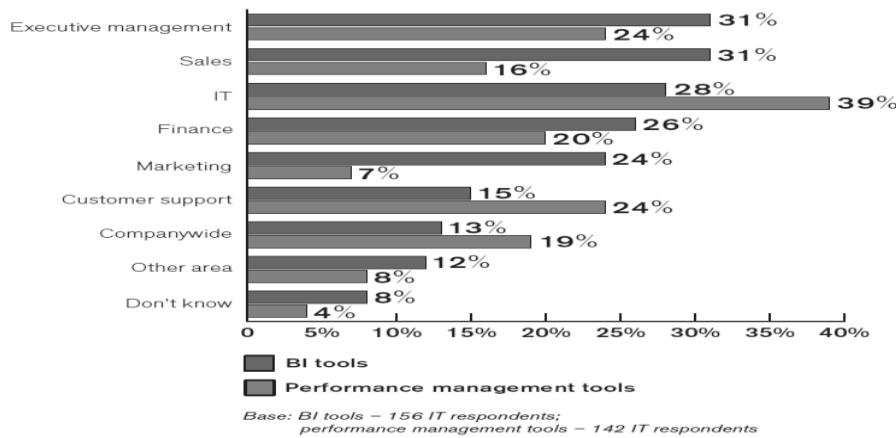
We asked the respondent companies a series of questions regarding the main obstacles in the penetration of BI solutions on the local market. Taking into account the “scores” they provided, the results are the following (ranking according to the degree of importance):

- Defective knowledge of the “concept” and of the advantages offered by the BI solutions;
- Romanian companies’ prevailingly focusing on the operational aspect (to the detriment of the strategic one);
- Low technical “appetite” of decision factors;
- Low financial power of potential customers;
- Low technical abilities of potential customers;
- Inadequate IT&C infrastructure. [12]



**Fig. 4.** Software tools considered part of BI and performance management

When asked which tools they consider to be part of their BI solution (see fig. 4), IT respondents most frequently mentioned analytics, dashboards, ad hoc query, enterprise production reporting and data integration quality. Dashboards, enterprise production reporting, analytics and planning budgeting consolidation are the software tools that IT respondents most frequently reported to be part of performance management.



**Fig. 5.** Departmental implementation of BI and performance management (areas in which a company first implement a BI/performance management tool/solution)

Sales and executive management were reported as the first departments to implement BI, at 31% each, probably in response to pressure from those areas for improved data availability. The IT&C department, a group that can test the tools before the rest of the organization sees them was cited most for initial implementation of performance management tools (39%), followed by executive management and customer support, at 24% each. (see fig. 5)

The third field of investigation was the key benefit that is derived or expected to be derived from BI and performance management tools is related to the improvement of decision-making process, such as the quality and relevance of decisions made. Seventy percent of IT&C respondents indicated this as the top BI benefit, and 55% indicated this as the top performance management benefit. Producing a single, unified view of enterprise wide information (57%), better aligning resources with strategies (56%), speeding up the decision-making process (53%), and responding to user needs for availability of data on a timely basis (52%) are the other top BI benefits reported by IT respondents.

As a conclusion for BI implementation we can say that the nature of the top benefits and challenges cited by IT&C respondents make it clear that today's technology purchasers demand comprehensive and integrated BI and performance management solutions that can overcome challenges related to integrating data from multiple sources and data quality. What are companies hoping to achieve with BI and performance management solutions? Seven out of 10 BI respondents and more than half of performance management respondents cited the desire to improve the decision-making process, including the quality and relevancy of decisions. Vendors that have the technical expertise to deliver these benefits can expect to appear on the short lists of BI and performance management technology purchasers. [12]

### 5.1. Respondents

Still in the virtue of the questionnaire, we achieved the results and we were able to formulate and validate research assumptions. Even data were collected only from 11 organizations, these are representative for the 2010 Romanian economy, because in this economical moment Romania has only 5,000 companies that need an ERP and a BI software instrument as a advanced management method. So we have only 2,000 big companies having more than 250 employees which can afford to implement a SAP, Oracle or SIVECO ERP software. But these 2,000 companies generate incomes two times higher than the other 10,000 SMB, and equal those of the 500,000 small Romanian companies, that have under 50 employees. From these 2,000 big organizations most of them, about 1000 are branches from transnational companies, and have mostly implemented ERP existing in their main organization, usually SAP or Oracle. So, are likely to be investigated public organizations and private Romanian capital organizations. These two categories have a hundred percent Romanian management, and had to optimize it.

The data were collected during January and June 2010, (see Table 1 and 2) with the help of Sorin Dimofte Implementing and Consultancy Manager of SIVECO Romania.[3]

The regression analysis using the method of least squares requires a dataset of n pairs ( $x_i, y_i$ ), where  $y_i$  are the dependent variables and  $x_i$  are the independent ones. There were analyzed over 500 Romanian enterprises, that implement a SIVECO ERP and were identified 11 distinct groups without any significant deviations among the enterprises forming each group. In order to apply this method there were chosen 11 companies that were included in the present study. Each of these 11 companies is representative for the enterprises group, having similar trend. This simplified version of the method is suitable for our problem because this way there were obtained very clear results.

**Table 1.** ERP & BI instruments implementation

Organization	BI_SBA	BI_SBSC	BI_Querry	BI_Report	BI OLAP	BI_Excel	BI_Etc	MIX_ERP+BI
ANR Drobeta Turnu Severin	1	0	1	1	1	0	0	0,57
Aeropotul Timisoara	1	0	1	1	0	1	1	0,71
ANIF Dunare Olt	0	0	0	1	0	0	0	0,14
Hidroserv Hateg	1	1	1	1	1	1	1	1,00
Hidroserv Severin	1	0	1	1	0	1	0	0,57
SE Braila	1	0	1	1	0	1	0	0,57
CET Brasov	0	0	1	1	0	0	1	0,43
Apa Serv Valea Jiului	1	0	1	1	1	1	1	0,86
Aerostar Bacau	1	0	0	1	0	1	0	0,43
Meva Severin	1	0	0	1	0	0	0	0,29
Romvag Caracal	1	0	1	1	0	1	0	0,57

**Table 2.** BI instruments implementation

Organization	SBA_Scenario	SBA_Forecast	SBA_What_If	SBA_Drill_Up	MIX_BI
ANR Drobeta Turnu Severin	0	0	0	0	0
Aeropotul Timisoara	0	1	0	0	0,25
ANIF Dunare Olt	1	1	1	0	0,75
Hidroserv Hateg	1	1	1	1	1
Hidroserv Severin	1	0	0	1	0,5
SE Braila	1	1	1	1	1
CET Brasov	0	0	0	0	0
Apa Serv Valea Jiului	1	0	0	0	0,25
Aerostar Bacau	0	0	0	1	0,25
Meva Severin	1	1	0	1	0,75
Romvag Caracal	1	1	0	1	0,75

## 5.2. Results

### 5.2.1. Research Hypothesis

Although in elaborating the research hypotheses we have had in view a series of works belonging to American literature[10],[7],[1],[6], we have made these hypotheses particular for Romanian organizations according to our own experience of almost 20 years in the field of planning, implementing, and of training in the field of informational systems.

*H01 The number of employees in an organization influences the role of the BI applications within the respective organizations. The organization dimension is directly connected with the role of the BI applications within the respective organization.[10]*

*H02 In the private domain there is a more efficient usage of money than in the public domain.[7]*

### 5.2.2. Testing the Hypothesis

*H01 The number of employees in an organization influences the role of the BI applications within the respective organizations. The organization dimension is directly connected with the role of the BI applications within the respective organization.*

We used regression analysis, as a statistical method to evaluate the relation between one independent variable (personal - size of organization) and another continuous dependent variable (ERP\_BI given to the ERP and BI level of implementation). With this analysis tool we have performed a linear regression analysis using the method of the least square in order to plot a line by a set of observations. Thus we have perform the analysis of the dependence and we have appreciated the extent to which the independent variable influence the dependent. With linear regression we output the regression coefficients necessary to predict one variable ERP\_BI from the other personal. The model has been confirmed to be valid because the F test value were 49,35, with significant Sig. <0,05 (0,02). The regression coefficient R=0,980 shows a

very strong link between the variable ERP\_BI given to the ERP and BI level of implementation and the independent variable personal showing the size of the organization, for the private sector. The model explains 96,1% from the total variation of the variable personal ( $R^2 = 0,961$ ). The rest of 3,9% is influenced by other residual factors not included in the model. (Table 3)

In conclusion hypothesis H01 has been confirmed.

**Table 3.** Linear regression analysis between an independent variable called personal and a dependent variable called ERP\_BI for private cases (proprietate=1)

ANOVA <sup>b,c</sup>					
Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	,172	1	,172	49,352	
Residual	,007	2	,003		
Total	,179	3			

a. Predictors: (Constant), personal

b. Dependent Variable: ERP\_BI

c. Selecting only cases for which proprietate = 1

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	proprietate = 1 (Selected)			
1	,980 <sup>a</sup>	,961	,942	,05897

a. Predictors: (Constant), personal

But in BI methods we found a weak link ( $R=0,167$ ) and also for the private sector we found  $R=0,593 < 0,63$ . This regression coefficient  $R=0,593$  shows an intermediate link in these case. (Table 4)

**Table 4.** Linear regression analysis between an independent variable called personal and a dependent variable called BI for private cases (proprietate=1)

ANOVA <sup>b,c</sup>					
Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	,148	1	,148	1,086	
Residual	,273	2	,137		
Total	,422	3			

a. Predictors: (Constant), personal

b. Dependent Variable: BI

c. Selecting only cases for which proprietate = 1

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	proprietate = 1 (Selected)			
1	,593 <sup>a</sup>	,352	,028	,36973

a. Predictors: (Constant), personal

*H02 In the private domain there is a more efficient usage of money than in the public domain.*

This hypothesis would be explained by the following specifications:

In private companies hardware facility is correlated with the number of employees

In private companies hardware facility is correlated with software facility

We used statistical techniques in order to define the differences between the groups, using T test. For this purpose, we tested the average equality of two paired samples

(Paired Samples T Test) for six variables grouped in four pairs each. Out of the six variables three pertain to the companies with public capital (pers\_public, calc\_public and BI\_public), respectively three to companies with private capital (pers\_privat, calc\_privat and BI\_privat).

**Table 5.** The result of the T test for six variables grouped in four pairs each

	N	Correlation	Sig.
Pair 1 pers_public & calc_public	4	0.997	0.003
Pair 2 pers_privat & calc_privat	4	0.632	0.368
Pair 3 calc_public & BI_public	4	0.613	0.387
Pair 4 calc_privat & BI_privat	4	0.979	0.021

We noticed (see table 5) that if in the public domain exists a better correlation between the number of employees and the number of computer-related equipment (0.997 in comparison with 0.632), the situation is different regarding the correlation hardware – software which we defined as using computers for BI applications. (In this case, the figures in the private domain are 0.979 in comparison with 0.613 in the public domain). We reach the conclusion that providing with excessive hardware is not necessarily a useful thing to do, if that hardware is not then correlated with the software devices. There was also validated the hypothesis referring to the better efficiency of investing money in the private domain, and also a better correlation between the efficiency of the hardware and employee resources and the implementation of a BI in the private domain in comparison to the public one.

## 6. Conclusion

The conclusion of the authors is that in the 2010-2012 years, Romania, a country that has lately managed to make itself known worldwide, most often by means of local achievements in the field of software industry, and less in other fields of industry, should take advantage of this appetite of the Romanians for the computer-science field and try to improve the management of the organizations. This could be made by prevailingly using the management methods from the category of DSS and BI that are based on informational tools; and if possible the product has to originate in the Romanian market and at the same time, we should always monitor especially the efficiency of the implementation and the efficiency of the investment in informational software.

Thus, modeling and simulation prove to be useful, reaching a maximum level of efficiency, consistency and importance by means of the BI tools. The applications in the category of informational systems for the support of managerial decision that the team of authors studied, promoted and implemented are especially BI solutions made in Romania. In this way, more and more Romanian organizations benefit from the advantages of special Romanian decision-making oriented software, and here we refer to the applications of SIVECO software house. The implementation of the BI applications is studied worldwide as well as at a national level, and the efficiency of

local BI software usage is assessed and quantified especially by means of managerial research carried out on the SIVECO customers.

Our scientific and teaching activities over the past few years have attempted to point out certain essential elements of integrated information systems, used as decision and management instruments available for managers. Thus for more than seven years we have tried to induce the managers of the organizations, with which we have collaborated, the awareness that the ERP systems are most mere accounting applications. Actually accounting is not exactly the most remarkable advantage of the implementation of an integrated resource planning system, as it is mostly perceived. On the contrary an ERP is a corporate instrument which connects users with distinct responsibilities on the same platform, and involves an information exchange between department and the individual in charge, the decision maker.

Another direction of our activities was the awareness of both managers and end-users that information technology is an instrument that supposed to be used with maximum benefits, not a dangerous element for the employees and for the organization. Future research will also include Small and Medium Business (SMB's) organizations which in the present economic environment probably represent one of the element to re-launch the Romanian economy. This sector will be analyzed by the implementations that Senior Software company, through the Senior ERP application has carried out on the Romanian SMB's market.

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