
Correlation Analysis of the Indicators of Asset Management and Profitability

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Abstract:

Optimum Asset Management has been and is today a concern in the management of an enterprise, its effects being felt as indicators of results. The way in which asset management results indicators and thus affect the profitability of an enterprise have proved it by conducting a case study in the companies in the food industry Spania. Modul Rioja region where asset management results indicators and thus influence the profitability of businesses I demonstrated by conducting a case study in the companies in the food industry of the region Rioja Spain.

The program is used to establish the correlation SPSS while watching the correlation and its economic-mathematical modeling and using SABI research platform, the platform belonging to the University of Rioja, Spain. We chose the food industry because of this industry perishable products requires proper management as the company's assets.

Key Words: *rentability, ratio assets, correlation, research platform*

Jel Classification: *G1, M1, C1*

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1. Introduction

This article forms part of his doctoral thesis which has the title "Analysis of asset management and its implications on profitability, lead author of the paper that this research Apart.

A competitive economy is an economy that has the structure of economic entities performing entities ever to face any challenge. Speaking of performance we report immediately to the two concepts that define performance: efficiency and effectiveness (Hanas *et al.*, 2007).

Between the two concepts are closely interdependent, meaning that an efficient undertaking without being effective will not have a very long period of existence, and an effective enterprise efficiency but without obtaining results automatically lead to unfavorable economic entity.

Efficiency is the key word of this research, and it represents the ratio of a company effort and result from that effort, or rather how they are used assets and equity values taking into consideration the fundamentals of the economy (Thalassinos *et al.*, 2012; Thalassinos, 2014; Thalassinos *et al.*, 2014; Thalassinos and Liapis 2014; Thalassinos *et al.*, 2015).

The authors Gheorghe Zaman and Marinela Geamănu efficiency as a specific element of several areas (economic, social, technological, ecological), was found both in practical activities of man and the concerns theoretical and methodological, but in economics it is defined as "an area of prime importance for studying the economic phenomena and processes, in terms of ratio, correlation, comparison of costs, efforts, consumption of resources, on the one hand, and the results, effects, production carried on by Moreover, expressed in physical units and value "².

Another definition of efficiency is found to author Lucian Buse namely: "the term efficiency know more accepted in the economic literature, some authors finding that an activity is effective when it reaches the desired goal with minimal effort"³.

So based on this concept to determine and analyze a number of indicators that define how they have been used assets of enterprises and the results from them, the industrial sector is that of food production, the companies being and having the object of activity in Spain , Rioja region. Based on the results obtained from the accounting documents submitted by them we performed an analysis of the intensity and type of correlation between two categories of indicators: management and profitability, but both categories belonging efficiency.

² Gheorghe Zaman, Marinela Geamanu, Eficiența economică, Ed. Fundației Romania de mîine, București, 2006, pag. 14

³ Bușe Lucian, Analiză economico-financiară, Ed. Economică, București, 2005, p. 132

An item of infrastructure increasingly common in European universities is given to the use of research platforms and not just statistical programs. Moreover there is an increasingly replacement research programs with these assay platforms, the latter having incorporate arrangements and analysis of statistical and mathematical techniques.

Efficiency thus seen from different levels, interrelated this is reflected through indicators expressed in various forms but essentially they all reflecting how they are managed and used assets of an undertaking.

2. Concepts and terms used

To achieve this works in addition to the term of effectiveness of this in the introduction and presentation of the indicators used is needed both in terms of transmitted information and the way its calculation.

Defining concepts was conducted using both its views presented by specialists nationally and especially internationally.

Indicators MIRRORS profitability at a company level are reflected both in relative and absolute form. Of absolute indicators correlation analysis we used: operating result, financial result, total result, EBITDA and EBIT; and the use of relative indicators are: economic rate of return of capital, financial rate of return, rate of return on sales and expenditure or consumption.

Both the absolute and relative indicators I use presented through an array of profitability indicators as follows:

Table 1. Absolute profitability indicators use

income	expenditure	result
+ operating income	- operating expenses	Operating result (Pe)
+ financial income	- financial expenses	Financial result (Pf)
+ total income	- total expenses	Total result (Pt)
+ total result	+ interest expense	EBIT
+ EBIT	+ Amortisation	EBITDA

Source: Table made by the authors

As meanings operating income is the result of an undertaking to the work carried out on a certain time, which is often confused with the potential cash flow or as it is also recognized as the gross operating surplus.

The financial result is actually the difference between revenues and financial cehtuieile d ela enterprise level and is mostly due to loans made by the company to finance both current needs and investments.

Belly total result is the difference between total income and expenses of an enterprise, which is a result of the country affected by fiscal policy, being based reporting in determining the entity income tax due to the state budget.

EBIT and EBITDA are two indicators belonging to Anglo-Saxon system and less French system basically their relationship finally being adapted nevertheless substantial adjustments resulting from this all-surpassing being so representative.

Expressions profitability using relative indicators calculated from the overall efficiency equation, namely by comparing the actual effect achieved with the effort made by the company to achieve that effect.

Indicators of profitability it is also reflected by using the following table:

Table 2. Indicators of profitability of an enterprise

effect indicators	indicators of effort	profitability
Gross profit	permanent capital	Return on economic equity (Re)
Net profit	Personal capital	Financial rate of return (Rf)
Operating result	Expenses turnover	Return on costs (Rrc)
Profit for turnover		
Operating profit	Turnover	Return on sales / commercial (Rcom)
Profit for turnover		

Source: Table made by the authors

Using therefore these indicators and also causing the indicators of management of the assets given the speed of rotation of their measured as indicators of results and that asset we performed an analysis of the correlation, watching how this asset management in an enterprise influence the profitability.

3. Research methodology

Based on the profitability indicators such as absolute and relative we determined the indicators reflecting asset management companies analyzed.

First we thought impedios after determining the necessary indicators presented the evolution of profitability of companies from Spain - Rioja region. As a sector we chose food. considering the theme of the research work we considered the most representative branch in terms of highly perishable products. So in this industry since the speed is higher, exactly how much faster current creates value both company profitability should at least theoretically be influenced positively.

At the level of companies in the Spanish region of Rioja undercurrents in 2013, the last year surprised the analysis, around 300 companies with activities in which belonged food industry, but we made a selection among them, the selection criterion is given by the indicator turnover. So after I decided to look at companies with turnover of more than EUR 10,000, we finally decided on a number of 198 companies.

The period under review we decided in November due to the large number of variables to be 2012 - 2013, although the average level of profitability analysis went on peroad specific data from 2010 to 2013.

Indicators renatbilitate both the absolute and relative who are currently under a table passed as an annex (Annex 1) for more research in this paper, which is of a large size.

I realized correlation analysis using Pearson index, the SPSS statistical program used. Modeling level of correlation being made but with more research platform SABI ajutroul Neo paltform found in the University of Rioja, Faculty of Economics and manage their businesses.

4. Case study

The impact of the financial crisis, however, was different from one country to another, from one industry to another, from one firm to another, even if we speak the same field.

One of the explanations people's specialty would be that a small firms with a level of technology lowest presents greater flexibility and therefore increased capacity to adapt to the changing environment in which they operate, and changes that occur the market from customers, suppliers, etc. As a company with a higher level of technology adapts to these changes but in a larger time interval and of course incurring higher costs.

For this study we considered the companies Rioja Spain, belonging to food industry companies analyzed period regarding the profitability trend 2010 - 2013, correlation analysis, they are only the last two years 2012-2013.

To analyze profitability at companies of Rioja we used the electronic platform SABI University of Rioja, Faculty of Economics. In this platform with a user and password data I entered the business section where, depending on the scope of activity and the region over the undertaking, we selected those businesses related to the food industry in Rioja.

The individual companies have selected balance sheet and profit and loss account, financial and accounting documents with which we calculated and analyzed a number of indicators of profitability.

For more rapid absolute indicators of profitability we determined for each indicator an average Rioja food industry. The mean results for each indicator are shown in table immediately below:

Table 3. Media absolute indicators of profitability in the food industry Rioja - Spain for the period 2010 - 2013

Media	Pe	Pf	Rt	EBIT	EBITDA
2010	547.653	-8.660	538.994	547.653	838.877
2011	547.752	-8.650	539.102	547.752	838.975
2012	548.123	-8.649	539.474	548.123	839.382
2013	555.495	13.616	541.879	555.495	847.725

Source: Table created by processing data from Annex 1

Considering the average values reflected in the above table so we can achieve a profitability analysis of the evolution in terms of absolute indicators.

Thus, in the operating activity is an increase in average operating result for the entire period. This increase can be explained by the fact that Rioja to the food industry has increased the number of enterprises operating profit above the average for the activity determined in each individual year.

The same evolution is observed and if total earnings from the companies in the food industry riojense. It seems that from year to year has recorded a growing number of enterprises that have achieved above average results for each individual year.

Relating simultaneously to two indicators EBIT and EBITDA in addition to, and if their situation is similar to what we had on profitability indicators earlier, here we can say that there is a difference in level considerably between the two indicators. This difference can be explained in terms of the level of depreciation. Basically being production-oriented companies is clear that we are talking here of a high tech level.

In determining the level and also to achieve a profitability analysis in terms of relative indicators we have kept the same procedure as in absolute indicators.

And if these indicators, to carry out an analysis with ease, without having to approach individual companies, we determined the average level in the food industry in Rioja - Spain.

Table 4. Average relative indicators of profitability in the food industry in Rioja the period 2010 - 2013

Media	Re	Rf	Rrc	Rv
2010	6,01%	51,75%	6,59%	5,84%
2011	6,08%	51,74%	6,64%	5,89%
2012	6,50%	52,34%	6,70%	5,94%
2013	6,41%	22,69%	6,72%	5,95%

Source: Table created by processing data from Annex 1

In 2013 there was a slight decline in the indicator compared to 2012. This decline could be justified by reference to data from us and Table 4.2 where the average total profit is increasing by an increase in the companies the average value of total assets.

The rate of return on equity is a decrease of the mean at a very high level in 2013 compared to other years. This, as I considered the data from the balance sheet and income statement of profit can be explained by a decrease in average net profits of the food industry in a much faster rate than the average equity.

In terms of efficiency in the use of spending is an increase in average spending rate of return, this meaning that to produce the same results companies have succeeded in reducing the level of expenditure from one year to another.

Return on sales records from year to year a growing medium, this meaning that the level of companies in the food industry of Rioja increased during this time profit share from the total turnover expenses.

Correlation analysis between micro and macro certain indicator is one way that highlighted the links that exist between these indicators and how they influence. Also correlation analysis is a first step to achieve an economic and mathematical model, the intensity of the link between these indicators which justifies the importance of its creation.

At the level of companies in the food industry in Rioja - Spain correlation analysis of indicators of asset management and profitability indicators is performed using SPSS statistical software, the index used is the index Pearson.

