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The Impact of Investments on Net Profit, as an Effect of Managerial Flexibility and Adaptive Organizational Culture

Constantin BRAN¹

Abstract

The continued development of the organization is possible in the context of an adaptive culture in relation to environmental turbulence. Adaptation of the organization implies the existence of a key factor, namely managerial flexibility. In rigid organizational cultures, managerial flexibility cannot be supported. In the present study we analyzed whether managerial flexibility facilitates investments in relation to net profit and it was concluded that in companies with an adaptive organizational culture, managerial flexibility is the "fluid" that supports and guides the entire organizational mechanism. Thus, managerial flexibility becomes the "key driver" of the flexible organization, capable of successfully coping with environmental turbulence to achieve optimal performance.

Keywords: *managerial flexibility, adaptive organizational culture, flexible organization, investment, net profit, strategic management.*

1. Introduction to the relevant literature

The continued development of the organization is possible in the context of an adaptive culture in relation to a turbulent environment.

Adaptation of the organization implies the existence of a key factor, namely managerial flexibility. In rigid organizational cultures, managerial flexibility can't be put in place.

Managerial flexibility is a concept that defines how a group of decision-makers of an organization can decide conveniently in an uncertain

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situation caused by the challenges of a turbulent economic environment. [1] Managers are in a position to make optimal decisions in a short time, decisions that are variable and accompanied by a certain risk dose [2].

Managerial flexibility implies a steady adaptation of managerial strategy in line with market evolution involving lower costs for the organization and attracting maximum profits by exploiting opportunities that emerge temporarily [3].

In order to calculate the effect of managerial flexibility, we need to take a look at the type of business and the area within the organization. The area controlled by managers is delimited for each individual, allowing them to exercise their right to decide. Decisions are first of all limited to organizational barriers within the company.

For better flexibility, effective communication is required for all managers in the organization. Managerial performance also depends on how motivated or self-motivated are the managers [4]. It is difficult to identify how each individual manager decided and what is the contribution of each to the success or failure of the organization in the absence of performance indicators tailored at the organizational level.

Even under these circumstances, the performance indicators cannot fully mirror the decisional behaviour of the managers, a reason for the difficulty to define the concept of management flexibility. The results of the organization reflect more objectively how effective were the decisions of the managers in a certain period of time. The flexible manager must make optimum and timely decisions in any situation for the benefit of the company (fig.1).

Adaptive organizational culture is characterized the flexibility that is maintained within a company and which increases its market value. [5] It directly targets the freedom and confidence that managers enjoy in optimizing their decision in difficult situations.

An adaptive culture allows managers to progress, motivates them properly, gives them resources, focuses on quality, errors are removed, customer satisfaction is the number one priority of the organization,

An adaptive culture is characterized by a kind of organizational discipline in which rigidities are easily identified and remedied. There is a particular emphasis on innovation, on the out-of-the-box thinking, where feed-back plays a decisive role and it is not seen as a criticism, but as a necessary tool for organizational progress [6], [7].

The net profit is the ultimate indicator, which, based on its size, measures the performance of an organization. Companies are setting a number of goals over a period of time, but they all converge to net profit growth. For this reason, special attention must be paid by the decision-makers to capital inflows which may become profitable investments [8].

Investments are, in a short definition, the "capital guiding" of a company to the purpose of profit. The relationship between managerial flexibility and investments has been addressed in recent years in the literature. [9]. The amount and the choice of the type of investment at the right time (fig. 2) are an great tool for measuring the level of managerial flexibility in an organization [10].

2. Problem Statement

Starting from the principle that the size of the net profit is a consequence of intelligent investment (the pragmatic expression of managerial flexibility), the natural question arises as to what are the business investments (rank of preferences) that are successful in a given field of activity?

The current research sought to find the answer to this question.

3. Aims of the research

The purpose of the study was to determine whether management flexibility is a facilitator for investments in the designated organization in relation to the net profit.

4. Methodology

4.1. The research methods used in interpreting data/results are:

- Multiple Correlation;
- Regression Analysis.

4.2. The study period

- The research took place between 05 July and 25 October 2017.

4.3. The Sample:

To illustrate the link between profit and investments in the IT field, we took financial data from the Romanian Commerce Registry for the first 250 IT companies in the country, for the fiscal year 2016. These organizations carry out activities of custom software development (client-oriented software) as well as data processing, web page management and other related activities.

The data taken and analyzed are the profit and the various investment components, relevant to this field, namely:

1. Investments in fixed assets;
2. Investments in high technology;
3. Investments in know-how;
4. Investments in human resources;
5. Investments in promotional activities.

5. Findings

The Multiple Correlation between profit and investments is shown in the following table (table 1):

Table 1. Multiple Correlation between profit and investments						
Indicators	Profit 2016 (RON)	Investments in fixed assets	Investments in high technology	Investments in know-how	Investments in human resources	Investments in promotional activities
Profit 2016 (RON, Romanian currency)	1					
Investments in fixed assets	0,285422451	1				
Investments in high technology	0,922228017	0,330473	1			

Investments in know-how	0,93015 7752	0,154753	0,847305	1		
Investments in human resources	0,69276 8606	0,141908	0,406798	0,591274	1	
Investments in promotional activities	0,69272 1244	0,141898	0,406707	0,591231	0,999983	1

The interpretation of the *correlation coefficient* in Table 1 is as follows:

1. a correlation coefficient of -0.25 to 0.25 indicates a weak or null correlation;
2. a correlation coefficient from 0.25 to 0.50 (or from -0.25 to -0.50) indicates an acceptable degree of association;
3. a correlation coefficient of 0.5 to 0.75 (or -0.5 to -0.75) indicates a moderate to good correlation;
4. a correlation coefficient greater than 0.75 (or less than -0.75) indicates a very good association or correlation;

Schematically, the interpretation of the Pearson correlation coefficient shows as follows (Table 2):

Table 2. The level of correlation between the selected indicators for the research			
Profit and loss account indicators	Profit and loss account indicators	Pearson correlation coefficient	Correlation
Profit	Investments in fixed assets	0,285422	weak
Profit	Investments in high technology	0,922228	strong
Profit	Investments in know-how	0,930158	strong
Profit	Investments in human resources	0,692769	good
Profit	Investments in promotional activities	0,692721	good
Investments in fixed assets	Investments in high technology	0,330473	acceptable
Investments in fixed assets	Investments in know-how	0,154753	weak
Investments in fixed assets	Investments in human resources	0,141908	weak
Investments in fixed assets	Investments in promotional activities	0,141898	weak
Investments in high technology	Investments in know-how	0,847305	strong
Investments in high technology	Investments in human resources	0,406798	acceptable

technology	resources		
Investments in high technology	Investments in promotional activities	0,406707	acceptable
Investments in know-how	Investments in human resources	0,591274	good
Investments in know-how	Investments in promotional activities	0,591231	good
Investments in human resources	Investments in promotional activities	0,999983	strong

The more the correlation coefficient approaches 1 in absolute value, the more the "intensity" of the linear relation between the two variables will be higher.

In this case, we notice that investments in know-how and high technology are the most important components for increasing the profit of IT companies, those in human resources and promotional activities are also correlated with a high profit, while investments in fixed assets have an insignificant influence.

Analyzing the **multiple regression** between *profit and investments*, we have (table 3) obtain:

Table 3.Regression Statistics	
Multiple R	0,992954244
R Square	0,985958131
Adjusted R Square	0,985670387
Standard Error	4509433,919
Observations	250

Table 3. Multiple regression analysis between profit and investments									
Regression	5	3,48391E+17	6,96783E+16	3.427	0				
Residual	244	4,96174E+15	2,0335E+13						
Total	249	3,53353E+17							
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95,0%	Upper 95,0%	
Intercept	423725,0805	328137,4314	1,291303704	0,19782	-222618,4	1070069	-222618	1070069	
X Variable 1	0,017198458	0,010474039	1,642008213	0,101876	-0,003433	0,03783	-0,00343	0,03783	
X Variable 2	0,836864707	0,023672898	35,35117219	5,59E-98	0,790235	0,883494	0,790235	0,883494	
X Variable 3	0,355209507	0,022776942	15,59513618	1,65E-38	0,310345	0,400074	0,310345	0,400074	
X Variable 4	-0,851129965	3,463055822	-0,245774255	0,806064	-7,672429	5,970169	-7,67243	5,970169	
X Variable 5	1,642566684	3,463521943	0,474247518	0,635748	-5,17965	8,464783	-5,17965	8,464783	

The multiple regression model shows the prediction (factors that will influence profit in the future) and can written as:

Forecasted Profit = $423725,080519697 + 0.017 * \text{Investments in fixed assets} + 0,83 * \text{Investments in high performance technologies} + 0,35 * \text{Investments in know-how} + (-0,85) * \text{Investments in human resources} + 1,64 * \text{Investments in promotional activities}$.

Variables X (1 to 5) are the regression parameters specific to each of the variables considered.

Variables X (1 to 5) are the regression parameters specific to each of the variables considered.

Intercept is the free parameter, which shows what would be the value of the resulting variable if the influence of the factorial variables would have been zero. X1, X2, X3, X4, X5 indicate the influence of each variable to which the parameter is applied for a 1-leu increase of that characteristic.

Multiple R is the multiple correlation coefficient, which gives the measure of the association between Y (profit in this case) and the set of variables X (investments). The calculated value of R is always positive.

R square is the coefficient of determination and is the square of the correlation coefficient R.

The value of the coefficient of determination answers the question: how much of the variation of Y can be explained by the linear relation with X. In the present case, 98% of the value of the profit is influenced the variability of investments (variables X1, X2, X3, X4, X5).

Significance F is the unilateral critical probability and must be less than the established significance threshold, which is 0.05. In this case, $0 < 0.05$, so the correlation between the six variables is significant.

6. Discussions

Clever investments need a good knowledge of trends in the field. The present study has practical value as the approach can be used when needed by interested managers and researchers.

Also, the model presented is relevant to both the Romanian IT industry and the horizontal and vertical industries in the global markets. Of

course, the method should be applied in medium and large companies where there is a need for an accurate analysis of a large data volume that can help to a better understanding of the trends.

We cannot say the model has limitations, but it needs customization. It can be adapted from one company to another, which is also recommended for obtaining valuable results given the uncertainty of the business environment. The study refers to the market conditions of the IT industry in Romania in 2016, the analyzed financial data being the most recent at the time of the research.

7. Conclusions

We conclude that in companies with an adaptive organizational culture (from the top 250 in the IT industry), managerial flexibility is the "fluid" that supports and steers the entire organizational mechanism to success.

Although it was thought that investments in human resources come first in the IT industry in Romania, the research has shown that the largest investments were made in assets / high technologies and know-how, human resources and budgets for promotion having lower positions.

Thus, for an increase of 1 leu in the amount invested in technologies, the profit will increase by average with 0.83 RON. In the case of investments, the trend is unexpected.

Although investments for promotional activities did not seem to be a priority for investors, the study shows that for each leu invested the company's profit is to grow by 1.64 RON.

In such situations, managers have much clearer information on how to make wise and flexible decisions while avoiding the cliches that have pervaded for years the traditional thinking of how to be successful in business.

The study also shows that any winning pattern has its rise and fall and that it is good to analyze available data at certain time intervals.

References

- [1] Santiago Leonardo P., & Bifano, Thomas G. Management of R&D projects under uncertainty: A multidimensional approach to managerial flexibility. IEEE transactions on engineering management, 2005. 52(2). pp. 269-280
- [2] Trigeorgis L. Real options: Managerial flexibility and strategy in resource allocation. MIT press. 1996

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- [3] Scialdone P. Valuing managerial flexibility: Challenges and opportunities of the real option approach in practice. Cuvillier Verlag. 2007
 - [4] Bran C., & Udrea C.-I. The Influence of Motivation and Flexibility on Job Performance, Edited by: Sandu, A., Ciulei, T., Frunza A. Conference: 15th World LUMEN Congress - Logos Universality Mentality Education Novelty (LUMEN) Location: Iasi, ROMANIA Date: APR 12-17, 2016, WLC 2016: World LUMEN Congress. Logos Universality Mentality Education Novelty 2016 (LUMEN 15th Anniversary Edition) Book Series: European Proceedings of Social and Behavioural Sciences, Volume: 15. 2016. pp. 135-143
 - [5] Bran C. & Gavrilă L. (Main Considerations and Types of International Valuation Standards Used in the Assessment of an Organization. In Sandu, A., Frunza A., Tomita C. & Ghorghiu L. (eds.), Multidimensional Education and Professional Development. Ethical Values. Bologna, Italy: Editografica. pp. 65-71. 2016 ISBN: 978-88-7587-736-1
 - [6] Antonio J. Verdu-Jover, Lirios A.-S., Jose Gomez-Gras M. Adaptive culture and product/service innovation outcomes, In European Management Journal, 2017. ISSN 0263-2373, <https://doi.org/10.1016/j.emj.2017.07.004>
 - [7] Fraticiu L. Mihaescu D. & Andănuț M. Culture-Civilization-Organizational Culture and Managerial Performance, in Procedia Economics and Finance. 2015. (27). pp. 69-72. ISSN 2212-5671.
 - [8] Rębiasz B. Bartłomiej G. & SKALNA I. Valuing managerial flexibility: An application of real-option theory to steel industry investments. Operations Research and Decisions. 2017(27)
 - [9] Monteiro, Joao Carlos da Rocha, et al. Managerial flexibility and competitive interaction in investment decisions: a discrete-time agency theoretic perspective. 2016
 - [10] Bistline J. E., Comello S. D. & Sahoo A. Managerial Flexibility in Levelized Cost Measures: A Framework for Incorporating Uncertainty in Energy Investment Decisions. 2016