

## The virtuous circle and the vicious circle in managerial training investment

~ Ph. D. Student **Cristina Călugăru** (Romanian Academy, Bucharest, Romania)

E-mail: [christichirita@yahoo.com](mailto:christichirita@yahoo.com)

**Abstract:** *In parallel with the consolidation of the view that there is a real need to train and improve enterprises' managerial staff – also in parallel with the increase of expenses incurred by enterprises in this direction, in the past decades this investment in managerial training is rather preparatory for the subsequent professional evolution of the people appointed in management positions of said enterprises – direct beneficiaries of these training or improvement programs.*

*Thus, there appears a gap between what enterprises wish to obtain, by implementing such training and development programs, and what they are actually obtaining: in fact, the investment 'leaks' from the virtuous circle<sup>1</sup> of acquisition of higher managerial competences and of their application in said enterprises (to obtain better economic performances, in activities that are more and more competitive), into the vicious circle of non-using this investment in management training, for many various reasons that we could identify using the results of empirical research.*

**Key words:** investment in managerial training, performance gap, managerial competences, the need for managerial training and improvement, virtuous circle, vicious circle, empiric study on management skills.

<sup>1</sup> The concept of "virtuous circle and vicious circle" was introduced by Normann (1991), to explicitly link the improved performance within the organization to improved performance externally and with service users, as the service production and consumption are occurring almost simultaneously, in services industry. Same logic goes for a wide range of interconnected processes developed in all organizations. Normann, R., 1991 – "Service management: strategy and leadership in service business", Wiley Publishing, 2nd ed.

### 1. Methodological delimitations

The endeavours of this article have been initiated after the completion of the research project of connections existing between the performance (competitiveness) of the Romanian enterprises, with a 4 years duration – on a sample of 104 national companies – and the investment they have made in the managerial training and development of their own managers, in the first or the second year of the specified period of time. The panel research has revealed several interesting conclusions, of which we have resumed for a deeper analysis, the ones related to the **managerial competences** possessed in companies before participating in trainings, compared to the competences acquired by participating in these improvement training programs.

Previous researches were done using a large variety of scientific methods, to demonstrate the degree of influence between these three factors: 'training' –>'superior competencies' –> 'superior performances'. The dominant logic is same in all cases: direct-linked influences and strong propensity to more predictable results, if one of the factors given as "amount" or level of manifestation.

### 2. Considerations concerning the performed empirical study: data taken into the analysis and the data processing manner

The proposed set of managerial competences was used as evaluation metrics within the management consulting services provided by the European financed project „Romanian enterprises in the context of change” - Training, Consulting and Assistance Program of enterprises to promote adaptability and to introduce new

organizational solutions (FCA) – for 104 Romanian firms, with a three years implementation period, 2010 to 2013. The project was supported by the Sectorial Operational Programme Human Resources Development (SOP HRD), financed from the European Social Fund and by the Romanian Government under the contract number SOP HRD / 81/3.2./S/55465).

The enterprises participating in the project have been evaluated by applying this instrument only once, namely before the participation of the nominated managers in the management training&consultancy programs provided in the frame of the same project, as support of additional recommendations for professional development and in order to constitute the study groups. The analysis of the managerial training needs has been performed separately from the evaluation of the managerial skills, in the project.

The two perspectives of interest in this empirical study – that of managerial competences, respectively that of the investment in managerial training – have benefited from partially different approach methods:

►the first perspective is based on the *quantitative method* – **method of correlation**. It applies when between the factors and the researched phenomenon stochastic (accidental) relations occur. This method helps measuring the intensity of the relation between the analyzed phenomenon and its factors of influence, as well as their influence. We aimed at determining which of the managerial competences considered in the study have a greater impact on the performance indicators "Turnover" and "Profit", by a correlation made in the centralizing table of data collected from the scores of these managerial competences. It is useful to specify that this

correlation departs, in the analysis, from the primary obtained data, as well as from the data proposed by the author of the study by calculating the "means" of these competences at the level of each enterprise (secondary data). The interview grid that has been used is a complex set of interlinked questions, with a scoring scale from 1 to 10, for each of the evaluated competencies;

► the second perspective is based on the **econometrics modelling** (identifying an equation of the relationship between chosen parameters, a regression-function type) – which is a mixt method, using quantitatively and qualitatively parameters; the relationship is monitoring the expenses related to the training, incurred by the analyzed enterprises, for a duration of time that is considered relatively simultaneous with that of research of managerial competences. Regarded as an investment, the expense related to training may be quantified according to variables such as the profit of the enterprise, productivity or the level of total incomes of the enterprise. The regression model chosen for research is the panel technique of data analysis, where we introduce as economic variables: the training expenses incurred by the enterprises included in the sample (variable  $Y - Ch\ Instr$ ); the gross profit of these enterprises throughout the analyzed period ( $Pb$ ); the productivity of the employees of said enterprises ( $W$ ); the total expenses of the same enterprise throughout the period of analysis ( $Ct$ ); the total incomes of said enterprises throughout the period of analysis ( $Vt$ ).  $Pb$ ,  $W$ ,  $Ct$  and  $Vt$  are considered to be  $X$  variables.

The investigated regression model concerns the dependence of the investment in the managerial training (Expenses related to the

managerial training) according to the profit and productivity of the sectionally analysed enterprises, for the term of 4 years of observation/data collection. The regression function may even be extended to 3 or 4 exogenous variables, adding the total Expenses and the total Incomes of the enterprises in the panel.

The series of managerial competences considered in this study, as having a direct impact on the economic performances of the analysed enterprises, was the following:

3. *Adaptability (Adaptation to the circumstances; Creative thinking)- Adp;*
6. *Action (Measures; Results)- Act;*
7. *Others' development (Develops individual talents; Motivates successfully)- ODv;*
8. *Personal development (Implication and commitment; Wish to improve oneself)- PDv.*

The answers to the questions included in the questionnaire have allowed for the determination of the average scores for each of the abilities constituting the series of competences that have been individually acquired, resulting from the manager's evaluation by all the observers (superior, direct subordinates and peers). Thus, they highlight the differences from the maximum possible value for the items evaluated by grading.

The analyzed data *for the evaluation of managerial competences* (Perspective 1) have been:

- The set of managerial competence measurements – values obtained for the managers of the enterprises participating in the evaluation;
- The gross profit of the analyzed companies and the turnover achieved in the estimated period as resulting from the "possession" of these internal competences (2009 – 2012).

The analyzed data to evaluate *the impact of the investment in the managerial training* (Perspective 2) have been:

- The values of the investments in managerial training for each of the enterprises participating in the evaluation;
- The gross profit of the analyzed companies and the turnover achieved in the period immediately following the investment (2009 – 2012).

For Perspective 2 - the investment in managerial training and improvement - the method of analysis that was used was shown and described in a distinct research report – and it uses a data analysis econometric method (the panel method, with temporal data series). The linear relation was designed to test a null hypothesis. The test either accepts or reject the null hypothesis, for the null hypothesis named as: there is no relationship between the level of investment in managerial training and the economic results (performance, or competitiveness) of studied companies.

In this method, the following items have been used as economic variables: the training expenses (Ch Instr) incurred by the enterprises included in the sample (variable  $Y - Ch\ Instr$ , as endogenous variable); the gross profit of the enterprises included in the sample during the period of analysis (Pb); the productivity of the employees of the enterprises in the sample (W); the total expenses of the enterprises in the sample during the period of analysis (Ct); the total incomes of the enterprises in the sample during the analyzed period (Vt). We have Pb, W, Ct and Vt considered as X variables (exogenous). The null hypothesis was rejected, which demonstrated the dependency between the endogenous and exogenous variables.

### 3. Data analysis; partial results

Only the Perspective 1 is to be presented in more details in this article, although a complete sense-making perspective in studying this subject comprises both perspectives.

Figure 1 – Connections between the Investment in Management training, leading to Managerial competences - and the Income and profit of the enterprise (author's diagram)



As it follows, for the evaluation of the managerial competences for the analysis of relations between the level of managerial competences within enterprises and their business results, we have tested a simple correlation of the values of variables at the moment when the test was made (the year when the previous survey to the participation to training was made), and the business results obtained in the same year and in the following year – after the target-group's participation in the management improvement training programs.

The individual reports of evaluation of the managerial competences drafted for each manager of the target group (three to seven or more representatives of the the analyzed enterprises' management staff, from top, middle and executive levels) are centralized in an Report of Evaluation of the Managerial Competences, for each of the participating enterprises. The scores (marks) obtained for managerial competences and abilities are processed and interpreted in the excel table where they are introduced as primary data, in order to identify the specified correlation. Thus, the data in the questionnaires or the numeric values of the evaluations based on 360° feedback method for said abilities, have been introduced in a table.

In the second stage, the average value for each pursued competence has been calculated, and afterwards the means of these competences at enterprise level.

In the third stage, the means of the competences (4 values for every enterprise) have been correlated with the indicators Turnover, respectively the Gross profit of the enterprise, obtained in the period of analysis. For simplification, we have also calculated the variant of the difference between the results obtained

in the year subsequent to training, and those in the year of evaluation, by circular feedback questionnaires (feedback at 360°), using the gross profit margin rate (gross profit  $\times$  100/turnover).

The data in the excel table have been visualized as a histogram, allowing for the quick interpretation of the differences between the managerial competences, respectively their means, and the tendency of evolution of the gross margin of profit – if there is one.

#### **Simple correlation; usefulness of the histogram**

The correlation between pairs of variables is measured by the correlation coefficient, calculated by means of the "correl" function for the data introduced in Excel files. This coefficient may take values between -1 and +1; when the value of the coefficient is = 0, there is no correlation between the analyzed data (very rare situations). For coefficient values close to 0, the correlation is weak, and we should interpret this as a weak tendency towards evolution of a series of variables in one direction (ascending or descending). For values close to 1, the evolution tendency of the dependent variable on the direction in which it varies and the independent variable is very big (perfect correlation for values = 1). The dependent variable in this analysis is considered to be the gross margin of profit/ with the alternatives of exercises related to the evolution of the Turnover or to the Gross Profit.

A quick manner to identify the correlation tendencies between the values of certain variables consists in their graphic

representation in the system of two coordinates (x, Y); we obtain a histogram, a primary graph where variables values are represented as “scattered” points within the ranges of values obtained by scores.

A histogram has the following components:

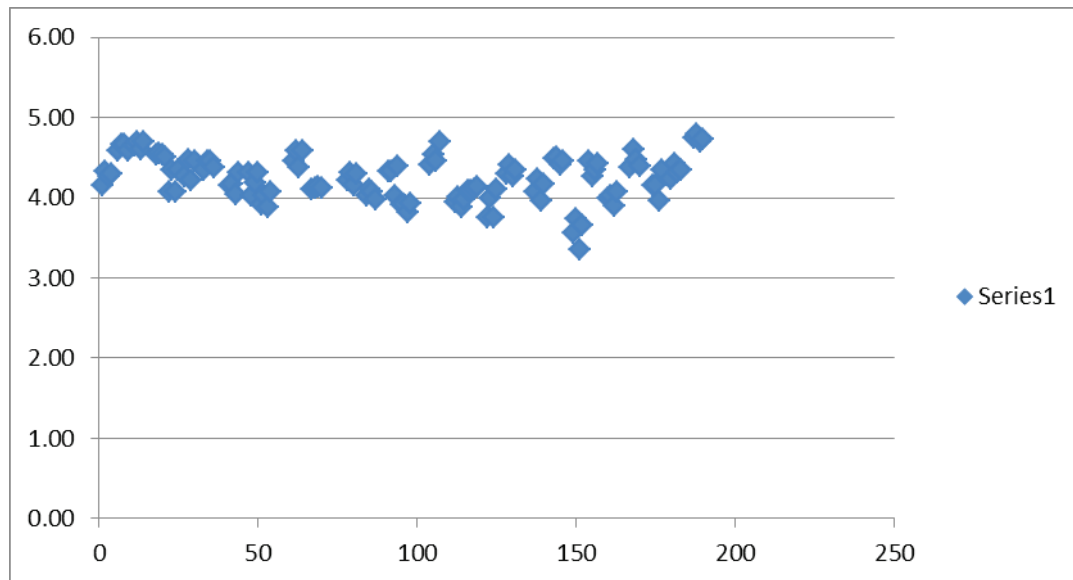
i) A title that specifies the population that it refers to – in this case, the means of managerial competences;

ii) A horizontal scale where X variable is identified, class limit values, class borders, class marks;

iii) A vertical scale where the frequencies for each class are identified.

The histogram obtained for the means of managerial competences (the set of four competences), for the 30 enterprises selected in the sample, is shown in the following figure:

Figure 2 – Histogram of the means of managerial competences existing in the enterprises of the analyzed sample

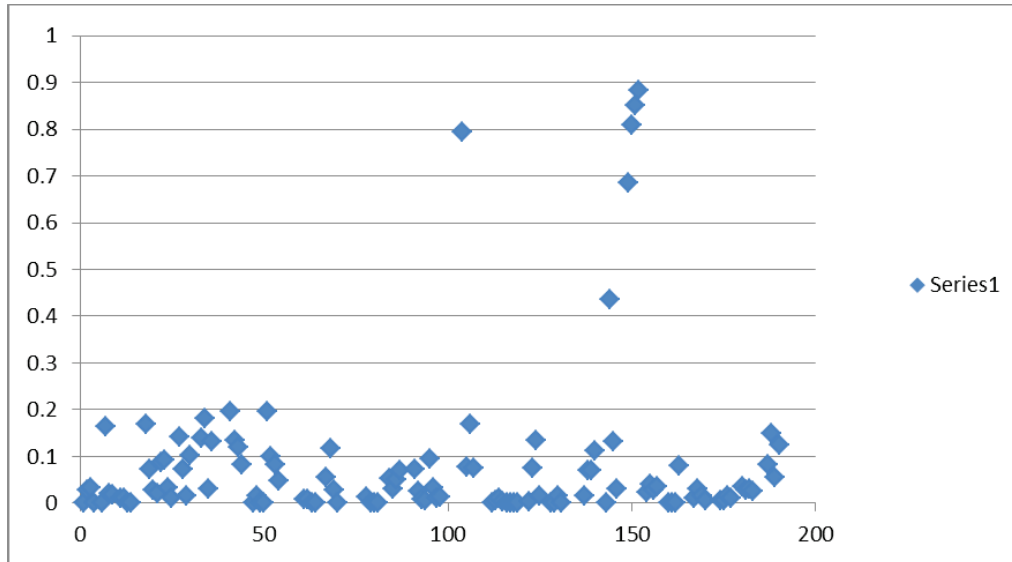


Interpretation of histogram: the “managerial competences” variables evaluated for the target group are linearly positioned in a range of values between 4.8 and 3.25, which shows that they are correlated among each other (they are situated in the same range of

values), and the value fluctuations are low (points are ‘agglutinated’).

The histogram obtained for the gross profit margin of the enterprises in the sample looks as follows:

Figure 3 – Histogram of the gross margin of profit of enterprises in the sample.



Interpretation of histogram: the variable « gross margin of profit of enterprises also has a linear evolution in a range of values between 0 and 0.89, which shows that these values are correlated among them and have the same tendency as the “managerial competences” set of variables, but there are bigger differences between the positions of the points on the system of axes, which indicates other manifested influences over the values of these gross margins. We can also see that six much bigger value peaks are registered, confirming the hypothesis of other influences, of other exogenous variables over the gross profit margins (e.g. external environment factors like technology, social trends in consumption, fluctuations of exchange rates, geographical cover, market demands, competitive offer, degree of profitability of the industry etc.)

The interpretation of histograms may be subsequently completed by registering

different value ranges of the profit margin variable, in correlation with different value ranges also for the evaluated set of managerial competences, for instance, competences scored with values between 4.5 – 4.9 are joined by increases by x % of the values of the economic indicators (in this case, the gross margin).

#### 4. Interpretation of results.

##### Conclusions and future perspectives

Best practices in management appraisal and management skills development demonstrate broadly, today, the bond between the companies' economic performances and the level of their internal management competencies. This is the first recommendation to make, for all companies pursuing growth and sustainable business achievements – strive for better managerial skills and competencies, better managers. But better or (more) suitable? Let's try a concise answer to this question.

In this short empiric study, the evaluation of managerial competences determining economic results of companies (which I called Perspective 1) leads to the following noticed aspects:

- the linear, positive correlation of the values of managerial competences with the gross profit margin calculated for the enterprises in the sample;

- none of the enterprises has unsatisfactory economic results (loss/ negative results), as the range of the evaluated competencies is in the superior third of the scale: from 3,6 to 6 in the scale values; this could suggest an optimization of profit levels for management teams with such values, on the scale;

- the need of identification of other variables with impact on the business results of the enterprises – influences of the internal or external environment – necessary for a better understanding of the correlation and, possibly, for the identification of one of the four managerial competences as factor with a decisive influence on economic performances;

- the strong impact of the chosen four managerial competencies, in a total of eight - and the rising question on how much the training could increase their level of manifestation;

- the type of management training needed, in order to develop such management competencies, are mainly in the field of interpersonal or intrapersonal skills; how could we have a clue on the technical managerial trainings impact (the so-called “hard” or teachable skills in management, like planning, strategy setting, financial skills etc.), when evaluating the training needs;

- the working instance for the analyzed enterprises: other key information are

connected to their economic results and set of competencies scores, e.g.

It is important to note that the evaluation of managerial competences in the beneficiary target group of the project had as defined objectives both the evaluation of the current performance, and the future personal development, which supposed the drafting of personalized recommendations of personal development directions and of participation in the managerial improvement courses offered in the project.

The human capital is an essential component of the economic competitiveness at the microeconomic level and, as it has been proven by recent analyses, it is more and more important in the sustainable development. Understanding how the human capital affects the level of economic competitiveness at microeconomic level will allow the more efficient targeting of the necessary resources to improve competitiveness at the national level; a complete list of the issue of human capital and of its effects on competitiveness is still difficult to constitute. “The extension of the field of microeconomic analysis to a wide range of behavior and of human interactions, that include the human behavior in relation to education, has led to the conclusion that the results of learning and of education in general rather have the features of a capital and not of an investment”<sup>2</sup> – and, seen as investment, the expense for training may be quantified according to variables such as the profit of the enterprise or its profitability or the level of total incomes of an enterprise.

It would be premature to appreciate that the relation between the two research

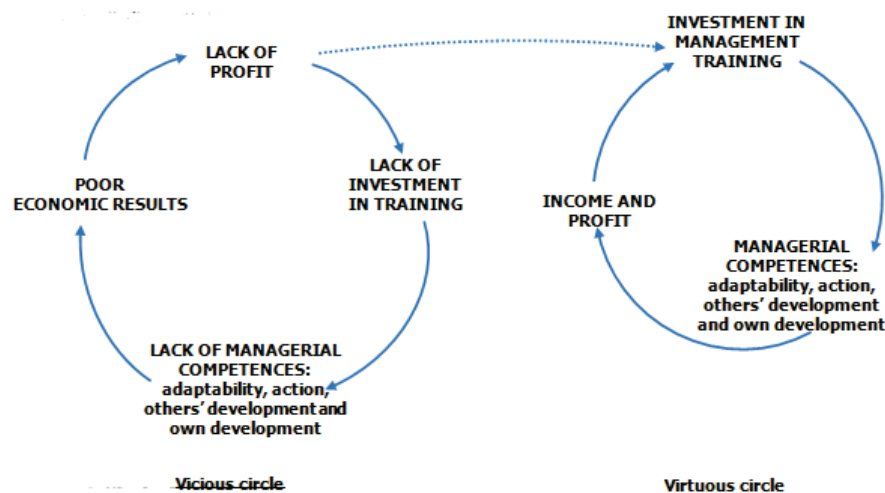
<sup>2</sup> [http://siteresources.worldbank.org/INTMENA/Resources/EDU\\_02-Chap02-Education.pdf](http://siteresources.worldbank.org/INTMENA/Resources/EDU_02-Chap02-Education.pdf)



perspectives is fully quantifiable, but we may appreciate that it is obvious and it may be proved by the joint impact they have on the performance indicators. We may state that there is a “vicious circle” of the investment in managerial training and the performance indicators such as turnover and profit – if the enterprise does not generate profit, does not

have sufficiently high sales, then there are no resources for training; this “vicious circle” becomes a “virtuous” one by including the managerial competence as engine to increase the incomes and profit of the enterprise, profit that subsequently may provide the budget for training and improvement of management competencies.

Fig. 4 – Virtuous circle and vicious circle of investment in managerial training investment (author's adaptation)



after the model of R. Normann (1991)

Although there are increases or decreases of the investment variables in managerial training, on the short or medium run, they are partially determined by the managerial competences existing in enterprises and, rather, they may be the result of external influences – i.e. the opportunity of non-refundable financing opportunities of the training, in human resources field (CEE perspective for 2007 – 2020: the opportunity of SOP HRD programmes). The developed higher competences will migrate, while the period to capitalize the investment in improvement shortens. One of this reasons is its “migration” to actually other companies – that are, in some cases, direct competitors

of those making the investment in training. But only gaining better management competencies leads to better economic results, to better level of profitability, leading therefore to a higher financial amount for investment in people development decisions.

Also, in order to recover the gap between ‘necessary’ and ‘sufficient’ in the key field of training that management skills represents for any company – the practice has shown that, most of the time, this investment in managerial training is rather preparatory for the subsequent professional evolution of the people appointed in management positions of said enterprises (beneficiaries of these training or improvement programs),

that are to perform better at their future jobs, than in the enterprises where they benefited from said training (to be understood that they have benefited from internal support, motivation and financial investment).

We must also specify that the performed research is rigorous in terms of the selected method and of the methodological steps, but it has insufficient (or non-concludent) geographic and sectorial covering – the number of analyzed enterprises is at the limit of the validation threshold of interpretations, and their activity fields are quite spread, although they all belong to the scope of services. The size of the firms participating in the study is also a factor of influence to issue hypotheses related to the interdependence of the factors involved in the researched perspectives (they have between 20 – 1400 employees, so the gap is significant).

A central reflection topic for the future deepening of the proposed research direction

(the enhancement of managerial competences through the investment in management training, as determinant of enterprise competitiveness) consists in the investment decision that is bounded to be firmly grounded and motivated – at the national, sectorial, organizational and individual level, in all development or performance analysis contexts. These are among the hardest challenges we face in actual economic, social and educational context, when going to obtain reliable data that underlie these issues of study.

#### Acknowledgements

This paper is supported by the Sectorial Operational Programme Human Resources Development (SOP HRD), financed from the European Social Fund and by the Romanian Government under the contract number SOP HRD/159/1.5/S/136077.

---

#### REFERENCES:

1. **Donald Currie** - *“Introducere în managementul resurselor umane”*, Ed. CODECS, 2009;
2. **Dennis Lock** - *“Manualul Gower de management”*, Ed. CODECS, 2001;
3. **Michael Armstrong** - *“Managementul resurselor umane – manual de practică”*, Ed. CODECS, 2001;
4. *Principles of good research and research proposal guide*, London Borough of Richmond upon Thames, 2006;
5. **Corneliu Russu** - *“Management strategic”*, Ed. All Beck, 1999, Bucuresti;;
6. **Ana-Lucia Ristea, Valeriu Ioan-Franc** - *“Metodica în cercetarea științifică”* – Ed. Expert, 2013;
7. **Robert Bacal** - *“Manager’s guide to performance management”* – McGraw-Hill Publishing Enterprises, USA; 2nd ed., 2012;
8. *“Skills, capabilities and management practices”*: [www.isc.hbs.edu/competitiveness-economic-development/frameworks-and-key-concepts/Pages/default.aspx](http://www.isc.hbs.edu/competitiveness-economic-development/frameworks-and-key-concepts/Pages/default.aspx)
9. <http://theconversation.com/how-individual-firms-can-solve-the-productivity-paradox-8657>
10. <http://garj.org/garjeaf/abstract/2013/May/Andrade%20and%20Sotomayor.htm> – *“Measurement models of human capital accounting: a case study”*
11. [http://siteresources.worldbank.org/INTMENA/Resources/EDU\\_02-Chap02-Education.pdf](http://siteresources.worldbank.org/INTMENA/Resources/EDU_02-Chap02-Education.pdf)