J Appl Econ Stat. 2017; 1(1): 1-10
doi: 10.25083/2559.5059.11.110

Original Article

The role of financial indicators in measuring the performance of economic organizations

Mihai Păunică[1]

[1]Academy of Economic Studies, Bucharest, Romania

Abstract Nowadays, with increasing competitiveness, organizations have to cope with complex situations and decision-making bodies have to adopt a management system that can adapt complex, fast, difficult to drive systems and for which an error of conduct can have grave/serious consequences.

Due to the complexity of the economic environment, in recent years there has been an increase in the expectations of the companies and, implicitly, of the managers regarding the level of performance of these systems. Performance appraisal is important because it provides decision support to managers in all activities: planning, organization, control and coordination. Evaluating past activities and identifying the variables that influence the company's performance can effectively achieve its objectives. If it is impossible to measure and evaluate "something," it is not able to improve it. For the success of the company, the critical performance indicators and the relationship between them are of particular importance.

Concluding, we can say that efficacy plays an essential role in the performance measuring process. In theory, any performance measurement indicator can be used as a tool to control it. However, no matter how useful this indicator is, it loses its attributes if it is not used effectively to implement performance improvement actions.

Keywords: financiar indicators, performance, economic organizations

Correspondence should be addressed to: Mihai Păunică; e-mail: mihai.paunica@cig.ase.ro

Introduction

The performance of an organization is one of the most important variables in management research and literally, the most important indication of a company's success. Achieving business performance requires that a first requirement is to develop and implement a system of indicators to measure organization performance (1).

Measurement is an implied condition of performance assessment, but it is not implicitly a finality. The goal is not just to measure, but to evaluate. Moreover, evaluation is not itself a goal, it is an instrument associated with management. This highlight the immediate role of analyst and management's in determining the objective and the role of measurement and evaluation, and thus of performance indicators (2, 3).

Financial or non-financial indicators can have the role of checking compliance and measuring gaps in relation to some predefined rules, or helping managers in choosing a course of action. The role of financial and non-financial indicators is well defined in supervisory and control activity. The activity of any organization is carried out in the short term, starting from directly exploitable measures (consumption of raw materials, use of labor, number of scrap, etc.). All these have the purpose of regulating where deviations are found, where indicators have "leadership - action" roles, both medium and long-term actions, and are described by synthetic indicators (e.g. quality products, labor productivity, return on fixed assets, etc.) (4- 6).

Discussion

It should be borne in mind that the good functioning of an organization is influenced by the emergence of internal demands (state of human, material and financial resources) or external (a new order) that require different responses. In this context, the organizational leadership concept is strongly associated with the leadership and prevention of these events. At the level of an organization or activity, two types of requests can be distinguished:

- Planned events, the repetitive occurrence of which does not change the objectives set by the management team and for which the response is known due to the flexibility of the system;
- Disturbances or malfunctions whose occurrence threatens to achieve the objectives set by the management team and whose improvement requires new strategies, either anticipating to prevent effects or resetting, restoring the system to its original state or adapting it by reassessing the objectives .

In this context/case, the role of financial or non-financial indicators is to monitor/survey the state of the organization or activity considered to be critical, and to help estimate the impact of a new request on any global or partial targets originally set (7, 8).

Nowadays, with increasing competitiveness, organizations have to cope with complex situations and decision-making bodies have to adopt a management system that can adapt complex, fast, difficult to drive systems and for which an error of conduct can have grave/serious consequences (9-12).

In 1992, the Association Française de Gestion Industrielle presents in a report the following analysis of the industrial management process: "Considering the complexity of the physical driving processes (from the" product idea "to the finished sold product) and the field of action (strategic to operational), the mechanism is multilevel, hierarchized (each level framing the next one) and cyclic (consequences and corrections of the differences). These levels, which should not be confused with the hierarchical levels of the organigram, are each characterized by horizons, duration and structure. ... The process thus consists of successive ranks, level with level, which formally, progressively and coherently prepare the conditions of accomplishment, to complete with the issuing of executory orders to the physical process. These are about comparisons, iterations, simulations and, in order to achieve the objectives, require, among other things, measurement and evaluation tools (indicators) and means of action (decision variables or levers). Financial or non-financial indicators may have a different use (13-16).

Regardless of its nature, the general characteristics of an indicator could be expressed through the following principles:

- Quantification of any performance must take place at the same level as the activities that trigger it (which implies the need for local control and evaluation);
- Indicators should be chosen in accordance with the objectives set;
- Performance measures must be easy to quantify and control (adapted to control and management mechanisms);
- Performance must be controllable by the persons who have to take care of the measurement
- Improvement Measurements should be adaptable as frequent and at the same time validated.

Performance indicators are part of a continuous improvement philosophy, such as that introduced by William Edwards Deming (October 14, 1900 - December 20, 1993), "Deming Cycle - PDCA" based on repetitive application of the following principles: Planning - Control - Action (Plan - Do - Check - Act). The indicators actually check the extent to which the results achieved overlap with the planned objectives.

Starting from the above-mentioned principles, other definitions of the performance indicator can also be identified. The most general is also formulated/made by Deming: "An indicator is a measure of an objective." This definition promotes two fundamental notions: the "measure", which involves a prior search for information and an "objective" that specifies that the assessment is made in relation to a reference level (17, 18).

Perigord and Fournier note that a performance indicator can also be defined as "an observed, measured, calculated event that allows a qualitative or quantitative identification of a positive or negative change in the behavior of a process." In this case, the emphasis is placed on the performance calculation, without imposing restrictions on the nature of the information used (quantitative or qualitative).

Savall and Zardet present another way of approaching this notion: "an indicator is the result of a small number of information that has the property of being significant, in particular in relation to the strategic objectives of the enterprise, to be updated and reviewed periodically." This definition highlights the notion of strategy, which means an implementation of the indicators (19-21).

In the literature (Boisvert, H. - 1995, Savall, H., Zardet, V. - 1989 and 1992) there are several classifications of indicators, which can be delimited in:

- Their existence is related to the monitoring of these objectives, which do not necessarily have a permanent duration. For these reasons, they are considered short-term indicators
- Monitoring or activity indicators - to assess evolution trends (eg quality, volume, cost, specific consumption). These indicators are stable, more or less permanent, and are called structural.

We can also distinguish:

- Mobilization indicators - assess the dynamics of a company's progress, system, activities, process, activity, etc. (Such as the number of hierarchical levels, degree of versatility, etc.);
- Reference indicators - refers to what a company or system is capable of doing once, but not necessarily in a permanent (standard) reproducible manner.

On the other hand, one can distinguish between:

- Guidance indicators - are defined a priori, attached to their processes and inputs;
- Manifacture indicators - are defined by the ateriors, attached to process outputs, these are the ones that validate the guideline indicators by addressing costs, quality, etc.

They can also identify:

- Immediate indicators - allow for a good evolution of the organization or analysed activity ;
- Potential-generating indicators - the results of which only occur in the following periods (for example, the activity of specializing employees leads to an increase in productivity).

Previous performance indicator delimits allow the management team to select and group them in order to build dashboards or other driving tools that will aggregate the indicators.

Specialty literature defines performance measurement as "a periodic measure of progress in relation to short, medium and long-term objectives; Is passed on to decision-makers to improve action plans.

Often the expression of performance achieved as a result of achieving a goal is based on a quantitative measure.

Two ways of expressing performance can be distinguished:

- expression relative to an objective that we can identify as a measure of performance that measures the deviation between one or two target values of the objective and the value achieved;
- expression that we can explain in relation to the overall objectives considered, which we can identify as an assessment of performance.

The issue of performance - measured or evaluated - consists in choosing a mechanism to compare measures with objectives. Among the factors that influence this choice are the nature of the expression of these measures and objectives. These may be: (a) numerical or linguistic; (B) precise or imprecise; (C) qualitative or quantitative; (D) deterministic or non-deterministic.

For any management team, the notion of measure is related to past events, and thus raises the question, How do you lead future performance based on past measures found ?. Breakdown of goals will be done by retaining state variables or essential variables. The relationship between the indicator and the decision is made through these state variables and the process indicators associated with them. It is therefore useful to analyze the extent to which the nature of the variables determines the functionality of the indicators (22, 23).

Management of organizational processes and production processes can be broken down into two complementary functions:

- a "prospective" function that analyzes the evolution of processes;
- a "retrospective" function that analyzes the outcome of process developments.

Starting from these functions, the following types of variables can be identified:

- Essential variables - are variables that are observed retrospectively to ensure that the objectives are met properly;
- Action variables - have an influence on process evolution, which in turn can be of two types:
  - Internal (endogenous) variables of the process considered, and therefore "controllable" or that can be managed by the management team;
  - External (independent or exogenous) variables of the considered process, which are only "usable" or "observable" by the management team.

In order to achieve its objectives, the management team can use a certain number of action variables. Action on these variables allows to reduce misalignments between measure and objective, deviations in the sense of "remaining" and / or "drifting". These variables also allow maintaining or restoring the organization or process to its proper state. On the other hand, the performance associated with the essential variables makes it possible to ascertain the effectiveness of the organization or processes considered (24, 25).

+According to Robert Kaplan (2003), "Each organization must create and communicate performance measurement measures that reflect its unique strategy."

Also, Kanji and Moura (2002) have determined that an efficient performance measurement system has to perform various functions:

- The first function of an organizational performance measurement system is to verify the company's progress in achieving its objectives.
- A second function of a performance measurement system is to bring to the attention of individuals the issues of particular importance for the success of the company and the identification of activities that need to be improved.
- A third function of a performance measurement system is to enable the development of effective development strategies, because regardless of the company's results, there is always room for improvement.

Over time, there have been deficiencies in traditional performance measurement systems focused on financial indicators such as profits, turnover, etc., with a new trend in developing performance measurement systems based on both Both financial and non-financial indicators.

Those who identify the shortcomings of traditional performance measurement systems include Jusoh (2008) which points out the following:

- use indicators that reflect the past and not the future;
- it does not include the strategy, the objectives being to minimize the cost and increase the efficiency of the workforce and of the machinery;
- quantifies performance and other improvement efforts with financial indicators, as the vast majority of improvement efforts are difficult to quantify using monetary units (quality of products and services, prompt delivery of customer satisfaction, etc.);
- are rigid, having a predetermined format that is used in all activities and departments, although different departments within the same company have their own characteristics and therefore the same indicators used by a department are not necessarily relevant to another.
- involves a high cost because it requires a large amount of information;
- does not provide direct information on customer wishes and competitors

Measuring performance in Neely, Gregory and Platts (1995) implies highlighting efficiency and effectiveness. In their opinion, performance measurement can be defined as:

- a process of quantifying the efficiency and effectiveness of a past action;

- an indicator used to highlight the efficiency and / or effectiveness of an action;
- a set of indicators used to quantify the efficiency and effectiveness of an action.

However, there are different perspectives in terms of performance measurement from a financial, marketing and management perspective. Otley (2002) found that from a financial-accounting perspective, performance measurement systems have different perspectives in a company:

- is an instrument of financial management;
- Provides financial information on the overall performance of the company, highlighting primarily its financial results;
- is a means of motivation and control.

Clark (2002) considered that from the perspective of marketing, measuring performance means both quantifying and evaluating the level of customer satisfaction of an organization and comparing the organization concerned with other competing organizations based on certain market criteria.

According to Neely (2005), from a managerial point of view, performance measurement is a necessary tool to highlight the extent to which the company's objectives can be achieved and to provide the information needed to improve its various activities (26, 28).

According to Ghalayini and Noble (1996), the evolution of research in the field of performance measurement comprises two phases:

- The first phase, which started in the late 1880s, and was mainly focused on highlighting the financial indicators using the main accounting balance sheet as the main support. Due to the industrial revolution that lasted until the 1900s, productivity was emphasized as another widely used indicator of company performance.
- The post-1980 period was considered a revolutionary period in terms of how to measure performance. All changes in the perception of performance indicators were governed by the changes that have taken place in both the private and public business environment. Increased competition and, implicitly, diminishing market share have prompted companies to implement a range of new production management technologies and philosophies: TQM (total quality management), JIT (just in time), OPT (optimized production technology). The implementation of these changes has revealed the lack of traditional performance measures. Thus, Eccles (1991) suggested that all large companies need to assess and modify how they measured performance in adapting to a highly competitive and changing business environment. It has questioned the exclusive use of financial indicators to measure performance by proposing to address them as part of a much wider set of indicators.

Due to the lack of traditional performance measurement systems, practitioners, consultants and researchers have allocated significant resources and effort to rethink them.

Thus, the post-1990 period of performance measurement is characterized by awareness of the need to update and improve the previous organizational performance measurement models. The performance measurement system must be dynamic so that performance measures remain relevant and consistently reflect the most important aspects of the business (29).

Due to the lack of traditional performance measurement systems, practitioners, consultants and researchers have allocated significant resources and effort to rethink them.

Thus, the the post-1990 period of performance measurement is characterized by awareness of the need to update and improve previous organizational performance measurement models. The performance measurement system must be dynamic so that performance measures remain relevant and consistently reflect the most important aspects of the business.

Due to the lack of traditional performance measurement systems, practitioners, consultants and researchers have allocated significant resources and effort to rethink them (30).

Thus, the post-1990 period of performance measurement is characterized by awareness of the need to update and improve the previous organizational performance measurement models. The performance measurement system must be dynamic so that performance measures remain relevant and consistently reflect the most important aspects of the business (31).

Conclusions

Due to the complexity of the economic environment, in recent years there has been an increase in the expectations of the companies and, implicitly, of the managers regarding the level of performance of these systems. Performance appraisal is important because it provides decision support to managers in all activities: planning, organization, control and coordination. Evaluating past activities and identifying the variables that influence the company's performance can effectively achieve its objectives. If it is impossible to measure and evaluate "something," it is not able to improve it. For the success of the company, the critical performance indicators and the relationship between them are of particular importance.

Concluding, we can say that efficacy plays an essential role in the performance measuring process. In theory, any performance measurement indicator can be used as a tool to control it. However, no matter how useful this indicator is, it loses its attributes if it is not used effectively to implement performance improvement actions.

References

1. Bloomfield RJ. The “incomplete revelation hypothesis” and financial reporting. *Accounting Horizons* 2002; 16(3): 985-988. http://dx.doi.org/10.2308/acch.2002.16.3.233

2. Akella SR, Greenbaum SI. Innovations in Interest Rates, Duration Transformation, and Bank Stock Returns. *Journal of Money, Credit and Banking* 1992; 24(1): 27-42.
3. Hou K, Xue C, Zhang L. Digesting anomalies: An investment approach. *Review of Financial Studies* 2015; 28(3): 650-705. https://doi.org/10.1093/rfs/hhu068
4. Kanagaretnam K, Mathieu R, Shehata M. Usefulness of comprehensive income reporting in Canada. *Journal of Accounting and Public Policy* 2001; 28(4): 349-365. http://doi.org/10.1016/j.jaccpubpol.2009.06.004
5. Arellano M, Bond S. Some Tests of Specification for Panel: Monte Carlo Evidence and An Application to Employment Equations. *Review of Economic Studies* 1991; 58: 277-297. https://doi.org/10.2307/2297968
6. Paunica M, Gheorghiu R, Curaj A, Cosmin Holeab. Foresight for restructuring R&D systems. *Amfiteatru Economic* 2009; 11(25): 201-210.
7. Fama E, French KR. Common risk factors in the returns on stocks and bonds. *Journal of Financial Economics* 1993; 33: 3-56. http://dx.doi.org/10.1016/0304-405X(93)90023-5
8. Arellano M, Bover O. Another Look at the Instrumental Variable Estimation of Error-Components Models. *Journal of Econometrics* 1995; 68: 29-51. https://doi.org/10.1016/0304-4076(94)01642-D
9. Lin S W. Testing the information set perspective of UK financial report standard no. 3: Reporting financial performance. *Journal of Business Finance and Accounting* 2006; 33(7-8): 1110-1141. http://dx.doi.org/10.1111/j.1468-5957.2006.00595.x
10. Paunica M, Anica-Popa A. The role of "after school" units in Romania's rural areas. *Theoretical and Applied Economics* 2014; 21(12): 143- 152.
11. Asimakopoulous I, Samitas A, Papadogonas T. Firm-specific and economy wide determinants of firm profitability Greek Evidence Using Panel Data. *Managerial Finance* 2009; 35(11): 930-939. http://dx.doi.org/10.1108/03074350910993818
12. Motofei C. Vectors of economic growth in the eastern area. *Theoretical and Applied Economics* 2017; 24(1): 215-226.
13. Koh Y, Lee S. Cross-listing effect of U.S. casino companies: Risk-adjusted performances. *International Journal of Hospitality Management* 2011; 30(4): 1055-1058. http://dx.doi.org/10.1016/j.ijhm.2011.03.003
14. Steiner M, Wittkemper H. Portfolio optimization with a neural network implementation of the coherent market hypothesis. *European Journal of Operational Research* 1997; 100(1): 27-40. http://dx.doi.org/10.1016/s0377-2217(95)00339-8
15. Paunica M, Stefan L. Performance audit of resource utilization during the economic crisis. *Ovidius University Annals, Series Economic Sciences* 2014; 14(2): 585-590.
16. Blasco N, Corredor P, Santamaría R. Does informed trading occur in the options market? Some revealing clues. *Accounting & Finance* 2010; 50(3): 555-579. http://doi.org/10.1111/j.1467-629X.2009.00337.x

17. Paunica M, Matac ML, Motofei C, Manole A. The role of higher education in a dynamic knowledge-driven economy. *Economics, Management & Financial Markets* 2011; 6(1): 421-426.
18. Bretschger L, Lechthaler F. Common Risk Factors and the Macroeconomy: New Evidence from the Japanese Stock Market. Centre of Economic Research at ETH Zurich, *Economics Working Paper Series* 2012; 12(160): 1-26. http://dx.doi.org/10.2139/ssrn.2044464
19. Cao HH. The Effect of Derivative Assets on Information Acquisition and Price Behavior in a Rational Expectations Equilibrium. *Review of Financial Studies* 1999; 12(1): 131-163. http://doi.org/10.1093/rfs/12.1.131
20. Paunica M, Stefan L. Romanian public external audit integration in the european union acquis. *Ovidius University Annals, Series Economic Sciences* 2015; 15(1): 123-128.
21. Carhart MM. On Persistence in Mutual Fund Performance. *The Journal of Finance* 1997; 52(1): 57-82. http://doi.org/10.1007/978-3-8349-6527-1_5
22. Motofei C. Foreign Trade Evolutions in the European Union. *International Journal of Academic Research in Accounting, Finance and Management Sciences* 2017; 7(2): 156- 163.
23. Parpas P, Rustem B. Computational Assessment of Nested Benders and Augmented Lagrangian Decomposition for Mean-Variance Multistage Stochastic Problems. *INFORMS Journal on Computing* 2007; 19(2): 239-247. http://dx.doi.org/10.1287/ijoc.1050.0163
24. Paunica M, Matac ML, Motofei C, Manole AL. Some Aspects Regarding The Use Of Business Intelligence In The Financial Management. *Metalurgia International* 2009; 14: 180-181.
25. Lev B, Zarowin P. The Boundaries of Financial Reporting and How to Extend Them (Digest Summary). *Journal of Accounting Research* 1999; 37(2): 353-385. http://doi.org/10.2307/2491413
26. Kim G, Chang Y, Kelleher D. Unit pricing of municipal solid waste and illegal dumping: An empirical analysis of Korean experience. *Environmental Economics and Policy Studies* 2008; 9: 167-176. https://doi.org/10.1007/BF03353988
27. Paunica M, Matac ML, Manole AL, Motofei C. Measuring the Performance of Educational Entities with a Data Warehouse. *Annales Universitatis Apulensis: Series Oeconomica* 2010; 12(1): 176-184.
28. Roll R, Schwartz E, Subrahmanyam A. Options trading activity and firm valuation. *Journal of Financial Economics* 2009; 94(3): 345-360. http://doi.org/10.1016/j.jfineco.2009.02.002
29. Motofei C. Sectorial evolutions in former communist economies, current EU members. *The Audit Financiar Journal* 2017; 15(146): 186-275.
30. Hirshleifer D, Hsu PH, Li D. Innovative efficiency and stock returns. *Journal of Financial Economics* 2013; 107(3): 632-654. http://doi.org/10.2139/ssrn.1799675
31. Fehr E, Gaechter S. Cooperation and Punishment in Public Goods Experiment. *The American Economic Review* 2000; 90: 980-994. https://doi.org/10.1257/aer.90.4.980