

EFFICIENCY OF CHANGE

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Abstract

Romania's integration into the European structures implies a new philosophy of development, accentuating the problems of the change management of the Romanian enterprises. In this context, the paper presents a synthesis of the authors' research on the state of international and national concerns in the field of the change management, highlighting several points of view related to the methodology of evaluating the efficiency of change.

Key word: *sustainable development, change management, profitability, adaptive change, top-bottom,*

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1. INTRODUCTION

The philosopher Heraclitus affirmed in the 6th century BC. that the only permanent thing in this world is change. Therefore, this is an inevitable feature of economic and social reality in any field of activity. In the business environment, change requires a high-performance management that allows the opportunities generated by its status to be exploited.

The factors that predominantly generate the need for change are: economic-financial crises, the globalization phenomenon, limited access to resources, aggressiveness of competitors, increased tax levels, instability of the legislative framework, etc. Faced with these challenges, the attitude of the economic agents can be proactive in the sense of capitalizing on the profitable development potential of the activity, either passive in the sense of adapting to perturbations, to survive or maintaining the initial trajectory.

The specialized literature records the preoccupations regarding the elaboration of some theories for the change management since 1911. They focused on business restructuring, highlighting the role of communicating, motivating and involving the management of changing economic organizations. Some authors, systematically addressing change, note that this is in fact a transition between two states of equilibrium generated by both external and internal factors. Therefore, it translates the approach of change from Taylor's scientific vision to social psychology (Taher et al., 2015).

As a result of the concerns of researchers and practitioners about the scientific approach to change, we now distinguish an extensive bibliography on organizational change, with often contradictory opinions, focusing predominantly on the management of change in the private sector, and less on the non-profit or public sector (Buss, 2009). This bibliography incorporates an impressive array of models and procedures that guides the process of change in maximum performance.

In a synthetic approach, we can say that two major directions of development of the management of change have crystallized: one integrated with project management and another that integrates change management with the individual one.

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In the last few years, two visions of change management have emerged, namely: the industrial interpretation of reality, which implies that the organization is similar to a machine that can be controlled and driven by an external force, and the process of change consists of a succession the predictable steps to be taken, and an emerging one that believes there are more types of change, and the organization is a living organism, difficult to control, with self-regulation possibilities. This latter vision assumes that the process of change is continuous. Practical experiences, the crystallization of some theories that have validated their rigorousness through the positive effects of their implementation, managers' belief that organizations need to constantly adapt will lead in the future to an increase in the number of organizations that will implement the change as well as to the development of tools necessary for the implementation process.

2. ACHIEVEMENTS ON NATIONAL AND INTERNATIONAL SCHEME IN THE FIELD OF CHANGE

Analyzing overall national and international developments in the field of change management, we find that its implementation is mainly done in large companies and less in SMEs. This is due to the financial effort it entails and sometimes the less performing results after the implementation of the projects. However, trials are also being reported in our country with promising results.

A recent study conducted in Romania on the level of usage of the change management in our country (30%) two years ago, shows that it is similar to the results recorded in 2003 at international level (34%); which currently stands at 79%. The difference is explained by the efficiency levels of change projects. Only 41% of Romanian economic organizations are satisfied with the previous changes, compared to 96% at international level (applying a performance management). Implementing change management on a level of excellence favors the achievement of goals of approx. 4 times in Romania compared to the international one, that grows 6 times.

In relation to the factors that ensure the success of the change initiatives, the most important at national level is the efficient communication relative to change (4th place at the international level). Next is the support of the employees (5th place at the international level) and by the middle management (6th place at international level). At international level, sponsorship is the most important factor. This requires active support from top managers for change, followed by providing financial, human, material, and time for change.

3. EVALUATION OF THE ECONOMIC EFFICIENCY OF CHANGE

Any approach in the economic field must be reflected in the economic efficiency plan regardless of whether the managers are taking effective solutions or not! In developing and implementing projects to change economic organizations, there is only one explanation for which an inefficient project is accepted for the first years after implementation, namely the need to overcome them during times of crisis or change of market strategies. Change management has as its primary objective the efficiency. This is the criterion for guiding and directing the change, setting options, priorities, action strategies, and selecting project variants. As it is known, efficiency shows the gains of the exchange of resources and time involved in the process of change against the estimated benefits during its implementation and deployment. Basically, for the beneficiary of change, the effectiveness shows to what extent this exchange is cost-effective. Although the literature highlights several aspects of the effectiveness to be assessed, namely economic, ecological, social and financial, the financial economy that considers the financial flows is the essential economic practice. Assessing the economic efficiency of projects of change for economic organizations involves a triple reporting:

- a) The estimated benefits are compared with the costs involved in the project at its overall level, on variants in absolute values, achieving the absolute efficiency of the project
- b) The estimated effects are compared with the efforts on the variants, by operating with the increase of the effects on variants and comparing them to one of the efforts achieving the relative efficiency of the project
- c) The efficiency levels resulting from calculations with predetermined minimum levels and desired by the beneficiary are compared

Estimations the change efficiency are based on a set of indicators and efficiency criteria that reflect the requirements of resource utilization and return on invested capital.

With change projects, the assessment of efficiency is a complex subject and difficult to address due to the difficulty of delimiting the influence. It's hard to appreciate how much it was due to change, and how much due to other factors. Therefore, there is still no common vision among researchers and practitioners in this regard.

However, for an IT company (AMR, 2003), there were established three directions of manifestation of effects during the implementation of such projects, namely:

- Impact on a strategic plan. The effects on the strategic position may be visible in approx. 3-5 years after the implementation of the project.
- Savings generated by the new infrastructure. Costs change, decreasing within 6-9 months of project implementation;
- Efficiency of operations. The new approach leads in 6-12 months to an improvement in economic performance

It is known that the investor is usually interested in the profit, which is why the prevailing use of the (relative) financial efficiency that is calculated, either as a relation between effects and efforts, whether it is intended to maximize the effects on the unit of effort, or as a ratio between efforts and effects if it is intended to minimize efforts on unit of effect. Therefore, the evaluation of the efficiency of change requires a clear delimitation of both effects (in structure) and effort (by category of expenditure). It should be noted, however, that in the economic practice there are many effects and efforts that can not be quantified with precision, but leave their mark on the decisions regarding the implementation of the change project.

Some researchers (Sirkin et al., 2005) are tempted to limit themselves only to the qualitative factors generating success or due to the easier perception of the immediate effects (time savings, better relations between employees), or the delay of easy occurrence in the profitability economic. Most, however, want a quantitative efficacy assessment to motivate the costs of change management. The risk for them is to be disappointed with the weak results at first and be tempted to give up the project before they have the opportunity to get the desired results.

As for the indicators for evaluating the effectiveness of project implementation, we find that they are largely used to assess the efficiency of investment projects (Tudor et al., 2015).

It is well known that economic efficiency is generally calculated as a ratio of effects and effort if it is intended to maximize effects on the unit of effort or as a relation between efforts and effects if it is intended to minimize efforts on the unit of effects.

In this context, calculating the efficiency of change involves delimiting both effects (in structure) and effort (by category of expenditure). We recall that there are many endeavors and effects that cannot be quantified in the economic practice, but that have a bearing on the decisional criteria for implementing change management. In the following, calculations will only consider the quantifiable parameters.

Indicators to evaluate the effectiveness of change

The economic profitability of the change project (equity) the economic organization

This indicator will reflect how many net profit units will be obtained at a monetary unit involved in project financing. In other words, it is calculated as the ratio between the net income estimated during the implementation period of the changeover project to the total volume of expenditures involved in the change process. If the ratio is greater than one, then the project will be profitable. We note that unlike the economic return of investment where investment expenditure is well defined, in the calculation relation we propose, we have expanded our financial effort to all expenditure items operating with the term of employee capital (Andreica et al., 2016, Andreica, 2011)

The term of recovery of the committed capital

Considering that the basis of the project for changing the economic organization is a capital placement and not strictly an investment expense, then the recovery of the committed capital will be calculated differently. The base formula is the ratio between the total value of the committed capital and the annual net income achieved.

Possible situations:

I. The objectives of the change are partially **related** to the activity of the organization, namely: improving the activity of the functional compartments (accounting, financial, administrative, etc.)

The calculation of the economic efficiency of change can be made according to the situations below.

Working hypotheses:

- a) the funds will cover the expenses for staff training and office equipment (working capital). Particular case: Fixed assets may also be purchased
- b) the turnover is not directly influenced (revenues are not influenced, only the expenses by diminishing the personnel, office expenses, etc.)

Time of return on equity K will be achieved through cost savings ΔC

The calculation formulas:

The static T recovery term of the equity (expressed in years)

$$T = K / \Delta C$$

shows in how many years spent funds will be recovered from economy to spending, if this economy would only report on the organization's change activity and would be constant every year.

The updated recovery term Ta of the subscribed equity Ka at the time of the beginning of the change is calculated using the relation below (if the annual savings are constant Δ C=ct):

$$T_a = \frac{\log \Delta C - \log [\Delta C - K a (1+a)^d]}{\log (1+a)}$$

where: a- update coefficient used in actuarial calculations (the average profitability of the domain / branch in which the change is made)

This indicator considers the time lag between the spending period and the one in which it is recovered.

Obviously, the economy of spending will also be reflected in the profitability of the organization, if the situation so permits, the cost savings will be replaced by the extra profit ΔPh.

The return on the project (employee capital) will be calculated as the ratio between net economy and employee capital

$RK = \Delta C_n / K = (\Delta C_t - K) / K = (\Delta C_t / K) - 1$ expressed in absolute values. As a rule, they are expressed in relative values (percentage). The economic significance of the indicator is the following: what value of cost savings is made for a RON spent for change (what additional profit is returned to a RON spent) The value of the total economy during the D effective years of operation is calculated as follows:

$\Delta C_t = \Delta C_h \times D$ if $\Delta C_h = \text{constant}$ or

If ΔC_h is not constant, then the calculation relation of C_t will be different:

$$\Delta C_t = \sum \Delta C_h$$

The updated rentability (RK_a) will be calculated as the ratio between the updated cost savings (ΔC_a) and the updated submitted capital K_a :

$$RK_a = ((\Delta C_a / K_a) - 1) \times 100$$

The minimum profitability threshold is that at an invested RON should result in minimum one RON in savings. If the annual savings are not constant, the calculation relationships will be different.

In the case of fixed asset purchases, the cost savings recorded in the bookkeeping will be increased by the amortization value to calculate the recovery period based on the absolute savings. The calculation relationship implies some particularities in the sense that the annual depreciation may not be constant, or the effective lifetime is less than the fixation time of the fixed asset.

II Another situation is where:

The objectives of the change are aimed at the whole organization by pursuing the improvement of its activity.

Here we have total extra income (ΔV_t) and net income (ΔV_n) based on which we will calculate the return on the submitted capital.

$$RK = \Delta V_n / K = (\Delta V_t - K) / K = (\Delta V_t / K) - 1$$

This shows what extra income will be earned throughout the organization's lifetime at a RON spent on change. It is usually expressed as a percentage and has a *minimum threshold* as the ratio is 100%.

Actual profitability is calculated based on the total updated extra income (ΔV_{ta}) and the updated totally spent funds (K_a):

$$RK_a = ((\Delta V_{ta} / K_a) - 1) \times 100$$

The calculation of the static recovery term and updated at the start of the change will be based on the annual profit increase according to the relation below:

$$T = K / \Delta Ph$$

which shows after how many years the funds spent will be recovered from the extra profit. This formula implies the constancy of the annual profit margin. Otherwise, an average annual profit will be estimated.

Updated recovery deadline:

$$T_a = \frac{\log \Delta Ph - \log [\Delta Ph - K_a(1+a)^d a]}{\log(1+a)}$$

This indicator considers the influence of the time factor on financial effects and efforts and assumes that the additional annual profits are constant $Ph = ct$.

The literature also highlights other methodologies for assessing the effectiveness of change based on specific indicators. These are (SMG, 2011), (Prosci, 2014), (PMI, 2014): Changefirst Investment Return Valuation Model (ROI), Prosci Investment Return Modeling Model, Project Management Institute Model (PMI).

CONCLUSIONS

Economic organizations frequently turn to change processes because of the desire to streamline their work or constraints from outside. Any failure in change can lead to significant loss of image and financial capital or even bankruptcy. The rate of change failure rate is 28-93% (Decker et al., 2012), and annual losses are 15% of the capital submitted for change (PMI, 2014).

Analyzing the literature suggests that the change-specific instruments seems to have been created only for large organizations because they have sufficient financial, material and human resources. Moreover, in studies and publications on the implementation of change management in micro-enterprises, they are frequently addressed globally as SMEs. In conclusion, the question arises as to whether the methodologies and tools can be adapted and personalized individually.

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