MANAGERIAL ACCOUNTING AND ENVIRONMENTAL PERFORMANCE OF BAKERY COMPANIES

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Abstract: *The complexity of the economic life, the economic and financial crisis and the social and environmental problems determine the increase in the role of information provided by managerial accounting in decision-making. The efficient management of any economic unit is based on the existence of a well structured information system, according to managers' information needs, the main component of such system being accounting. The article aims at clarifying certain aspects concerning the role of managerial accounting in the correct assessment and in managing performance in bakery companies.*

Keywords*: performance, managerial accounting, bakery, calculation, environmental management accounting*

JEL Classification Codes: **M40, M41**

1. INTRODUCTION

When problems are thoroughly investigated we can notice a certain perception of companies, to act and react, to make decisions and to use different systems as compared to the current ones, especially the American and Japanese ones and which are often difficult to describe, formalize, but which exist. On the other hand we can notice the difference among the European countries. The tools specific to the management are identical but they are not applied in the same way into practice. In this context, our mission is to fundamentally contribute to the development of scientific creation and national culture in a European context, to expand and diversify the education offer and to make a connection between it and the economic environment.

Economic competition, increasingly fierce nowadays, requires yield and performance from the economic environment. On the other hand, fulminating development of technologies requires continuous upgrading of skills and new forms of organization and management of work. In this dynamic context, managerial accounting becomes vitally important because it transforms organizations and has an impact on the social, economic and physical environment. Business decisions on the development of new products, the pricing policy, staff recruitment and their remuneration are dependent accounting information, and managers' behavior is influenced by the accounting data because they have an impact on their possibilities to act, managers being at the same time the generators and the recipients of this information (Horngren et all, 2005).

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The problems of the change in the economic environment and the and the companies' need to adapt determined the reorientation of the managerial accounting. At the same time, given that the techniques and practices used by traditional managerial accounting, applied in new production conditions have not yielded the expected results, it is increasingly evident that the managerial accounting system needs to improve.

Currently, there is a marked international trend to progressively open managerial accounting towards observing changes that are taking place in the organization, customers and suppliers, in order to highlight the sources of better economic performance with the purpose of change classical organizations into sustainable "enterprises". This vision causes the Ray Proctor (2002)[3] to distinguish between "management accounting" and managerial accounting "saying: "Management accounting is oriented towards the future. It is primarily concerned with the provision of information to managers to help them plan, evaluate and control activities. It is essentially a service function, a means to an end rather than an end in itself. Managerial accounting also fits this definition, but the use of the word "managerial" emphasises the service role. This may seem obvious, but for much of the twentieth century, management accounting was used mainly to serve the needs of financial accounting, rather than to assist managers in their tasks… Managerial accounting is about improving the future performance of organizations".

Therefore, a model, a simplified representation is expected from managerial accounting to highlight the link between variables, between causes and effects, a model to help explain and analyse financial performance.

2. DEFINING PERFORMANCE

Studying the literature, we note that in the definition of the concept of performance three main views stand out, i.e.: defining performance depending on the level of achievement of the objectives, according to the productivity and efficiency of the company, and according to the creation of value.

Defining performance depending on the level of achievement of the objectives belongs to A. Bourguignon (1995)[4] who defines performance as being the "achievement of the organizational goals, whatever their nature and their variety". In other words, performance in the company represents everything that contributes to reaching the strategic objectives. M. Lebas (1995) [5] deems that the definition of performance given by A. Bourguignon seems incomplete, as it is limited to the definition of the characteristics of performance without looking for an operational means.

In our opinion, the performance must be assessed according to the objectives proposed in advance. It is impossible to assess performance in the absence of clearly established objectives that can be expressed quantitatively or qualitatively, and it must have a deadline. The forecasting activity necessarily involves measuring the activity required to provide information to managers so that they can make decisions meant to improve performance. So performance can be seen through the way of achieving or exceeding strategic objectives. Company performance must be assessed according to the level of these objectives. We must

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[3] Proctor, R. - *Managerial Accounting for Business Decisions* . UK: Pearson Education, 2002, p.XVII

[4] Bourguignon, A. – *Peut-on définir la performance?*, Revue Française de Comptabilité, n° 269, juillet -août 1995, pp. 61-66

[5] Lebas, M. – *Performance measurement and performance management*, International Journal of Production Economics, Volume 41, Issues 1-3, October 1995, pp. 23-35

take into account that, if the established objectives were modest, reaching or even exceeding them is a modest performance.

Defining performance based on the company productivity and efficacy belongs to E. Cohen (1995)[6] who assimilates performance with efficiency and defines it as a "*the ratio between the results generated by the company and the means used"*. We consider this assessment as erroneous, because a company can be effective without achieving its objectives, and therefore without performing. The company can operate efficiently, but if efficiency is not achieved as expected, performance is not achieved.

M. Ristea (1997)[7] associated the concept of performance to three notions: inexpensive (purchasing resources at the lowest cost), efficiency (to maximize the results, starting from a given amount of resources, or to minimize the amount of resources for a pre-established result) and effectiveness (the results obtained must achieve the expected results). In our opinion, this view is correct because under the current circumstances when the price is set by the market, positive results are obtained by companies that succeed in acting on several ways as follows: controlling costs by purchasing resources at the lowest cost, achieving the best results given the current resources, achieving pre-established performance objectives.

The definition of performance based on the creation of value has long been considered a revolution in economic theory, which is still based on fundamental and applicative research. The concept belongs to M. E. Porter (1986)[8] who considers that "company performance depends on its capacity to create value for its clients". The company is efficient if the value it can obtain exceeds the costs of creating the product. Later, Ph. Lorino (2000)[9] shows that "performance for the company is what helps improve the value-cost couple". In other words, performance is a ratio between the cost of the company operation and the value of the good or services obtained.

No matter which of the three performance definition trends we choose, the role of managerial accounting in measuring its management is crucial. In our opinion performance measurement is a prerequisite for the development of a company, but it is not sufficient and must be one of the components of performance management. Our opinion is not unique in the literature, many authors prefer talking about a performance management system rather than about a performance measurement system, an aspect also highlighted by E.Lardenoije et all (2005) [10].

In the last two decades we have witnessed an evolution of the company performance measurement system, a trend which had three main directions:

- performance measurement both by traditional financial indicators but also with non-financial indicators has become widely accepted;
- the relationship between the strategic planning process and performance measurement was enhanced at every level of the enterprise;
- company performance is no longer viewed inn economic terms but also from the social and environmental point of view.

Each of the three directions has distinct features and an impact on management accounting as the main source of information for the decision-making process.

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[6] Cohen, E. – *Analyse financière, 2- eme edition* , Les Edition d'Organisation , Paris, 1995
[7] Ristea, M. – *Contabilitatea rezultatului întreprinderii*, Editura Tribuna Economică Publishing House, Bucharest, 1997
[8] Porter, M.E. – *Competition in Global Industries*, Harvard Business School Press, Boston, 1986
[9] Lorino, P. – *Mesure de performances*, Les Editions d´Organisation, Paris, 2000
[10] Lardenoije, E., van Raaij, E., van Weele, A. – *Performance Management Models and Purchasing: Relevance Still Lost*, Researches in Purchasing and Supply Management, the 14th IPSERA Conference, 2005, pp. 687-697

Any accounting system has among its main objectives the measurement of company performance. The accounting theory and practice have imposed certain conventions, principles and concepts that give the definition and performance measurement an objective basis, taking into account the economic and political context specific to each accounting system as deemed by M. Minu (2002) [11]. Although we agree with the view that the accounting result is viewed as the main indicator for measuring the financial performance of the company, we believe that it has a number of limitations as follows:

- this indicator, by the way it is calculated is directed towards the past, serving as a basis for assessing the results of the activity, over a period of time past;
- is not enough to know the past performance of the company but it is also necessary to carry out thorough analyses in order to forecast future performance.

Between the concept of performance the concept of value there is a close connection. In this respect, I. Ioniță (2006)[12] defines performance as "the method of representing the increase in the value of a business between two moments plus the profit appropriated by the investor for other usages".

Measuring the performance of a company requires the consideration of several factors, such as:

- the multiple meanings of the concept of performance;
- the complexity of the economic activity;
- the peculiarities of the areas of activity of the company, which is why in carrying our the process of measuring performance multitude of indicators should be used instead of just one.

We believe that in the baking industry, given the type of production, the use of non-financial indicators has special importance derived from customers' expectations concerning the food products. In this context, these indicators should be monitored especially carefully because the level of sales is dependent on the customers' perception of the company and its products.

Consequently, the sustainable maintenance of any company in a competitive market cannot be achieved without the ongoing concern for performance, achievement and success. The notion of performance is quite complex and has many facets. In economics, the concept of performance is interfered with concepts such as profitability, productivity, efficiency and growth. Performance analysis should be carried out in conjunction with long-term objectives of each company.

3. ENVIRONMENTAL PERFORMANCE - AN OBLIGATION IN THE CURRENT CONTEXT

In recent decades economic vocabulary was enriched with new terms such as eco-development, sustainable development, eco-performance and others. Since the 1970s, the environmental and social issues have gained more importance and financial models for assessing company performance began to be increasingly criticized. Currently it is deemed that a company is globally efficient when it answers both the requirements of the internal as well as of the external environment.

The term of *eco-development* was first used in the Conference on the Environment of the United Nations of Rio de Janeiro in 1972. In 1987 in the report of the Brutland

[11] Minu, M. – *Contabilitatea ca instrument de putere*, Economic Publishing House, Bucharest, p. 96

[12] Ioniță, I. – *Diagnosticul financiar-contabil privind performanța întreprinderii*, The Publishing House of the University of Suceava, 2006, p. 81

Commission the term *sustainable development* was used. Sustainable development is the type of development that creates viable structures over time, ensuring sustainable economic growth and welfare. Currently we are in the era of knowledge economy but also of the green economy as form of the new economy.

Sustainable development is based on three main objectives: improving economic results of the company (economic performance), environmental protection (environmental performance) and development of human society as a whole (social performance).

In certain developed countries the obligation to report social performance was required, but in most of them their reporting is left at the discretion of the company management. In the absence of standards for the preparation of reports, companies have difficulties in proving social and environmental performance. Social performance of the company can be assessed taking into account a number of criteria such as: the jobs created, the impact on regional development, providing professional development opportunities, actions taken to combat corruption, imposing ethical standards on employees, observing the rights if employees and consumers, investment in areas such as education, culture and health.

The ISO 14.000 standards provide a system of environmental management as part of the general management system.

The environmental management system includes: the organizational structure, planning activities, responsibilities, practices, procedures, processes and resources for the development, implementation, achievement, revision and maintenance of the environmental policy.

According to the author L. M. Băloiu (2006)[13], the environmental policy of the company must set commitments for:

- the reduction of any significant impact of its activities and products on the environment;
- the development of procedures for the assessment of the environmental procedure and of the associated indicators;
- the prevention of pollution, waste and resource consumption reduction;
- to encourage suppliers and contractors to adopt an environmental management system.

ISO 14001 standard defines the environmental performance as the "measurable results of an environmental management system on controlling an organization's environmental issues, according to its policy and its objectives in this area".

The milling and baking industry affects the environment through:

- water pollution resulting from wheat washing in the milling sector and from washing the tools in the bakery industry;
- the pollution by the dust in the grains flour powders p released into the atmosphere can form a suspension under high relative humidity of the air;
- noise.

Companies with notable social and environmental performance certainly have a more favorable image on the market and a competitive advantage[14]. Unfortunately, in recent times there is a tendency for companies to demonstrate that they are concerned with achieving social and environmental performance, only in order to create a favorable image among

[13] Băloiu, L. M. – *Politici ecologice*, the Publishing House of Titu Maiorescu University, Bucharest, 2006, p. 216

[14] The Swiss company Pistor AG, specialising in supplying frozen, fresh semifinished products, ingredients, etc. for bakeries and pastries launched a type of bread called *Pain d`eole*. It is bread made of flour for the milling of which wind power was used. The product benefits from an ecological image and it is obviously in the attention of consumers sensitive to environmental issues.

consumers in particular. In our opinion, this phenomenon can be prevented by legislation through the requirement of social and environmental performance reporting standards.

The public opinion in general and consumers in particular sanctioned companies when there is inconsistency between image campaigns and behavior in relation to society and the natural environment.

4. ENVIRONMENTAL MANAGEMENT ACCOUNTING – A NECESSARY TOOL

From the perspective of the environmental issues, con, traditional accounting has a number of drawbacks. Thus, it is not easy to obtain information on environmental costs, which are often hidden costs of the company. For example, the salary costs for the staff involved in the environmental protection measures are included in the same account as the other costs of living labor. We deem that it is necessary to supplement the general chart of accounts by creating new accounts to record environmental information.

Traditional management accounting does not recognize the importance of the environmental issues, this resulting in the following:

- the environmental costs are often considered unimportant;
- certain types of environmental costs are not identified and monitored;
- in the case of investments environmental costs are not always taken into account.

The concept of environmental management accounting (EMA) has found its place in the accounting system in recent decades.

The term *environmental accounting* is used in three different contexts, as can be seen from the figure no. 1:

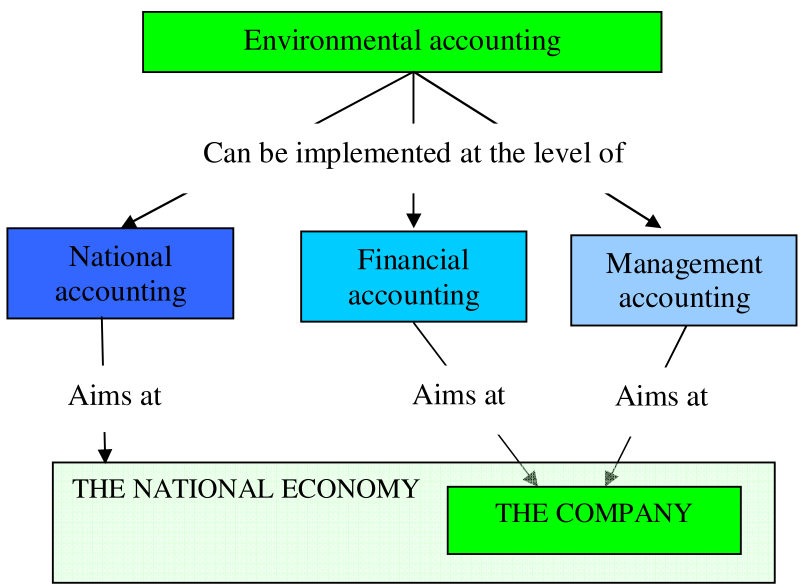

Figure no. 1. Opportunities to implement the environmental accounting

Source: Țaicu, M. - (2010) Contabilitatea managerială a mediului şi dezvoltarea durabilă a firmei, Provocări contabile. Articole, studii şi cercetări, Editura Universitaria, Craiova, pp. 168-173

The environmental accounting called green accounting aims to incorporate environmental costs and benefits into the decision-making. The interest in environmental performance and in the EMA derives from several key factors: the legal regulations in some countries require the publication of annual reports on environmental performance, the increase in the voluntary acceptance of the importance of the management of environmental issues, the promotion of EMA by some national and international organizations, the environmental taxes imposed by the State and the customers who request that products observe the environmental standards.

The International Federation of Accountants (IFAC) considers that environmental management accounting is “the environmental and economic performance management through the development and implementation of theoretical and practical environmental accounting systems”. EMA is the is the identification, collection, analysis and use of two types of information needed for decision-making:

- physical information on the use, flows and purpose of the electrical power, water and materials (including wastes). These are very important especially for large companies, which have considerable spaces (companies in the mining, oil extraction sectors);
- monetary information on environmental costs, profits and savings.

The environmental management accounting is focused of the environmental costs and provides users with information on the movement and consumption of natural resources and energy. EMA is a support for decision-making providing information useful for obtaining financial and environmental performance. It must be noted, however, that its implementation at company level is not guarantee for the obtaining financial and environmental performance. The role of EMA should not be reduced to the calculation of environmental costs, but should also allow decision makers within the company to act on the costs in order to control them.

For the implementation of EMA in any economic entity, it is necessary to adapt the current information systems or to adopt new information solution, cheap, yet meeting the quality requirements if the users. In conceptual terms, we can delimit the level of environmental accounting at company level from the environmental accounting at country level.

The environmental costs can be classified[15] into the following categories:

- categories reflecting the type of environmental work (such as waste control vs. waste prevention);
- more representative categories for traditional accounting (costs of materials vs. labour costs);
- environmental categories;
- categories reflecting the visibility of the data in the accounting statements (visible costs vs. hidden costs).

The implementation or EMA has a number of advantages. First, EMA provides decision-makers with detailed information in which the environmental costs are shown separately. Although, conceptually, EMA is not something new, in practice it is in an early stage. Companies that implement it can thus benefit from a competitive advantage. The efforts of the company towards reducing environmental costs will create benefits for the whole human society. A company that strives to reduce the environmental impact of its activities on the environment improves its image and can attract more valuable personnel, with long-term effects on its activities. In addition to the presented aspects, the benefits of the implementation of EMA also result from its support for[16]:

- the environmental protection through the compliance with the environmental standards and the environmental policies adopted at the organizational level (planning and

[15] IFAC, *Environmental Management Accounting* – International Guidance Document, 2005, p. 37
[16] German Environment Ministry, *Guide to Corporate Environmental Cost Management* , Berlin, 2003

implementing pollution control investments, finding and buying substitutes for toxic materials, reporting wastes and emissions to competent authorities);

- the simultaneous reduction of the costs and environmental impact through a more efficient use of the energy, water and materials (a more accurate monitoring of the energy, water, material and waste flows);
- evaluating and implementing programs to ensure the strategic position of the company.

The environmental cost analysis can identify new opportunities, and savings can be made by recycling resources or by using them in other activities.

5. CONCLUSIONS

There is a close interdependence relation between the three types of performance - economic and financial, social and environmental. Thus, obtaining economic performance allows the company to invest more to solve problems related to social and environmental areas, and obtaining performance in these two areas can lead to increased economic performance. In recent decades the social function of the company has increased significantly and it generates a number of hidden costs, unexplained by traditional management accounting systems. Management accounting should be improved so that hidden costs be known to the makers of company offering the opportunity to work towards reducing them. In most countries, companies have responsibilities established by law to protect the natural environment. Some companies set objectives concerning the environmental goals higher than those required by law. The performances of these companies in environmental matters are reported as part of the manifestation of social responsibility. Given the developments in the world in recent years, we hope that in the decade that began a triple performance reporting will be generalized: that of the economic, social and environmental performance.

In our opinion, although the social and environmental performance are very important, including for the bakery companies, we should not forget that economic performance is what motivates the investor in a business and represents the reason of the existence of any company.

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