

## INNOVATION OF HUMAN RESOURCES MANAGEMENT IN THE CONTEXT OF THE ORGANIZATIONAL SUSTAINABILITY

**Postdoctoral Researcher, Carmen Mihaela BOTEANU**

”Valahia” University of Târgoviște, Romania

**Ph.D. Student Gabriela Elena BIȚAN**

The Bucharest University of Economic Studies, Romania

E-mail: gabriela\_bitan@yahoo.com

**Professor Ph.D., Ionica ONCIOIU**

”Titu Maiorescu” University, Bucharest, Romania

**Lecturer Ph.D., Ana Maria IFRIM**

”Titu Maiorescu” University, Bucharest, Romania

**Abstract:** *This article analyzes the role and the place of innovation in the sustainability process of an organization and in the economy. The authors consider that the fundamental economic changes that take place permanently, influence the quality of the innovative process within the companies and their sustainability. The need to approach an innovative process in sustainability is a necessity in this days when companies have to reinvent themselves to continuing working. Applying new information technologies and building partnerships between higher education system and business environment is an obligation for each organization in the process of reorganizing and restructuring the assumed mission. The need to develop new approaches and to identify new priorities for development will provoke companies to focus on the innovation process in the context of sustainability. The objective of this paper is to propose a model that integrate the concept of innovation management in the process of develop a sustainable company.*

**Keywords:** *innovation of human resources management, organizational sustainability, economic sustainability, labor productivity.*

**JEL Classification:** *M14, O43.*

### 1. Introduction

The sustainability of companies is based on strategies developed by organizations and is influenced by external factors: legislation, technological developments, specific context in a particular market, socio-cultural conditions, environmental factors (Baumgartner and Ebner, 2010) and internal factors such as economic, managerial and human.

The present paper is related to the innovation management from the point of view of the companies that operate in the field services. From this point of view, innovation has become a critical issue as a result of globalization and of the need to have a higher financial performance.

With this paper we intend to integrate the analysis from the point of view of innovation management in the context of the sustainability of a company in the field services with the analysis of the profitability of the respective company. We choose the field services because it constantly changing due to the fact that all the companies are trying permanently to optimize the processes in order to increase the financial performance. However, the process presented in this paper can be applied to any company in any field of activity.

The starting point in the elaborated process was the necessity to analyze the main needs that put the mark on the financial indicators of the business. Later, in a second stage of the analysis, the economic indicator which is directly influenced by the innovation process is presented. The analyzed indicator provides a clear picture of the financial sustainability of the business.

The aim of the presented paper is to integrate the economy and innovation elements in the context of sustainability and profitability of the company.

The paper is structured as follows: first chapter is a literature review about the knowledge, studies and analyzes in the field of work, second chapter presents the methodology that propose an integrated approach for innovation and profitability, third chapter is about data analysis and the last are the conclusions where the result of the approach is presented.

## **2. Literature review**

Companies are constantly interacting with internal and external factors that generate possible uncertainties about their possibility of being able to reach their own goals.

The sustainability of the organization has been synonymous with the sustainability of the environment, perhaps due to the evolution of the concept of sustainable development that, in the last decades, has targeted three types of capital relevant within the concept of sustainability: economic, natural and social capital. In this context, emphasis is placed on social, environmental and financial performance in the context of the sustainability of companies, using risk management as a tool.

Thus, economic and socio-human performance lead to financial performance, financial performance leads to ecological and social performance. It turns out that financial performance, ecological and social performance are synergistic.

Research on sustainability measurement elements and techniques has grown in recent years and has explored a variety of issues. The specialty literature is divided regarding the measurement of sustainability, due to the fact that it is closely correlated with the measurement and management of the performance of an organization. Thus, three main ways are analyzed in terms of measuring sustainability: emphasizing the roles of stakeholders in designing, implementing and using measures; indicating how to establish common measures and share data between organizations and adopting new theoretical perspectives (Mura et al., 2018).

Regarding innovation, there are concerns at European and internationally level. The International Organization for Standardization, through the ISO/TC279 Technical Committee, has developed a new set of standards, ISO 56000, that will help organizations maximize their innovation management processes and get the best results from new ideas. Until now, 4 standards of this series have been published (one in 2020 and three in 2019) and other 4 standards are under development. (ISO) At European level, the Technical Committee CEN/TC 389 - Innovation Management has developed the CEN/TS 16555 series of standards. The first part of this series, published in 2013, is under review, and the other 6 parts have been confirmed until 2021. (BSI) In Romania, the Technical Committee of ASRO, CT ASRO 383, published in 2016 the standard SR 13572: 2016 - Innovation management systems. Requirements (ASRO).

The extension of the research about the contribution of knowledge management and innovation to sustainability activities should be regarded as a longitudinal research project. (Maier et al., 2019) Recent global trends in corporate sustainability management place greater emphasis on achieving more forms of social viability rather than traditional economic or environmental approaches. Applying a process of innovation oriented towards sustainability it can be observed that the innovative practices within the companies largely reflect an economic concentration on sustainability, followed by some activities in the environment field. However, it can be said that innovation has an interdisciplinary approach and emphasizes both social/community issues and the fact that organizations are still mainly lead by financial considerations. (Gloet and Samson, 2020)

The commitment of the organizations for sustainability can be explained by the interactions between the internal strategic decisions of the companies and the external

environment in which they operate. Many theoretical approaches, including stakeholder theory, legitimacy theory, institutional theory and signaling theory, provide economic and institutional reasoning that explains why sustainability has become a priority for many companies. Economic changes have modified the mechanisms that allow companies to implement environmental sustainability strategies in their business models, observing how innovation creates sustainable business models (Bellucci et al., 2020).

### **3. Methodology**

The main objective of the proposed model is to integrate the concept of innovation management in the process of development a sustainable company.

As it is known, innovation can produce both financial and non-financial benefits for the organization. The innovation management of the company decides which evaluation indicators are targeted in the process of ensuring the sustainability of the organization. Within this methodology, labor productivity is analyzed, an indicator that relates to the internal potential of the organization and the efficiency of its use. This indicator is analyzed from the perspective of the impact generated by the model implemented in the company.

The organization must constantly develop tools and methods that lead to increased productivity. Increasing this indicator leads to the development of ways to improve the business. The effectiveness reflects the degree of fulfillment of the external expectations (customers, state, suppliers, employees, shareholders) and the efficiency is measured by the degree of fulfillment the expectations of the internal environment of the company. This conception is embraced by some authors (Jianu, 2007; Mura et al., 2018) who consider that  $Performance = Productivity + Efficiency$  or  $Performance = Effectiveness \times Efficiency$ . Other authors combat this point of view, considering that productivity expresses only a factual situation. Only because a company is productive does not mean that it is performing. Similarly, efficiency is the value expression of productivity. Benchmarking is other indicators that should be included here, because it can be productive or efficient, but not as good as competitors. The human resources and how they manage represent a safe way to ensure the economic efficiency in an organization and implicitly, the sustainability.

The present methodology emphasizes the changes within an organization as a specific content of the innovation. The change is a specific function of innovation and can be defined by the following typical changes: new equipment, new technological processes, new approaches in the process of selling new products, using of new raw materials, changes in the process of production management and logistics and, not least, the approach of an integrated strategy of human resource. Thus, within the present model, the impact of an innovative approach on the human resource will be analyzed, in the context of the organization's sustainability and implicitly, of its profitability.

As we have specified, the analyzed company is in the services field (for confidentiality reasons the name of the organization will not be used).

The proposed research methodology implies a practical approach, both from a quantitative and qualitative point of view. The main assumption from which we start to develop this process is that the innovation management and sustainability must be a foundation in the development process of an organization, in the context of globalization.

In approaching the quantitative and qualitative implementation of some innovation elements within the human resources processes, we considered the use of the output elements of the decision tree technique.

The proposed methodology is based on the decision tree model, applied in the decision process regarding the accepted innovative element. This is an integrated conceptual model, which involves the development of the innovation management system

in terms of human resources and the impact that these human resources have on the financial results of the company. In this sense, it is analyzed the way of carrying out an activity within the organization in contrast with other proposed approaches, which can bring elements of innovation in the human resources process and, implicitly, to the business sustainability.

To begin with, an analysis is performed on the current situation of the company, using the model presented in Table no. 1.

**Table no. 1 Analysis of the current situation**

Indicator	Unit of measurement	Year n-2	Year n-1	Year n
Average working day duration	hours/day			
Average number of days worked per year	days/year			
Average hourly labor productivity	Lei/hour			

Source: Authors' own development based on literature review and experience

The indicators presented above will be used to calculate productivity indicators:

- Daily productivity = Average working day duration x Average hourly labor productivity
- Annual labor productivity = Daily productivity x Average number of days worked per year

In the reference year innovative methods regarding the efficiency of human resource activities were applied. In the context, using this model, we identified the variation of annual productivity.

#### 4. Data analysis

As we have mentioned, the analyzed company operates in the services field, offering management consulting and has 30 employees working in various departments. From management reviews it was concluded that labor productivity is the cause of the company's inability to grow. A clear analysis of the positions, the activities carried out by each human resource and the degree of load for each activity was realised. In this sense, at organizational level, the following factors have been identified that influence the productivity of work:

- a. Extensive factors:
  - Average working day duration: interruptions of the working process due to the primary needs, personal needs, deficiencies in the process of developing new services, lack of an efficient information system
  - The average number of days worked: conflicts between employees, failure to implement company plans and projects in a timely manner
- b. Intensive factors:
  - High-performance technology for the implementation in good conditions of the activities
  - The degree of professional training
  - The material co-interest system
  - The human resource control function.

At the moment when these factors were identified, the company had two alternatives to ensure its sustainability:

1. Reduction of the number of personnel which would have led to a reduction of expenses

2. Developing an innovative plan that involves an additional investment, but which can be recovered in time.

After applying the decision tree method, it was concluded that the risk is higher in the second situation, but the financial results are much better. This is the reason why it was decided to develop an innovative plan that involves an additional investment that can be recovered in time.

The identified factors determined that the productivity of labor in year 2017 and 2018 was lower than in year 2019 when an innovative plan was implemented in order to increase labor productivity.

At the end of the year 2018 was developed the plan that emphasized all the elements previously identified:

- a. Extensive factors:
  - Average working day duration:
    - work contracts were re-enacted with employees focusing on achieving the objectives assumed periodically. In this sense, the working day was no longer analyzed from the point of view of the 8 hours worked and from the point of view of the achieved objectives. If the objectives are reached, each employee could use the lefted time for personal or primary needs.
    - an integrated information technologic system has been developed that has made human resource activity more efficient.
  - The average number of days worked: the introduction of the previous elements reduced the appearance of conflicts between employees and the lack of operational capacity of the organization's projects.
- b. Intensive factors:
  - The acquisition of the information technologic system together with the acquisition of the equipment needed to carry out the activity, led to the implementation in good conditions of the organization's activities.
  - Realization of a professional training plan, based on a 360 degree evaluation, led to a clear identification of the competences of the employees.
  - Development of the material co-interest procedure based on the activity carried out on objectives.
  - The function of control of the human resource is more efficient due to the developed information technologic system, as well as the objects related to each activity and each position.

The analyzed information are shown in the next table (Table no.2).

**Table no. 2. Analysis of the situation from the point of view of labor productivity**

Indicator	Unit of measurement	Year 2017	Year 2018	Year 2019
Average working day duration	hours/day	6,2	6,8	7,4
Average number of days worked per year	days/year	240	240	231
Average hourly labor productivity	Lei/hour	14000	14000	18200

Source: Authors' own development based on the developed model

Based on the indicators presented above, we can calculate the daily productivity, the annual labor productivity and the variation of the annual labor productivity. (Table no.3)

**Table no. 3. Analysis of the indicators regarding labor productivity**

Indicator	2017	2018	2019
Daily productivity	86800	95200	134680
The annual labor productivity	20832000	22848000	31111080
The variation of the annual labor productivity	-	2016000	8263080

Source: Authors' own development based on the developed model

Thus, the labor productivity that expresses the effectiveness of the total labor cost through the production of goods and services at the level of the organization, is an important element that has led to the increase of the income within the company.

## 5. Conclusion

Increasing the labor productivity involved essential changes in the entire work process, by combining and using the factors of production. Due to this changes, the working time for provision a service is reduced, so with the same amount of work it produce a big amount of goods. The objective tendency to save the social work finds its expression in the law of the increase of the labor productivity, which reflects the causal relation between the level of the development of the material factors of production and the yield of the human factor.

In this sense, the innovative plan proposed by the company was based on the development of a process of analysis, evaluation and management of human resources, starting from the primary needs of everyone, continuing with the analysis of each position in accordance with the capacity, openness and competence of each employee, with the final objective to develop a more efficient activity that will lead to a long-term sustainable organization.

The top management of the organization considers that the implementation of this project has been a success in the context of the sustainability of the organization and wants to continue developing other projects within the organization, projects that are based on the efficiency of human resources, but also taking into account of their the needs.

*Acknowledgement:* This paper was co-financed from the Human Capital Operational Program 2014-2020, project number POCU/380/6/13/125245 no. 36482/23.05.2019 "Excellence in interdisciplinary PhD and post-PhD research, career alternatives through entrepreneurial initiative (EXCIA)", coordinator The Bucharest University of Economic Studies.

## References

1. ASRO, 2020. *SR 13572:2016*. [online] Available at: <<https://magazin.asro.ro/ro/standard/245982>> [Accessed 10 March 2020].
2. Azevedo, R., Flaschel, A.F. and Nunes Moreira, H., 2019. Limit cycles in a model of supply-side liquidity/profit-rate in the presence of a Phillips curve. *Economia*, <https://doi.org/10.1016/j.econ.2019.09.003>
3. Bellucci, M., Bini, L. and Giunta, F., 2020. *Chapter 4 - Implementing environmental sustainability engagement into business: sustainability*

- management, innovation, and sustainable business models. Innovation Strategies in Environmental Science* 2020, pp. 107-143, <https://doi.org/10.1016/B978-0-12-817382-4.00004-6>
4. BSI, 2020. *Product Detail*. [online] Available at: <https://shop.bsigroup.com/ProductDetail/?pid=000000000030272486> [Accessed 10 March 2020].
  5. Centobelli, P., Cerchione, R. and Esposito, E., 2019. Efficiency and effectiveness of knowledge management systems in SMEs. *Journal Production Planning & Control The Management of Operations*, 30(9), <https://doi.org/10.1057/s41275-017-0054-x>
  6. Ebnother, S., Vanini, P., McNeil, A. and Antolinez, P., 2003. Operational Risk: A Practitioner's View. *Journal of Risk*, 5.
  7. Gloet, M. and Samson, D., 2020. *Supporting Supply Chain Innovation and Sustainability Practices through Knowledge and Innovation Management*, Proceedings of the 53rd Hawaii International Conference on System Sciences, <http://hdl.handle.net/10125/64336>
  8. Harmantzis, F., 2002. *Operational Risk Management in Financial Services and the New Basel Accord*. working paper, Stevens Institute of Technology.
  9. ISO, 2020. *Standards by ISO/TC 279. Innovation Management*. [online] Available at: <https://www.iso.org/committee/4587737/x/catalogue/p/0/u/1/w/0/d/0> [Accessed 10 March 2020].
  10. Jianu, I., 2007. *Evaluarea, prezentarea și analiza performanței întreprinderii*. Bucharest: CECCAR Publishing House.
  11. Juhani, U., Minna, S., Satu, P., Tero, R., Juho, S., Sanna, P. and Martti, M., 2016. Effectiveness of innovation capability development methods. *Innovation*, 18(4), pp.513-535.
  12. Lagodiienko, V., Malanchuk, M., Gayvoronska, I. and Sedikov D., 2019. Selection of criteria for key performance indicators by the matrix method. *International Journal of Mechanical Engineering and Technology*.
  13. Maier, A. and Dan, H.S., 2018. Influence of the Marketing Innovation on the Organizational Performance. *International Journal of Advanced Engineering and Management Research*, 3(6).
  14. Maier, D., Maftei, M., Maier, A. and Bițan, G.E., 2019. A Review of Product Innovation Management Literature in the Context of Organization Sustainable Development. *Amfiteatru Economic*, 21 (Special No. 13), pp. 816-829.
  15. Mura, M., Longo, M., Micheli, P. and Bolzani, D., 2018. The Evolution of Sustainability Measurement Research. *International Journal of Management Reviews*, 20(3), pp.661-695.
  16. Thomas, D. and Hockerts, K., 2002. Beyond the business case for corporate sustainability. *Business Strategy and the Environment*, 11, pp.130– 141