

## **Innovation and new technologies – pillars for a business sustainable development**

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**Abstract:** *This paperwork approach the topic of sustainability as an essential condition for business survival on any market. In this context, the question is if companies are actively integrating sustainability principles into their businesses. The objective for this paper is to present how much innovation and new technologies help companies on their path to achieving sustainability and what could be done more in this direction. The paper aim is realised based on the results of a marketing research conducted among Romanian companies from different industries.*

**Key-words:** *innovation, new technologies, sustainable development*

### **1. Introduction**

The company sustainability is defined as a combination of environmental, social, and governance issues.

Sustainability has long been on the agenda at many companies, but for decades their environmental, social, and governance activities have been disconnected from core strategy (Bonini, 2011). Certain industries - energy, the extractive industries and transportation - report that their companies are taking a more active approach than those in other sectors, probably as a result of those industries' potential regulatory and natural-resource constraints.

Debates on how best to promote sustainable and inclusive development are incomplete without a full consideration of issues of science, technology and innovation (STI). Technology and innovation serves as a crucial driver of rising prosperity and improved national competitiveness (United Nations, 2015).

Sustainable development policies seek to change the nature of economic growth rather than limit it. They are premised on the belief that continual growth in a finite world is possible through the powers of technology, which will enable us to find new sources or provide alternatives if a particular resource appears to be running out. Otherwise, technology will help us use and reuse what we have left in the most efficient manner (Beder, 1994).

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This paper is structured on two parts. The first part includes the theory on principles of sustainable development the role of innovation and new technologies in developing the business sustainability. The second part presents the results of a marketing research applied on Romania companies, but inspired by an online survey conducted by McKinsey on international level.

## 2. Literature review

Survival in a knowledge economy calls for continuous improvement and innovation of an organisation's products, services and processes. A lot of research shows that innovation leads to increased turnover, market share and profits (Volberda et al., 2005).

"Technology" encompasses essentially three meanings: tools and instruments to enhance human ability to shape nature and solve problems, knowledge of how to create things or how to solve problems and culture - our understanding of the world, our value -systems (Vergragt, 2006). Technologies co- evolve with societies (Saviotti, 2005); technological developments influence society and vice versa.

So long as sustainable development is restricted to minimal low-cost adjustments that do not require value changes, institutional changes or any sort of radical cultural adjustment, the environment will continue to be degraded. Unless substantial change occurs, the present generation may not be able to pass on an equivalent stock of environmental goods to the next generation (Beder, 1994).

The persisting contradictions between a better life created and supported by technology for the wealthy few, and increasing environmental degradation and persistent poverty for the vast majority call for a deeper exploration and understanding of the nature of technology and its relationship to society, especially to a sustainable society (Vergragt, 2006).

The most important drivers of technological change are governments and citizen-consumers. Consumers became less interested in consuming as such to fulfil their needs (Stutz, 2006) and more in participating in decision - making about issues that are relevant for their own and their children's lives.

Decision-making about issues that are relevant for their own and their children's lives. In this way, they have become citizen-consumers who have been empowered to express their demands for products and services in such a way that they reach a balance between personal interests and the public good.

Information and communication technologies are now oriented mainly to fostering transparency and democratization in governance and business, to citizen participation in decision-making in all aspects of life, to communicating widely the results of modern science and technology among the population, and to diffuse widely sustainable practices, services and technologies.

The worldwide network society is powerful but also vulnerable. In a network economy access and participation take place of selling and buying (Keursten, 2007).

### 3. Research methodology and discussions

The survey theme was “Opinions of Romanian managers on using innovation and new technologies for achieving the business sustainability”. This was an online survey. The data was collected between May – July 2015. The sample size was 400 companies from Romania, from different sectors of production and services but in the end we received only 128 filled questionnaires. In this context, the results cannot be extrapolated to the population, but they can be considered the starting point for more deep research. The questionnaire approach the theme of innovation adopted the companies and the theme of new technologies utility in business development. The answers to the 17 questions were analysed using SPSS IBM Statistics 17.0.

First, we intended to find the dimensions of Romanian managers’ interest in achieving sustainability for their business and how they succeed in managing sustainability. In the following table are presented our findings.

	<i>Sustainability - priority for management (%)</i>	<i>Difficulty of managing sustainability (%)</i>
very high	4	13
high	27	36
low	47	42
very low	22	9

Table 1. *Managers interest in sustainability*

According to the data show above, a very small percentage (4%) of managers consider sustainability a priority for management team. Overall, only a third of subjects show their struggle to achieve sustainability. This is a concerning result because in the present economy the adoption of sustainable development principles is a condition of being competitive. On the other hand, almost half of respondents (49%) consider difficult to manage sustainability.

Most managers (56%) are focused in managing corporate reputation for achieving sustainability for their business. Other actions they choose for achieving sustainability are related to protecting the environment like: reducing energy use (53%), water use (31%) and waste (56%). Only 1 of 5 managers state that they use R&D resources for delivering sustainable products and services. The results are shown in the following picture.



Fig.1. *The main company's actions developed for achieving sustainability*

Companies are integrating sustainability across many processes, according to respondents, but mostly in: mission and values (65%), operations (62%), marketing (59%), external communications (58%). All the results are shown in the following figure.

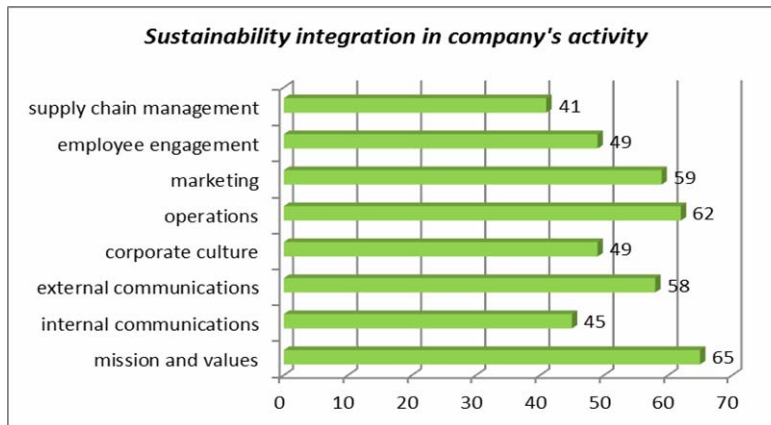


Fig.2. *The main business components where sustainability was integrated*

Regarding the barriers in sustainability initiatives, almost a third of respondents (29%) mentioned insufficient resources and 15% mentioned the lack of information on sustainability activities implementation. A concerning result for this topic is related to the lack of cooperation of employees on sustainability activities implementation, in 27% of cases. All the results are shown in Fig.3.

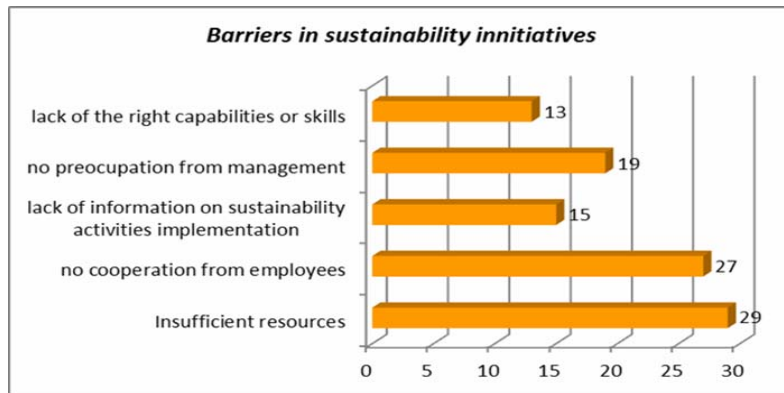


Fig.3. *The barriers in taking sustainability initiatives*

From all 128 companies, 66,4% has adopted innovations. From those who adopted innovations, 35,3% adopted product/service innovation and 64,7% process innovation. From the companies which adopted innovations, 15,3% took this decision especially for achieving sustainability.

80% from the managers who adopted product/service innovation and 55% from those who adopted process innovation used also new technologies. These technologies played an important role in achieving business sustainability.

#### 4. Conclusions

Survival in a knowledge economy calls for continuous improvement and innovation of an organisation's products, services and processes. Innovation is needed to find new solutions for current issues in organisations and is essential for sustainable development. In Romania only a small percentage of companies adopt new technologies and innovations for achieving sustainability. A well-functioning STI ecosystem needs to include, political stability and well-functioning institutions, an educated workforce. Finding the right balance between accessibility and reward (for creativity and innovation) remains a fundamental challenge in building sustainable development paths.

The ability of local firms to access technological know-how is fundamental to shaping their ability to provide products and services, both of the kind that are essential to improve living standards, and that could also promote growth and competitiveness.

Data covering the three pillars of sustainable development still needs to be collected, harmonized, managed and integrated in a more coherent way to support better policy - making and decision-making.

The sharing and exchange of information across the three pillars can result in synergies and bring increased benefits for a wide spectrum of users from policy-makers to the business community to citizens.

Aligning the interests of the private sector with the overall need to promote access to existing technologies and create products and services aimed at markets with little or no ability to pay is no easy task. There is a need to rethink how best to diffuse existing technologies as well as promote access to new technologies for all.

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