

SUSTAINABILITY THROUGH KNOWLEDGE. WHY KNOWLEDGE IS A SUSTAINABILITY FACTOR?

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Abstract

By sustainability must be understood, generally, a property, more exactly, the potential of a given system to replicate itself, no matter if based on internal or external causal factors. Consequently, it seems obvious the information (and, even more, the knowledge) plays a crucial role in take-off-ing and ensuring such a replication, both structurally and functionally. The paper aims to put into evidence such a role of the information/knowledge in founding the sustainability property of the economic systems. The methodology used is the logical analysis, based on the cybernetics of systems. Finally, the paper approaches some particular information contained especially in the public policies of adjustment, putting into evidence the ways in which such an information constitute causal factors in the economic systems sustainability.

Keywords: sustainability, information, knowledge, feed-back, adjustment

JEL Classification: H00, O10, P00

1. Introduction

At the same time with the high-tech deployment of widespread technologies, mankind has stepped into the era of knowledge, characterized by an innovative economy. With the widespread introduction of high technology, mankind has stepped into the era of knowledge, characterized by an innovative economy. The engine of growth in the innovative economy is no longer the accumulation of capital, as neoclassical economic theory says, but knowledge-based performance in innovation.

The knowledge economy, called by some exegetes the new economy or the network economy, is characterized by the transition from the traditional "heavy" economy to the economy based on high technological development. With this transition, we are witnessing major organizational changes in the structures, strategies and ways in which the management of these entities is exercised.

If the managerial strategies of the old economy predominate to the exaggeration of the need for formal and proprietary links to own resources, in the knowledge economy, the emphasis will increasingly be on the release, management and use of resources. This new economic logic implies that the rate of economic growth in the new economy of innovation depends on the products and services that are mostly gained as a result of capitalizing on knowledge.

The emergence of the Internet in the 1990s was the triggering factor of the third industrial revolution⁵¹ and online business .com. With the economic crisis that started in 2008 and the recession that followed, the consequences of low economic growth have negatively affected global markets, reflecting different consumer behaviors and leading to the development of new business models including the sustainability concept.

2. The Logic of Economic Sustainability

From a logical point of view, the concept of sustainability transcends the existence and autonomous functioning of a system. The issue of sustainability lies only in the systems that comprise cultural subjects simultaneously, in three hypostases within the respective system:

- cognitive - observational subjects;

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⁵¹ If the first industrial revolution represented the production steam production, the second by the use of power-driven lanes and the third by using computers, the fourth industrial revolution redefines the way industries work, from energy, aviation to transport or medical services, interconnecting data, people and equipment, regardless of their geographical location, in order to increase their efficiency and performance.

- praxiological - active subjects;
- praxiological objects.

Very often, in common language, the sustainability of a system is confused with its sustainability, although different concepts. Sustainable systems, although they may contain subjects, do not contain cultural subjects as opposed to sustainable subjects. The difference between the two types of systems is of a structural nature and consists of the presence or not of cultural subjects.

Economic theory and institutional management were faced with the choice between growth and balance, because it was self-evident that the choice of growth brought about the removal of the system from the equilibrium state, involving risk, and conversely, keeping the balance could lead to miss the growth. The dilemma found its solution with the introduction of the dynamic equilibrium concept, made possible the economic growth under the conditions of maintaining the balance, understood as an asymptotic tendency towards a static equilibrium never reached, always destroyed (in the sense of the concept of creative destruction attributed to Schumpeter) that the cycle be restored to infinity.

In other words, ensuring economic growth eliminates any dynamic equilibrium that can shock and oscillate steadily around a static and referential static equilibrium. Conversely, the intention to ensure dynamic macroeconomic equilibrium that stagnates around a static equilibrium hampers any healthy economic growth. The dilemma has finally been resolved by introducing the concept of sustainability of growth.

3. The logical relationship between sustainability and globalization

Sustainability can not be dealt with independently of the issue of globalization, and the two processes are interdependent from the point of view:

- ontological;
- logic;
- axiological;
- epistemological;
- praxiologically.

From the point of view of ontology, sustainability (S) and globalization (G), being trans-thematic processes, possess both ontological status. Sustainability is a social artifact, namely an objectification of inter-subjective ideas / projects, while globalization can be, alternatively:

- a social artifact, such as the internet, the financial system etc .;
- a natural fact, such as desertification;
- a social-natural combination, such as landslides due to uncontrolled deforestation.

From the point of view of the logical report, the paradigm of optimality, through the necessity of minimizing the cost of opportunity of economic decisions, necessarily leads to globalization. At the same time, the globalization of the entire planet, it is mandatory to re-integrate outpours into input, as the economic process is replicated, this being the very content of sustainability or sustainability. Therefore, from a logical point of view, no return from sustainability to optimality, all of which necessarily lead to sustainability precisely through the emergence of the process of globalization (Dinga, 2010).

From the axiological point of view (of the value system), sustainability / sustainabilisation and globalization have the highest perpetuity (survival) of the individual and the community, the latter being considered globally (planetary).

From the epistemological point of view, the main epistemological relation between sustainability and globalization is that of testability, because sustainability testing involves passing the system through all the processes that may be the outputs of a given process so that it is sustainable. This route implies globality, because it only assures the totality of the destination processes of the outputs in question. So, from the point of view of testability, sustainability / sustainabilisation

implies globality / globalization. At the same time, globality testing involves identifying and measuring the capacities of the central hub (or central hubs) owned by the process. But this involves identifying the majority (at 80% limit) of the connections (ie inputs / outputs), which indicates the ability to retrieve the outputs of the given process, ie it indicates the sustainability. So, from the point of view of testability, globality implies sustainability.

From the praxiologically point of view, of the actional causality, between sustainability / sustainabilisation and globality / globalization, we have mutual causal relations as follows:

- globalization necessarily implies sustainability because if a process is global, it turns out that it is obligatory to recirculate any output, there being no other outlets for some components of the output, having a process extended to the maximum, the planetary one;
- from sustainability can practically deduce globality as possible because, if a process is sustainable, it provides favorable conditions for the development of globality, for example, as a result of the increase in the number of components of the output vector which therefore need new processes for which to form as an integral input.

4. Management in the knowledge society

Over the past two decades, the unsustainable course that society as a whole is seeing is increasingly visible. Inequalities and inequities, conflict risks, climate change, cyber threats, the crisis of raw materials and the aging of the population in developed countries are the few threats that many of us face.

An aggravating factor that directs mankind in the direction of a major disaster on a planetary level is short-term thinking, which seeks to obtain as much profit as possible in no time, no matter what the consequences. The 2008 crisis is the best example of how old business models on which most organizations operate is not sustainable, and a paradigm shift is also needed in this area.

We are currently witnessing the fierce fight in the innovation market where two global players, the US and the EU, are slowly losing ground to emerging powers such as China, South Korea, India, and so on. The struggle for supremacy is given not only in the traditional sectors, but also in the high technology.

The foregoing leads logically to the conclusion that it is absolutely necessary to adopt solutions that will lead to major structural reforms in the economy and in society. This change in problem-solving should be holistic, which will include promoting long-term planning to ensure overall sustainable development and not just environmental issues. Local and state authorities together with communities will have to ensure job creation in clean and innovative technologies, which will lead to an increase in quality of life and the fight against unemployment over time.

Knowledge management is the process of creating, sharing, using and managing an organization's knowledge and information (Girard, John P .; Girard, JoAnn L., 2015) and is a multidisciplinary approach that aims to achieve organizational goals through optimal use of knowledge . It consists in the systematic process of acquiring, organizing, supporting, applying, sharing and renewing all forms of knowledge, improving organizational performance and creating value (Davenport and Prusak, 1998; Allee, 1997; Alavi and Leidner, 2001).

McElroy (2003) shared the development of knowledge management in several stages:

- the first stage is based on the exchange of information through the use of high technology (IT & C);
- the second stage focuses on sharing knowledge among members of the organization, which leads to the creation of an organizational culture that allows and encourages the exchange of ideas.
- the third focuses on awareness of the importance of content, its retrieval, as well as the arrangement, description and structure of that content

As time passes, several scholarly approaches to the issue of knowledge management have emerged in academic debates:

- technocentric approach, with a focus on technology, ideally that enhances the exchange of knowledge and creation;

- organizational approach, with an emphasis on how an organization can be designed to best integrate knowledge;

- the ecological approach, focusing on people's interaction, identity, knowledge and environmental factors as a complex system of adaptation similar to a natural ecosystem.

At present, in the knowledge management, we are witnessing a transition from the individual forms of knowledge and skills creation based on our own experience, to collective collaborative forms.

5. Socio-economic aspects of sustainability

For modern organizations to operate systematically, strategically, in the long run, they must ensure a sustainable development. This type of development provides organizations with a positive image that leads to a better attraction of human and material capital, business partners as well as clients. Good reputation eliminates staff fluctuations, hiring costs and training for new employees. It is in the interest of each organization to identify the best solutions to gain competitive advantages over competition.

Fighting the effects of stressors at the level of organizations, such as financial crises, climate change, requires solutions available within the concept of sustainable development. This will increasingly require the adoption of environmental solutions at all cultural levels of contemporary organizations.

The development strategies of countries conducting an environmental policy increasingly take into account indicators that measure social responsibility. They measure the degree of readiness that organizations take to carry out their environmental protection activities. Building on previous investments in green projects, agencies calculate social indicators and make their assessment based on business plans, investing in future green projects.

6. Conclusions

Sustainable development is, in the stage that mankind is going through, a growing challenge, and the direction in which we have to move becomes clearer. The key element of this development is knowledge, which is the basis for innovation in all areas. Its high value is the key factor of competitiveness that involves solutions that combine specialized technologies with information technologies.

For sustainability to become a global development model, states, organizations and citizens need to become aware of and adopt its principles. The World Business Council for Sustainable Development (WBCSD) evokes the contribution of sustainability to a better future within the Vision 2050 strategy that outlines the way for a sustainable global society to be achieved by 2050. This road will allow mankind to fall within the resources of planet Earth, slowing down the destruction.

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