

Chapter 59

Developing Strategies in the Sharing Economy: Human Influence on Artificial Neural Networks

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ABSTRACT

The sharing economy is challenging the traditional business models and strategies by encouraging collaboration, non-ownership, temporal access, and redistribution of goods and/or services. Within this framework, the current chapter aims to examine how managers influence, voluntarily or involuntarily, the reliability of a managerial early warning system, based on an artificial neural network. The analysis focuses on seven Romanian sustainable knowledge-based organizations and brings forward that managers tend to influence the results provided by a managerial early warning system based on artificial neural network, voluntarily and involuntarily. On the one hand, they are the ones who consciously decide which departments and persons are involved in establishing the structure of the managerial early warning system. On the other hand, they unconsciously influence the structure of the managerial early warning system through the authority they exercise during the managerial debate.

INTRODUCTION

The concept of “sustainability” has its roots in the social sciences, more exactly, in the ecological paradigm (O’Riordan, 1976), and it is used for the first time by George Ludwig Hartig, in 1785. He argues that forestry can be sustainable only if the future generations will be able to obtain the same benefits from its exploitation as the current generation. However, the perspective from which it is approached changed radically in the last centuries (Table 1). Thus, the theories developed in the 19th and the early 20th centuries (namely, the classical theory, the stakeholder theory, etc.) adopt an economic perspective

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and claim that a firm's sustainability is ensured through profit maximization and shareholders' satisfaction. Furthermore, the theories promoted during the 20th and 21st centuries (like, neo-institutional theory, the knowledge-based theory of the firm, the holistic theory etc.) bring forward two more perspectives, namely: the social and ecological ones; as a consequence, three pillars of company's sustainability are emphasized, such as: profitability, stakeholders' satisfaction, and natural environment (Fiksel, 2006; Leon, 2018a; Lozano, 2008). Nevertheless, these perspectives are combined and the borders of sustainability are extended by the sharing economy which describes a socio-economic environment dominated by non-ownership (Belk, 2014; Botsman & Rogers, 2011), intra- and inter-organizational collaboration (Leon, Rodriguez-Rodriguez, Gomez-Gasquet, & Mula, 2017; Mantymaki, Baiyere, & Islam, 2019; Sthapit, 2019), temporary access (Habibi, Davidson, & Laroche, 2017; Yang, Bi, & Liu, 2020), and sharing of under-utilized or idle goods and/or services (Hong, Kim, & Park, 2019; Lee & Kim, 2019).

Within this framework, managers realize that the traditional strategies and business models, such as: the powerful input of resources into the supply sector (Böcker & Meelen, 2017; Fan, Xia, Zhang, & Chen, 2019), platform competition and price-setting (Armstrong, 2006; Eisenmann, Parker, & van Alstyne, 2006), and network externalities (Parker & van Alstyne, 2005) are no longer viable. Therefore, they have to focus not only on increasing shareholders' satisfaction but also on augmenting their internal and external stakeholders' satisfaction, improving the quality of life, and protecting the environment. In other words, they have to address the challenges from the micro- and macro-environment, having their stakeholders' best interest in mind.

Table 1. The perspectives from which the concept of “sustainability” is approached

Perspective	Sustainability as...	Author/s (Year)
Environmental	<i>A duty</i>	Barkemeyer, Holt, Preuss, and Tsang (2011); Pearce, Markandya, and Barbier (1989)
	<i>A process</i>	Braat (1991)
	<i>An ability</i>	Bansal (2005); Jennings and Zandbergen (1995)
	<i>A capacity</i>	Ariansen (1999)
	<i>A component of the social and ethical responsibility</i>	Landrum and Ohsowski (2018); Ng and Burke (2010); Richardson (2009); Schwartz and Carroll (2008)
Social	<i>A condition</i>	Torjman (2000)
	<i>A level</i>	Black (2004)
Economic	<i>A general goal</i>	Anderson (1991); Saunila, Nasiri, Ukko, and Rantala (2019)
	<i>A specific objective</i>	Daily and Walker (2000); Maddox (2000)
	<i>A change factor</i>	Blum-Kusterer and Hussain (2001); Bos-Brouwers (2010)
	<i>A way to satisfy stakeholders' needs</i>	Dyllick and Hockerts (2002); Hahn, Figge, Pinkse, and Preuss (2010)
	<i>An image of productivity</i>	Dunphy, Griffiths, and Benn (2003); Holliday, Schmidheiny, and Watts (2002)
	<i>An adaptive capacity</i>	Kira and van Eijnatten (2008)
	<i>A stage of development</i>	Ketola (2010)
	<i>A process</i>	Câdea (2006)
	<i>A result</i>	Vaida and Câdea (2010)

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