

CONSUMER eWOM COMMUNICATION: THE MISSING LINK BETWEEN RELATIONAL CAPITAL AND SUSTAINABLE BIOECONOMY IN HEALTH CARE SERVICES

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Abstract

Today's world faces many challenges that may be solved by using the principles of bioeconomy. Bioeconomy has had a multi-disciplinary approach with the objective of an integrated scope, namely, to achieve sustainable development. In a knowledge-based economy, the link between sustainable bioeconomy and organizations is achieved by Intellectual Capital. The intangible assets of Intellectual Capital coming from the external environment of an organization in the shape of Relational Capital have great value, as they can offer competitive advantages. Consequently, along with the progress of technology and especially the online opinion platforms and Social Media, consumers have begun to share their experiences with other consumers in a new form of communication called electronic word-of-mouth (eWOM). In the health care field, this type of communication triggered a shift in the consumer behavior, leading to their knowledge empowerment *about physicians, symptoms and even health care organizations*. This study extends the existing literature on health care and Relational Capital by examining the consumers' motives to post eWOM messages in a Romanian Social Media support group, which concentrates on *In Vitro* Fertilization (IVF) procedures. We identified a number of key motives (reputation, reciprocity, sense of belonging to a community, enjoyment of helping other individuals, moral obligation of helping other individuals with knowledge contribution and knowledge self-efficacy), which may explain the consumers' intentions to post eWOM messages, as integrated in an empirical model. Using the PLS technique, we tested the model on a sample of 121 women, members of the Social Media support group. The findings revealed that 39% of the variance of the intention to post eWOM messages, was explained by reciprocity. The outcomes of this study provide important implications for both research and practice.

Key-words: bioeconomy, sustainability, health care services, relational capital, eWOM

JEL Classification: I12, M39, D64, D71, D81, D83, D91, O34, Q01

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Introduction

A new trend of research in policymaking has emerged in the academic environment over the last decade. According to Lund Declaration (2009), urgent measures related to issues that focus on climate change, food and energy security, health and industrial restructuring, should be taken. The emergency in finding solutions to these problems is characterized by persistency, complexity and insecurity (Coenen, Hansen, Rekers, 2015; Upham, Klitkon, Olsen, 2016). Despite the plethora of uncertainties, the concept of bioeconomy was introduced as a solution provider to the Lund Declaration (Ollikainen, 2014; Richardson, 2012).

Bioeconomy is approached in a multi-disciplinary way, integrating interdisciplinary and trans-disciplinary perspectives as well as knowledge from various disciplines, in an integrated manner, in order to achieve constant sustainable development (Raghu et al., 2011; Schmid, Padel, Levidow, 2012). The conditions a sustainable bioeconomy should focus on are either knowledge or practical based activities or restrictive and stimulated based activities (Pfau, et al., 2014). In the bioeconomic context, sustainability is described as meeting the actual needs of a population without compromising the ability of future generations to meet their own needs (WCED, 1987). Although its importance was recognized, research in the field showed a very slow organizational adoption (Martinez Garcia de Leaniz and Rodriguez del Bosque, 2013).

From a business perspective, sustainability is comprised of three dimensions, namely, economic, social and environmental (Choi and Ng, 2011). Among the three dimensions, only environmental sustainability has received the greatest attention and encompasses measures for maintaining the natural capital (Goodland, 1995). Further, specialists concluded that in our contemporary knowledge-based society, intangible assets are more likely and most often providing sustainable competitive advantages as well as superior performance (Spender and Grant, 1996; Sveiby, 1997). Generally, intangible assets focus on information and knowledge which makes them more difficult to be identified and reproduced in an environment characterized by dynamism and nonlinearity (Bratianu and Orzea, 2013a). Bratianu and Orzea (2013a) conducted a knowledge analogy based on the laws of thermo-dynamics, which define knowledge as an energy and introduce the idea of knowledge transformation, suggesting that knowledge may take any shape and designate other phenomenon only after a certain process occurs. Bueno (2000) stated that knowledge management was the most important intangible asset for an organization, which gave birth to three different streams of knowledge research: Intellectual Capital, organizational learning and operational knowledge management. As such, in a knowledge-based society, an organization's Intellectual Capital determines the connection between bioeconomy and sustainable development.

In essence, the scientific literature mainly focuses on the private organization's Intellectual Capital but also on their sustainable behavior, such as, the strategic role of the Intellectual Capital in the activity of an organization (Mertins and Orth, 2012; López-Gamero, et al., 2011), the impact of Intellectual Capital on the sustainable performance of the organization (Yahya, Arshad, Kamaluddin, 2014; Liu, 2010) and Intellectual Capital and corporate reputation (Martinez Garcia de Leaniz and Rodriguez del Bosque, 2013). Recently, the objective of assessing sustainable development only in the private sector has changed to achieving a potential sustainable environment in the public sector as well; as for example in health care (Allee, 2000).

Health care organizations play a very important role in implementing sustainable development measures as they provide social services and have the power to actively trigger a sustainable behavioral change towards society (Ball and Bebbington, 2008). Hence, health care organizations can substantially influence the public and act as change agents that promote and support sustainable initiatives. Despite the huge potential of Intellectual Capital and the shift towards an inherent sustainable health care, research in this field has been neglected (Cavicchi, 2017).

So far, although some variation in terms and definitions occurred, Intellectual Capital has been described a fuzzy concept, its interpretation depending on the large spectrum of meanings in different organizational contexts (Bratianu and Orzea, 2013a). The first stage in the development of Intellectual Capital followed a Newtonian perspective, which encompassed a rather static approach of the concept, whereas the second stage in the evolution of Intellectual Capital, introduced a thermo-dynamic perspective, which was meant to capture the complexity of the turbulent business environment (Bratianu, 2009).

If a classification of Intellectual Capital were to be conducted, the outcome would be two types: the potential Intellectual Capital and the operational Intellectual Capital. The potential Intellectual Capital, in its turn, consists of three knowledge flows: the cognitive knowledge flow, the emotional knowledge flow and the spiritual knowledge flow (Bratianu and Orzea, 2013a). In the changing transformation knowledge process, in the Intellectual Capital are being included all the inputs of an organization using integrators such as leadership, processes, technology, organizational culture and organizational management (Bratianu and Orzea, 2013a), but we believe that the tripartite approach of Intellectual Capital is more adequate in health care services, being made out of human capital, organizational capital, and Relational Capital, and at the same time, every dimension being characterized by the three flow knowledge approach (Edvinsson and Malone, 1997). According to some health care studies, human capital was often viewed as the most important dimension of Intellectual Capital, followed by Relational Capital but other studies conducted on nurse supervisors' perceptions of Intellectual Capital revealed that structural capital and Relational Capital had the highest impacts (Wall, 2005; Zigan, MacFarlane, Desombre, 2008; Chang, Wu, Shei, 2014). Thus, Health Care Intellectual Capital, in both its conceptualization and reporting, has included Relational Capital as a dimension derived from the interaction between an organization and its consumers, known in the scientific literature as business to consumer interaction (B2C). Moreover, in Romania a new phenomenon emerged on today's markets, which is described as an online interaction between consumers (C2C). This form of interaction between consumers is called electronic word of mouth communications (eWOM)(Hennig-Thurau et al., 2004). Even if the C2C interaction is publicly available and accessible for a long period of time, it is distributed all over the world and takes the shape of converted knowledge content for the consumers, as well as for the organizations, there has not been an explicit discussion about integrating C2C interaction as a component of Relational Capital (Deighton and Kornfeld, 2009).

In this paper, the consumer interaction in the shape of eWOM is considered a subcomponent of Relational Capital that generates value for the external and internal stakeholders of a health care organization (Sussan, 2012; Paoloni, Cesaroni, Demartini, 2017). Yet, in order to achieve the desired outcomes, the "interaction" has to take place. Even though the consumer's voluntary knowledge contribution in the online platforms has

relational value (Sussman, 2012), little attention has been paid to the knowledge brought by eWOM communication to Relational Capital in health care services.

The purpose of this paper was to understand the motivations that stand behind a health care consumer's decision to engage in eWOM communication on a dedicated social media group. Moreover, this paper is structured as follows: we began with a review of the literature on Intellectual Capital and Relational Capital in health care, followed by an explanation of consumers' motivations for engaging in eWOM communication. Using Cheung and Lee's (2012) framework, we identified six potential motives for health care consumers' online eWOM intention, integrated in an empirical model. Finally, we discuss the implications for research and practice as well as the limitations of the study and future research directions.

1. Theoretical background

1.1. Health Care Intellectual Capital

The most commonly used definition of Intellectual Capital describes it as an outcome of integrated organizational knowledge with the objective to bring added values to consumers and competitive advantage (Evans, Brown, Baker, 2015; Bontis, 2002; Subramanian and Youndt, 2005). About 40% of the literature on Intellectual Capital does not provide a detailed definition of the concept, but rather a brief description of its dimensions and examples of what may be classified as Intellectual Capital assets (Robinson, 1998; Zigan, MacFarlane, Desombre, 2009). As such, in the most recent Intellectual Capital model, the Entropic Intellectual Capital Model, it is included in its structure, three types of knowledge flows: the cognitive knowledge, the emotional knowledge and the spiritual knowledge (Bratianu and Orzea, 2013a). From an organizational perspective, the cognitive knowledge may be explicit or tacit, but it has a concrete form, while the emotional knowledge is encountered in the organizational culture and the spiritual knowledge encompasses, in a synergetic way, the vision, mission and values of an organization. Still, in practice, the three flows of knowledge may coexist only in the presence of integrators, such as technology, processes, organizational culture, leadership and organizational management (Bratianu and Orzea, 2013a). Bratianu and Orzea (2013a) reached the conclusion that the most important integrator is leadership, which has a consistent role for both the spiritual knowledge and the emotional knowledge of an organization. Analogous, at an individual level, the emotional knowledge is a distinct component of tacit knowledge and takes the shape of a mix outcome characterized by experiences, perspectives and subjective opinions, intuitions, ideas, values and emotions (Bratianu and Orzea, 2013b). Moreover, emotions are fundamental in any decisional process, triggering various cognitive reactions (Bratianu, 2011).

The model elaborated by Edvinsson (1997) determined Intellectual Capital as a tripartite concept made up of human capital, structural capital, and Relational Capital. The human capital dimension consists of the knowledge, skills and experiences owned and used by the employees of an organization, whereas the structural capital, known also as organizational capital, is made up of an organization's knowledge and codified experiences which are stored in databases and procedures. Relational Capital encompasses knowledge embedded within and derived from networks of relationships established with the internal and external stakeholders of an organization (Subramanian and Youndt, 2005; Bontis, 1998; Mura, et al., 2012). In other words, according to Edvinsson's model (1997), Intellectual Capital is a

mix of integrated knowledge harnessed from individuals, organizational structures, processes and systems, relationships and networks (Subramanian and Youndt, 2005). Moreover, considering the Entropic Intellectual Capital Model and Edvinsson's model, we assume that all knowledge flows are found in all the dimensions of Intellectual Capital. These Intellectual Capital dimensions, in their turn, can be assumed to be separate constructs described by their own antecedents, covariates and consequences and should be collectively shaped in an interdependent manner (Radaelli, et al., 2011). Further, similarly, an Intellectual Capital model elaborated by Molodchik and Shakina (2013) has in its composition the same dimensions as Edvinsson's model (1997) but each dimension is characterized by other items. As such, in our study, in line with Molodchik and Shakina's model (2013), the structure of Intellectual Capital is comprised of the three dimensions, divided on two levels:

- Human capital should contribute to the development of an organization by management capabilities as well as each employee's knowledge and skills;
- Structural capital includes innovative capabilities and internal process capabilities, which support tacit and explicit knowledge transfer by IT systems and documentation (Edvinsson and Malone, 1997);
- Relational Capital identifies external connections with stakeholders such as consumers, suppliers, government, mass media, and other partners (InCaS, 2009). Consequently, Molodchik and Shakina (2013) argued that the appropriate instruments for assessing the external connections of Relational Capital are network capabilities and consumer loyalty and reputation.

Further, among the most valuable assets in health care organizations are the knowledge, skills, and experiences of the professionals. These intangible resources merged with the values embedded in their external relationships and derived from the organizational internal capabilities, define the Health Care Intellectual Capital (Edvinsson and Malone, 1997). Moreover, health care organizations have a vast palette of formal and informal know-how, both structured and unstructured, distributed across individuals, files, databases, reports, partnerships, stakeholder relations, reputation and image as perceived by the community (Edvinsson and Malone, 1997). Although the health care sector is knowledge intensive, few health care organizations systematically manage their Intellectual Capital goals, reflected in their overall performance (Peng, Pike, Ross, 2007). Most Health Care Intellectual Capital specialists describe it with the help of its three dimensions (human, structural and relational) but based on the MERITUM classification (2002). Table no. 1 illustrates the dimensions of Intellectual Capital of a health care organization and a few associated examples.

1.2. Health Care Relational Capital

From the perspective of knowledge management, Relational Capital (Edvinsson and Malone, 1997; Subramanian and Youndt, 2005) has been considered a significant intangible asset which may bring benefits, if used adequately. Relational Capital is described as "the value of the relations that an organization maintains with the different agents of its environment" (Euroforum, 1998). Thus, the value of Relational Capital is described by the amount of relations established between organizations and their external

environment, namely, stakeholders (Mitchell, Agle, Wood, 1997). More exactly, the Relational Capital for an organization represents a key factor to gain competitive advantage on the market and the necessary support of training and transferring collective knowledge (Paoloni and Lombardi, 2017). Helliwell and Putnam (2004) have argued that Relational Capital is a fundamental element in achieving sustainable health care services. The networking activity of a health care organization is a method to incorporate and develop sustainable knowledge from the external environment in the shape of value creation (Albers Mohrman and Lawler, 2014).

Table no. 1: Dimensions of Intellectual Capital and health care examples

Dimension	Examples in the health care sector
Human Capital	Professional competencies, context-specific knowledge, leadership and managerial skills
Structural Capital	Vision, mission, values, strategic plan, programs, tools, information systems, ways of working together, best practices
Relational Capital	Patient/caregiver views and experiences, nature of internal clinical-managerial relations, contracts/agreements and partnerships with other service providers or with government, research institutions, consultants, brand, image, and reputation in the community

Source: Evans, J.M., Brown, A., Baker, G.R. (2015), p. 559.

In Sussan’s (2012) Relational Capital approach, C2C interaction is considered a subcomponent of Relational Capital, as C2C interaction has Intellectual Capital value. Based on Molodchik and Shakina’s model (2013) as well as Sussan’s (2012) perspective on Relational Capital, we divided Relational Capital into two components: the interaction that takes place between the organization and its consumers (B2C interaction) and the interaction that takes place among consumers (C2C interaction), as it may be observed in Figure no. 1. The mechanism of knowledge transformation into Intellectual Capital values of an organization, assessed from its consumers, is based on the following explanation (Sussan, 2012): An organization has to compete in a marketplace by continuously delivering the best value to its consumers. In order to understand how consumers perceive this value, the organization has to interact with them and research their purchase outcomes measured by satisfaction, loyalty, image and service quality. After collecting the necessary information from its consumers, an organization may identify various strategic actions to improve its delivery and communication processes. Nonetheless, along with the progress of technology, health care consumers became more empowered and more interested in the co-production of health services. The Internet has enabled much C2C interaction that is known in the scientific literature as Electronic word-of-mouth (eWOM).

According to Hennig-Thurau et al. (2004), eWOM communication is “any positive or negative statement made by potential, actual, or former consumers about a product or company, which is made available to a multitude of people and institutions via the Internet”. Cheung and Thadani (2012) stated that eWOM communication could be classified on two levels: market-level and individual-level. At the individual-level, eWOM is considered a process of personal influence, in which a sender of information can influence the purchase decision of an information receiver. According to Sussan (2012), eWOM has both economic value and experiential value for a consumer. By reading the

information provided by other peers in the shape of eWOM communication, an individual reduces the risks and time associated with the purchase decision, as in the case of health care services (Purcărea, Gheorghe, Petrescu, 2013) and, in addition, it reduces the cognitive dissonance after purchase (Sussan, 2012). Moreover, other peers' experiences help an individual make a comparison between their own experiences and others' (Hennig-Thurau et al., 2004) based on emotional, usage or functional cues embedded in the eWOM message such as the argument quality, valance of the eWOM, sidedness and the volume of eWOM (Cheung and Thadani, 2012). In this context, eWOM fosters customer relationships, suggesting that the volume of eWOM enhances consumer value, as perceived by a consumer, and, in turn, this value is transformed in a worth knowledge flow for an organization (Sussan, 2012). In health care services, Gheorghe and Liao (2012) concluded that the most encountered negative emotions in eWOM messages, which may be integrated in the individual emotional knowledge, are anger and rage.

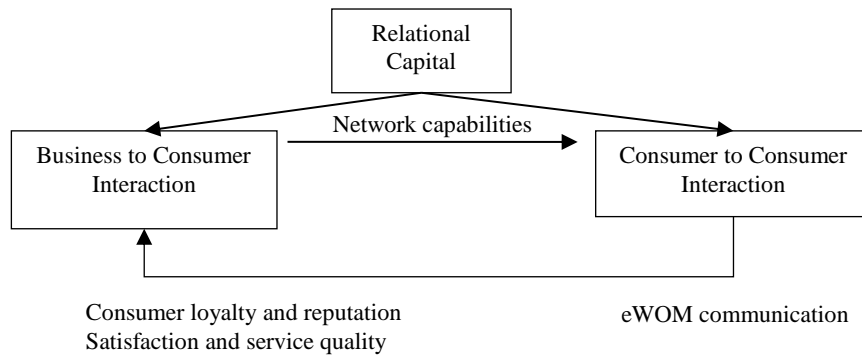


Figure no. 1: The Relational Capital model approach
Source: adapted from Sussan, F. 2012, p. 86.

1.3. Conceptual framework

Cheung and Lee (2012) developed a model of antecedents of eWOM communication in online consumer-opinion platforms, which included the following components:

- Egoistic motivation. Individuals become egoistic in behavior when they expect tangible or intangible returns after sharing information for other peers on the internet. Reputation and reciprocity have been included in this category. As such, when individuals share and contribute with knowledge, they want to gain recognition of being experts in a certain field, meaning they want to gain reputation, whereas reciprocity refers to the expected returns in the future for the offered help;
- Collective motivation: Individuals with collective motivations contribute with their knowledge for the benefit of a group rather than for a personal return. More exactly, when individuals identify themselves as members of a group, they have the tendency to define themselves in terms of the characteristics of their group membership. The communicators of a eWOM message have the impression that the other members of the group will be satisfied by the knowledge received from their contributions, involving a deep sense of belonging;

- **Altruistic motivation:** Altruism is the motivation of individuals to increase the welfare of other peers without expecting direct rewards in return. Enjoyment of helping has been identified as being part of an altruistic behavior, suggesting that although there is no apparent compensation in sharing knowledge in consumer-driven platforms, there is still an intrinsic enjoyment for helping other people.

- **Principlistic motivation:** With a strong sense of commitment to a group, individuals feel obliged to help other peers by sharing knowledge. Therefore, moral obligation is a derivation from principlism and is described by a sense of duty or obligation to help other individuals based on shared membership.

- **Knowledge self-efficacy:** Self-efficacy is a personal evaluation of an individual's ability to perform certain actions, such as contributing with knowledge in online consumer-opinion platforms.

Consequently, in line with Cheung and Lee's model (2012), we elaborated our conceptual framework depicted in Figure no. 2 along with the following hypothesis:

- **H1:** Reputation is positively related to an individual's intention to post eWOM messages.

- **H2:** Reciprocity is positively related to an individual's intention to post eWOM messages.

- **H3:** Sense of belonging is positively related to an individual's intention to post eWOM messages.

- **H4:** Enjoyment of helping other peers is positively related to an individual's intention to post eWOM messages.

- **H5:** Moral obligation is positively related to an individual's intention to post eWOM messages.

- **H6:** Knowledge self-efficacy is positively related to an individual's intention to post eWOM messages.

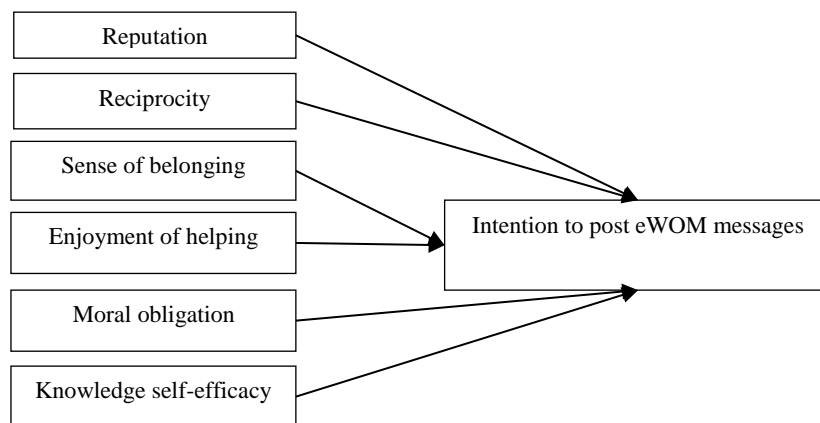


Figure no. 2: Conceptual framework of the research model

2. Research Methodology

The research model was tested using a sample of female respondents who posted eWOM messages in a Romanian Social Media group dedicated to IVF procedures, as the bio-ecology vision is primarily concerned with sustainability. Even if the commercialization of bio-resources has been criticized in the health care literature, especially, in areas concerned with human tissues such as oocytes (Gupta, 2012; Haimes, 2013), stem cells (Fannin, 2013) and surrogacy (Gupta, 2012), we made a dare attempt to select a Social Media group in which fertility experiences are discussed, with a specific interest in IVF.

The sample was made up of women who opened at least three positive discussion threads about their experiences with a certain Fertility Clinic or specialized physician in fertility issues, and not necessarily replied to already open threads. A convenient sample was built by inviting volunteers to participate in filling in an online questionnaire, based on the conventional non-probabilistic sampling but logic, following the criteria aforementioned. A total of 500 usable questionnaires were collected but only 121 respected the selection criteria. The questionnaire consisted of 4 items that referred to the demographic profile of the respondents and 22 items focused on the constructs of the model, measured on 5-point Likert scales, ranging from *strongly disagree* (1) to *strongly agree* (5). The latent constructs of the model were measured with the scale proposed by Cheung and Lee (2012) but modified according to the health care context. The statistical analysis was performed in SPSS version 20 for respondents' demographic profile and the validation of the structural model was assessed in SmartPLS version 3.

3. Findings

➤ Demographic profile of the respondents

Among the 121 respondents, all were females and the vast majority of respondents had ages between 31 and 36 years (27.3%), with their monthly income between 2100-2600 Romanian currency (20.7%) and university studies (54.3%), as it is described in Table no. 2.

➤ Measurement model

The assessment of the validity of the measurement model was determined by the internal consistency reliability (the Cronbach's alpha coefficient), the Convergent Validity (CV) and the Average Variance Extracted (AVE) in SmartPLS (Hair et al., 2014). The outcomes showed that all conditions for achieving a robust measurement model were satisfied.

➤ Structural model

The structural model analysis was assessed based on the bootstrapping procedure in SmartPLS, which included testing the significance of the estimated path coefficients at a p value lower than 0.05 and examining the value of the explained variance (R^2) (Hair, et al., 2014a). The results are illustrated in Figure no. 3. The significant estimated path coefficient indicated by an asterisk, revealed that the significant antecedent of eWOM intention in health care is reciprocity, leading to a support of H2. Moreover, the R^2 value (39%) demonstrates that the model has substantially explained the variance of the latent construct, namely, the intention to post eWOM messages.

4. Discussion

Given the limited research in the area of consumers' intention to spread eWOM messages in online health care consumer-opinion platforms and the lack of consideration towards eWOM as a component of Relational Capital of an organization, this study sought to assess the factors that shape the eWOM communication in health care. The analysis revealed that health care consumers' eWOM intention is significantly correlated to one antecedent, namely, reciprocity. The outcome is consistent with previous eWOM marketing literature, but for other fields, not for the health care sector. According to Chiu, Hsu and Wang (2006) and Kankanhalli, Tan and Wei (2005a), reciprocity is a valuable asset in a knowledge sharing environment. Moreover, Kankanhalli, Tan, and Wei (2005b) argued that the exchange of Intellectual Capital could be facilitated by norms of collaboration and sharing. Reciprocity implied that knowledge sharing is not always monodirectional and individuals feel a sense of mutual indebtedness, reciprocating the benefits they receive from others, to ensure continuous supportive exchanges (Shumaker and Brownell, 1984).

Table no. 2: The demographic profile of the respondents

Variables	Frequency (%)
<i>Age</i>	
18-24 years	19.8
25-30 years	14.0
31-36 years	27.3
37-40 years	16.5
41-46 years	22.3
<i>Monthly income (RON)</i>	
More than 1000 RON	14.9
1100-1599 RON	16.5
1600-2000 RON	19.8
2100-2699 RON	20.7
2700-3000 RON	9.9
More than 3100 RON	18.2
<i>Residential Area</i>	
Urban	82.3
Rural	17.7
<i>Level of education</i>	
Primary school	0
High-school	23.8
University	54.3
Post university	21.9

In the health care context, contributors of knowledge sometimes expect to be receivers of information, which may be another piece of valuable knowledge. This type of cooperation makes every member of the community feel a sense of belonging (Majewski, Usoro, Khan, 2011). In our research model (fig. no. 3), sense of belonging to a community has not proved to be a significant antecedent of eWOM intention. Further, moral obligation and knowledge self-efficacy did not show significant relationships with consumers' eWOM intention. Since members of the group did not develop a sense of belonging to the community, they

implicitly did not develop a sense of duty or obligation to help others based on shared membership whereas knowledge self-efficacy does not have a significant impact on consumers' eWOM intentions because many reviewers may not completely understand the IVF procedure and may express their opinions based on satisfaction and the received service quality. It is already acknowledged that health care services are high in technical properties and there is an entropy of information on the side of the health consumers (Gheorghe, 2014). Enjoyment of helping and reputation also proved not to have significant impacts on the consumers' eWOM intentions.

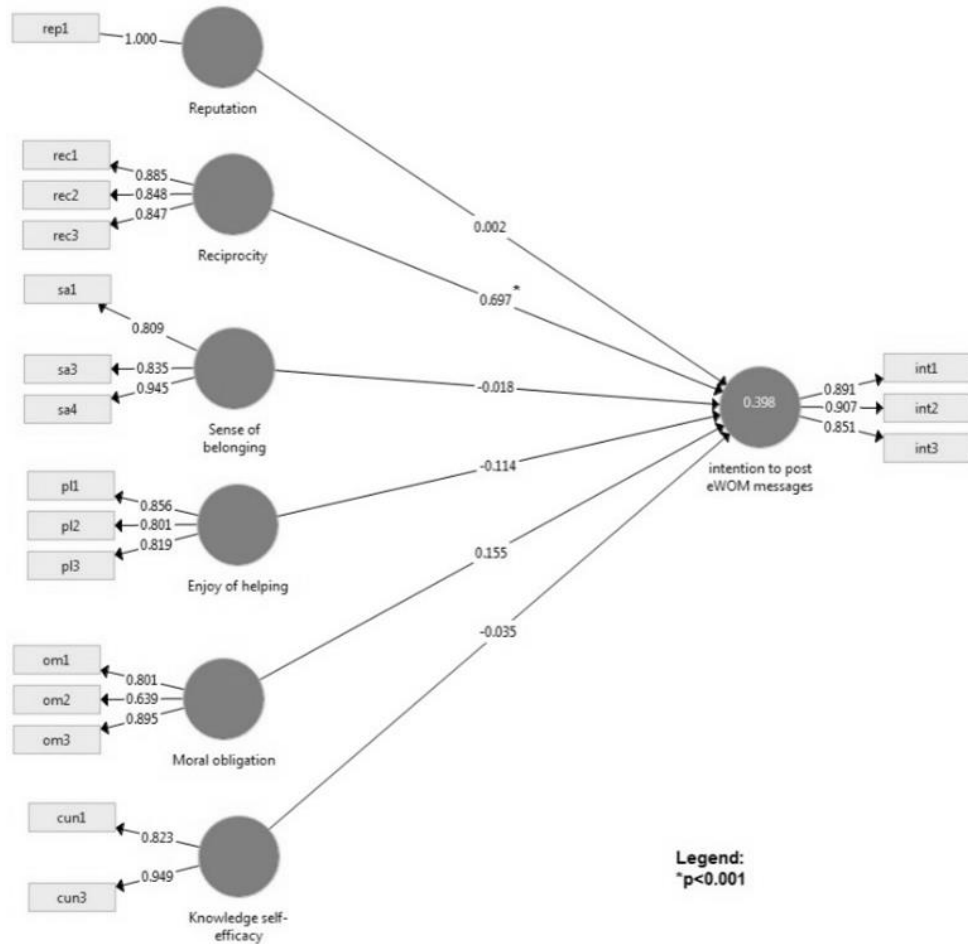


Figure no. 3: The results of the research model

Users of the health care group do not build a reputation since health care is a service which most people need but do not want and at the same time, lack the necessary knowledge to give a specialized opinion (Berry and Beudapudi, 2007).

Conclusions

This study enriches the existing eWOM research in various ways. Although several studies focused primarily on the impact of eWOM on the health care consumer purchasing decision after reading eWOM messages (Purcărea, Gheorghe, Petrescu, 2013), there is a lack of understanding on how eWOM communication works in health care services. This research provides an empiric model that explains the antecedents of consumers' eWOM engagement in health care services. More exactly, we provided empirical evidence that reciprocity has a significant impact on the consumers' eWOM intention to spread health care messages on a Social Media group. The finding of this research is useful for health care organizations as the eWOM storage information about their services and employees shape their online reputation. From a consumer's perspective, organizational reputation is an efficient clue in predicting the outcomes of a service experience because it relies on past actions of the organization with other individuals whereas from an organizational perspective, reputation needs close attention and a very robust reputation management (Berry, 2009).

Building a favorable reputation is an essential element integrated in the Relational Capital. Coming back to the Entropic Intellectual Model, the organizational reputation has both a spiritual knowledge component as well as an emotional knowledge component. Moreover, the eWOM messages, having in their structure an emotional knowledge flow, we suggest as strategic research, to be investigated the emotions of consumers and the importance of their emotional knowledge awareness between them, as the emotional component may transform anytime in cognitive knowledge, due to the nonlinear characteristic of knowledge and so, the organization may win a sustainable competitive advantage (Bratianu and Orzea, 2013a).

By interpreting the results of this research, attention must be paid to a number of limitations. To our knowledge, up to the moment of our literature review on eWOM, the research on consumer engagement in eWOM communication in the health care sector remains scarce as limited attention has been given to both health care eWOM communication as well as to the eWOM communication, as being a component of the organizational Relational Capital. To enhance the understanding of this linkage and in order to contribute to the development of the existing health care literature, we elaborated and tested an empirical model that explains why health care consumers engage in eWOM communication. Although the explanatory power of the research model was moderate and we included almost all the antecedents of an eWOM intention, we believe that future research studies should include other related constructs but specific to the health care field, such as empathy. Moreover, studies should also focus on negative eWOM antecedents, as our research concentrated only on spreading positive eWOM messages. The sample size is relatively small, but in line with the research methodology and the sample consisted only of women. This suggests that future research should include a more diverse sample with a larger sample size that would raise the statistical power of the model and the representative level. Moreover, further research directions should focus and investigate other health related issues.

References

- Albers Mohrman, S. and Lawler, E.E., 2014. Designing organizations for sustainable effectiveness: A new paradigm for organizations and academic researchers. *Journal of Organizational Effectiveness: People and Performance*, 1(1), pp. 14-34.

- Allee, V., 2000. The value evolution: addressing larger implications of an intellectual capital and intangibles perspective. *Journal of Intellectual Capital*, 1(1), pp. 17-32.
- Ball, A. and Bebbington, J., 2008. Editorial: accounting and reporting for sustainable development in public service organizations. *Public Money & Management*, 28(6), pp. 323-326.
- Berry, L. and Beudapudi, N., 2007. Health Care. A fertile field for services research. *Journal of Service Research*, 10(2), pp. 111-122.
- Berry, L., 2009. Competing with quality service in good times and bad. *Business Horizons*, 52, pp. 309-317.
- Bontis, N., 2002. Managing organizational knowledge by diagnosing intellectual capital: Framing and advancing the state of the field. In: C. Choo and N. Bontis N, eds., *The Strategic Management of Intellectual Capital & Organizational Knowledge*. Oxford: University Press.
- Bratianu, C., 2009. The frontier of linearity in the intellectual capital metaphor. *The Electronic Journal of Knowledge Management*, 7(4), pp. 415-424.
- Bratianu, C., 2011. Changing paradigm for knowledge metaphors from dynamics to thermodynamics. *Systems Research and Behavioral Science*, 28, pp. 160-169.
- Bratianu, C. and Orzea, I., 2013a. The entropic intellectual capital model. *Knowledge Management Research and Practice*, 11, pp. 133-141.
- Bratianu, C. and Orzea, I., 2013b. Emotional knowledge: The hidden part of the knowledge iceberg. In: *Proceedings of the 14th European Conference on Knowledge Management*, Kaunas University of Technology, Lithuania, 5-6 September 2013, pp. 82-90.
- Bueno, C.E., 2000. La dirección del conocimiento en el proceso estratégico de la empresa: información, complejidad e imaginación en la espiral del conocimiento. In: E. C. Bueno and M. P. Salmador, eds., *Perspectivas sobre dirección del conocimiento y capital intelectual*, I.U.: Euroforum Escorial, pp. 55-66.
- Cavicchi, C., 2017. Healthcare sustainability and the role of intellectual capital. *Journal of Intellectual Capital*, 18(3), pp. 544-563.
- Chang, H.Y., Wu, M.Y., Shei, D.F., 2014. Perceptions of intellectual capital held by supervisors of nursing divisions in hospitals in Taiwan. *Management Decision*, 52(6), pp. 1101-1115.
- Cheung, C.M.K. and Lee, M.K.O., 2012. What drives consumers to spread electronic word-of-mouth in online consumer-opinion platforms. *Decision Support Systems*, 53(1), pp. 218-225.
- Cheung, C.M.K. and Thadani, D.R., 2012. The impact of electronic word-of-mouth communication: A literature analysis and integrative model. *Decision Support Systems*, 54, pp. 461-470.
- Chiu, C.M., Hsu, M.H., Wang, E.T.G., 2006. Understanding knowledge sharing in virtual communities: an integration of social capital and social cognitive theories. *Decision Support Systems*, 42, pp. 1872-1888.
- Choi, S. and Ng, A., 2011. Environmental and economic dimensions of sustainability and price effects on consumer responses. *Journal of Business Ethics*, 104, pp. 269-282.
- Coenen, L., Hansen, T., Rekers, J.V., 2015. Innovation policy for grand challenges. An economic geography perspective. *Geography Compass*, 9, pp. 483-496.

- Deighton, J. and Kornfeld, L., 2009. Interactivity's unanticipated consequences for marketers and marketing. *Journal of Interactive Marketing*, 23(1), pp. 4-10.
- Edvinsson, L. and Malone, M.S., 1997. *Intellectual capital. Realizing your company's true value by finding its hidden brainpower*, Harper Collins Publishers, Inc., 1sted.
- Edvinsson, L., 1997. Developing intellectual capital at Skandia. *Long Range Planning*, 30(3), pp. 366-373.
- Euroforum, 1998. *Medicion del Capital Intelectual: Modelo Intelect*. Instituto Universitario Euroforum Escorial, Madrid.
- Evans, J.M., Brown, A., Baker, G.R., 2015. Intellectual capital in the healthcare sector: a systematic review and critique of the literature. *BMC Health Services Research*, 15, pp. 556-569.
- Fannin, M., 2013. The hoarding economy of endometrial stem cell storage. *Body and Society*, 19, pp. 32-60.
- Gheorghe, I.R. and Liao, M., 2012. Investigating Romanian Healthcare Consumer Behavior in Online Communities: Qualitative Research on Negative eWOM. *Procedia-Social and Behavioral Sciences*, 62, pp. 268-274.
- Gheorghe, I.R., 2014. *Managing Marketing in Health Care Services*, Bucharest: Carol Davila Publishing House.
- Goodland, R., 1995. The concept of environmental sustainability. *Review of Ecology Systems*, 26, pp. 1-24.
- Gupta, J.A., 2012. Reproductive biocrossings: Indian egg donors and surrogates in the globalized fertility market. *International Journal of Feminist Approaches to Bioethics*, pp. 25-51.
- Haimes, E., 2013. Juggling on a rollercoaster? Gains, loss and uncertainties in IVF patients' accounts of volunteering for a UK egg sharing for research scheme. *Social Science & Medicine*, 86, pp. 45-51.
- Hair, J.F., Hult, G.T.M., Ringle, C.M., Sarstedt, M., 2014a. *A primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*, Sage Publications.
- Helliwell, J.F. and Putnam, R.D., 2005. The Social Context of Well-Being. In: F.A. Huppert, B. Kaverne, and N. Baylis, eds., *The Science of Well-Being*. London: Oxford University Press, pp. 1435-1446.
- Hennig-Thurau, T., Gwinner, K.P., Walsh, G., Gremler, D., 2004. Electronic word-of-mouth via consumer-opinion platforms: what motivates consumers to articulate themselves on the Internet? *Journal of Interactive Marketing*, 18(1), pp. 38-52.
- InCaS, 2009. *Intellectual capital statement, made in Europe*. [online] Available at: <www.incaseurope.eu/images/stories/InCaS_Publishable_Guideline.pdf> [Accessed 20 April 2017].
- Kankanhalli, A., Tan, B.C.Y., Wei, K.K., 2005a. Contributing knowledge to electronic knowledge repositories: an empirical investigation. *MIS Quarterly*, 29(1), pp. 113-143.
- Kankanhalli, A., Tan, B.C.Y., Wei, K.K., 2005b. Understanding seeking from electronic knowledge repositories: an empirical study. *Journal of the American Society for Information, Science and Technology*, 56(11), pp. 1156-1166.

- Liu, C.C., 2010. Developing green intellectual capital in companies by AHP. *8th International Conference on Supply Chain Management and Information Systems (SCMIS)*, Hong Kong, pp. 1-5.
- López-Gamero, M.D., Zaragoza-Sáez, P., Claver-Cortés, E., Molina-Azorín, J.F., 2011. Sustainable development and intangibles: building sustainable intellectual capital. *Business Strategy and the Environment*, 20(1), pp. 18-37.
- Lund Declaration, 2009. *Europe must focus on the grand challenges of our time*. Swedish EU Policy, Lund, Sweden.
- Majewski, G., Usoro, A., Khan, J., 2011. Knowledge sharing in immersive virtual communities of practice. *The Journal of Information and Knowledge Management Systems*, 41(1), pp. 41-62.
- Martinez Garcia de Leaniz, P. and Rodriguez del Bosque, I., 2013. Intellectual capital and relational capital: The role of sustainability in developing corporate reputation. *Intangible Capital*, 9(1), pp. 262-280.
- MERITUM, 2001. Measuring intangibles to understand and improve innovation management. *Final Report MERITUM Project*, European Community, Brussels.
- Mertins, K. and Orth, R., 2012. Intellectual capital and the triple bottom line: overview, concepts and requirements for an integrated sustainability management system. *4th European Conference on Intellectual Capital*, Reading: Academic Publishing International, pp. 516-526.
- Mitchell, R.K., Agle, B.R., Wood, D.J., 1997. Toward a theory of stakeholder identification and salience: defining the principle of who and what really counts. *Academy of Management Review*, 22(4), pp. 853-886.
- Molodchik, M.A. and Shakina, E.A., 2013. Metrics for the elements of intellectual capital in an economy driven by knowledge. *Journal of Intellectual Capital*, 15(2), pp. 206-226.
- Mura, M., Lettieri, E., Spiller, N., Radaelli, G., 2012. Intellectual capital and innovative work behaviour: Opening the black box. *International Journal of Engineering Business Management*, 4(39), pp. 1-10.
- Ollikainen, M., 2014. Forestry in bioeconomy- Smart green growth for the humankind. *Scandinavian Journal of Forest Research*, 29, pp. 360-366.
- Paoloni, P. and Lombardi, R., 2017. Exploring the connection between relational capital and female entrepreneurs. *African Journal of Business Management*, 11(24), pp. 740-750.
- Paoloni, P., Cesaroni, F., Demartini, P., 2017. The Relational Capital of Universities: A dynamic approach. *13th Interdisciplinary Workshop on Intangibles and Intellectual Capital. Value Creation, integrated reporting and governance*, Ancona, Italy.
- Peng, T.J.A., Pike, S., Roos, G., 2007. Intellectual capital and performance indicators: Taiwanese healthcare sector. *Journal of Intellectual Capital*, 8(3), pp. 538-56.
- Pfau, S.F., Hagens, J.E., Dankbaar, B., Smits, A.J.M., 2014. Visions of Sustainability in Bioeconomy Research. *Sustainability*, 6, pp. 1222-1249.
- Purcărea, V.L., Gheorghe, I.R., Petrescu, C.M., 2013. Negative Emotions Design: Exploring Romanian Consumer Electronic word-of-mouth Behavior in Health Care Services. *Proceedings of the Academy of Marketing Conference*, Cardiff, UK.

- Radaelli, G., Mura, M., Spiller, N., Lettieri, E., 2011. Intellectual capital and knowledge sharing: the mediating role of organisational knowledge-sharing climate. *Knowledge Management Research & Practice*, 9(4), pp. 342-352.
- Raghu, S., Spencer, J.L., Davis, A. S., Wiedenmann, R.N., 2011. Ecological considerations in the sustainable development of terrestrial biofuel crops. *Current Opinions on Environmental Sustainability*, 3, pp. 15-23.
- Richardson, B., 2012. From a fossil-fuel to a biobased economy: The policies of industrial technology. *Environmental Planning C: Government Policy*, 30, pp. 282-296.
- Robinson, J.R., 1998. Financial capital and intellectual capital in physician practice management. *Health Affairs*, 17(4), pp. 53-74.
- Schmid, O., Padel, S., Levidow, L., 2012. The bio-economy concept and knowledge base in a public goods and farmer perspective. *Bio-Based Applied Economy*, 1, pp. 47-63.
- Shumaker, S. and Brownell, A., 1984. Toward a Theory of Social Support: Closing Conceptual Gaps. *Journal of Social Issues*, 40(4), pp. 11-36.
- Spender, J.C. and Grant, R.M., 1996. Knowledge and the firm: Overview. *Strategic Management Journal*, 17(S2), pp. 5-9.
- Subramanian, M. and Youndt, M., 2005. The influence of intellectual capital on the types of innovative capabilities. *Academy of Management Journal*, 48(3), pp. 450-463.
- Sussan, F., 2012. Consumer interaction as intellectual capital. *Journal of Intellectual Capital*, 13(1), pp. 81-105.
- Sveiby, K.E., 1997. *The New Organisational Wealth: Managing and Measuring Knowledge-Based Assets*. San Francisco: Berrett-Koehler.
- Upham, P., Klitkou, A., Olsen, D.S., 2016. Using transition management concepts for evaluating of intersecting policy domains (“grand challenges”): The Case of Swedish, Norwegian and UK biofuel policy. *International Journal of Foresight Innovation Policy*, in press.
- Wall, A., 2005. The measurement and management of intellectual capital in the public sector: Taking the lead or waiting for direction? *Public Management Review*, 7(2), pp. 289-303.
- WCED (World Commission on Environment and Development), 1987. *From one earth to one world: An overview*. Oxford: Oxford University Press.
- Yahya, N.A., Arshad, R., Kamaluddin, A., 2014. Measuring green intellectual capital in Malaysian environmentally sensitive companies. *Proceedings of the International Conference on Advances in Social Science, Economics and Human Behavior*, pp. 1-5.
- Zigan, K., MacFarlane, F., Desombre, T., 2008. Intangible resources as performance drivers in European hospitals. *International Journal of Productivity and Performance Management*, 57(1), pp. 57-71.
- Zigan, K., MacFarlane, F., Desombre, T., 2009. The identification of important intangible resources in hospitals. *International Journal of Public Administration*, 32(13), pp. 1162-1181.