Digitalization of business relationships: A conceptual framework

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Jari Salo, (M.Sc.), Researcher in Marketing[1]

Department of Marketing

jari.salo@oulu.fi

[1] Corresponding author: Jari Salo, Faculty of Economics and Industrial Management, Department of Marketing, University of Oulu, P.O.Box 4600, FIN-90014 University of Oulu, Finland, e-mail:jari.salo@oulu.fi, tel: +358 8 553 2957, fax: +358 8 553 2906

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Abstract

The purpose of this paper is to elaborate on key concepts related to digital business relationships and show important relations between these concepts. I explain how individual acts and episodes that constitute business relationship are being digitalized and how this digitalization enables the creation of digital business relationships. Digital business relationships conducted in digital environments are emerging phenomenon in main stream marketing literature. This paper is conceptual in nature and the main outcome of the study is the model developed for tackling the phenomenon.

Introduction

Business relationships have been the key focus of marketing studies for decades in the IMP-Group and also in marketing channel literature in various forms (Wilkinson 2001). Information technology (IT) has also been central focus since first computers and before that in form of telegraph and phones. Marketing as a discipline is focusing on exchanges (Blau 1964 and Bagozzi 1975) and value derived from those exchanges. Business relationship or relational exchange is one form of exchange.

There are many stories told how IT and other related technologies are altering our way of life. Tapscott,Ticol and Lowy (2000); Negroponte (1995) and Dertouzos (1997) and many others claim that the world is really changing while others like Porter (2001) predict that technologies are only facilitating these changes and exchanges. Between two extremes nothing or everything I think lays real answer. Some aspects of business will be impacted

upon IT while others are left as they were time before the internet. It should be said here that the internet and most importantly the WWW are only one form of IT and that IT has been here long before the internet. In this paper I use the term IT to encompass all the technologies capable of transmitting and processing information.

It can be argued that there exists identifiable research gap between the current understanding of business relationships and IT. Electronic commerce technologies (ECT), information systems (IS) and information and communication technology (ICT) are key elements of IT in this paper. The current business to business electronic commerce (B2B EC) literature has mainly been interested to understand the different business models (Tapscott, Ticoll, and Lowy 2000 and Lucking-Reiley and Spulber 2000) and not the changes occurring under the surface. More elaborated frameworks from the business perspective are needed since the business models and technological solutions should not be the main focus of study. Technologies are resources that firms must use effectively by creating value and competitive advantage.

This study unfolds as follows. The first part of the study presents a review of the literature on IT and business relationships. This will be followed by an illustration of the concepts related to the study and after that I will try to create a framework that will tackle the phenomenon labeled digital business relationships. The paper concludes with a discussion of limitations and future research.

Literature review

If I look upon the literature on IT I can easily see two extreme views on IT. These are the techie view and the humie view (Dertouzos 1997). Since I am looking at the impacts of IT on business relationships and arguing that digital business relationships are possible I am at the moment looking from the humie viewpoint. It means, in this paper, that technologies are for people and used by the people. There exists great deal of different definitions of IT in the literarture, academia and in business and there has been proposed many relations between IT, ICT, IS and ECT. As pointed out by Wilson, Littler and Bruce (1997) it is not fruitful to identify different approaches to define IT. It should be only noted that IT should be used as effectively as other resources that firm has access to. In the US more than 50 percent of the capital spending goes to IT and that counts for one third of the growth of the entire US economy (Davenport and Prusack 1997). Similar patterns are found in Europe. The investments to IT may turn against business parties if those IT investments are not used by the people that constitute an organization. If employees do not adopt the use of new IT into their work processes then the investments should not be done. Fuglseth and Gronhaug (1994) cleverly pinpointed that humans are the basic element in every IS. The impact of IT on many different aspects of economy has been discussed with help of conceptual models but not until recently empirically based models have been presented. A review study of these empirical studies on IT and economic performance is conducted by Dedrick, Gurbaxani and Kraemer (2003) and they found that IT has a positive and significant impact on labour productivity and economic growth. IT in various combinations ranging from the internet, WWW, HTML to different applications and systems including enterprise resource planning (ERP), customer relationships management (CRM) supply chain management (SCM), enterprise application integration (EAI) are enabling business processes and creating new business contexts for

companies to operate. At the end of the day, the internet and many new technologies enables people and organizations to establish, create, maintain and end relationships between organizations. The question to answer from the marketing perspective is how to use these technologies to connect to relevant people and organizations to make exchanges possible.

The impact of IT on business relationships has been studied only in few publications until the publication of the article by Leek, Turnbull and Naudé (2003). They focused on communication modes in the UK. Business relationship can be thought of as consisting of separate acts and episodes that constitute the relationship (Holmlund 1997); (Tikkanen, Alajoutsijärvi and Tähtinen 2000). Act is single event while in episode there are many acts. Purchasing, from inquiry to after sale service could be thought of as episode while invoicing could be one act. Interaction between two individuals builds up the business relationships which consist of two interacting companies and acts and episodes between them. The business relationship or dyad is part of larger network as pointed out by Anderson, Håkansson and Johanson (1994); Håkansson and Snehota (1989). The business network is in greater detail discussed in Axelsson and Easton (1992); Håkansson and Snehota (1995). These business networks can be looked upon from many viewpoints and one type of abstraction is through strategic nets (Möller, Rajala and Svahn 2002). Business relationships between business parties have been and are changing since the development of the internet and the web browser. These and other IT have made digital interactions possible between individuals and corporations. The seller and the buyer do not have to meet in person but they can interact digitally. Technologies are in an increasing amount used between business parties in order to unleash the power of business relationship. With the help of IT we now face a new phenomenon referring to the fact that quite many products, services as well as information can be digitized, converted to bits, and delivered to customers via or with help of

the internet (Shapiro and Varian 1999). This evolution has been accelerated by the producers of goods since the information element almost in every offering is increased (Porter and Millar 1985). All this implies that IT in all its forms is gaining momentum.

The impacts of IT developments on business relationships

In this part of the study I will try to combine the presented concepts and ideas in to coherent framework. The figure one presents ten separate acts and three episodes between business parties that are accumulating the business relationship and are affected by the digitalization. There exist many types of combinations of digital and atomistic acts. The first episode in the figure one is atomistic i.e. non digital, second one is partially digital and third one is digital. Each act has its environment which can be either digital or atomistic. Atomistic environment can be felt by the people while digital environment is in this paper defined as a mixture of various electronic devices (PCs, PDAs, mobile phones, and digital television) and enabling technologies such as the internet, intranets, extranets as well as traditional media channels (TV, radio) used in facilitating exchanges.

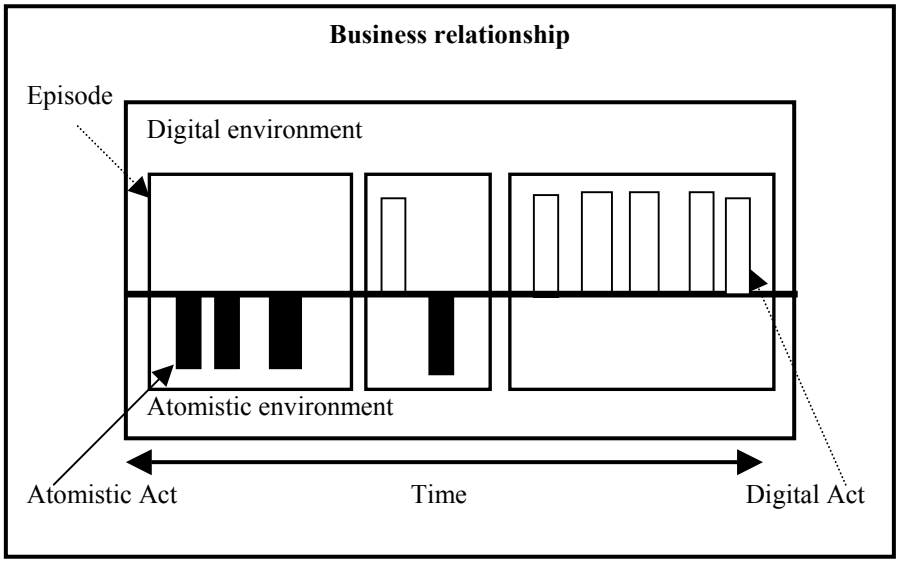

Figure 1: The impact of IT and digitalization on business relationships.

In relationships parties can have fully digital interactions with each party or these parties can digitalize some elements of the relationship or the network. Digital business relationships (DBRs) that are formed in digital environment with compatible applications and systems provide sustainable competitive positioning towards enemies because DBRs with substantial managerial IT-skills are hard to imitate (Mata, Fuerst and Barney 1995). This is possible since the information flow between different strategic business units and organisations that are embedded in the relationship are tightened together by working IS and applications. However, atomistic products that cannot be digitized are still delivered via the traditional channels.

The impact of digital technologies on business relationships are two-folded. Firstly, digital technologies impact on the relationships that exist between people that are conducting business in the name of the firm. Secondly, the impact is on the relationship that exists between these business parties. If we move away from the business relationship to triad level, we can see third impact on strategic net level or closer to business network level. The digital technologies are affecting also on the third parties that are directly or indirectly related to the focal relationship. The change is also transmitted to the whole network level while the most profound impact is on the closest network. It could be argued that the impact is most powerful if the focal relationship parties are strongly tied together (connected) and are central players in one specific industry (location). The impact is not so large if few small companies involved in a relationship start to invest digital technologies that are needed in a close relationship between them.

DBR encapsulates the ideal combination of acts and episodes in digital form and these are the cornerstone of digital business relationships. The act, episode and the forming of business

relationship concepts are somewhat misleading when considering the temporal aspect but at the moment this division of time and action into slots will work for the purpose of this research. With help of this model we can ponder on and guide our thinking about the changing elements of business relationships. Other business relationships are more profoundly affected by the digitalization than others. The most eminent impact will be upon the possibility to collaborate between parties in digital environments that look and feel like traditional face-to-face environments.

Conclusions and further research

The main result of this study is the developed model. DBR model highlights digital acts and episodes that constitute digital relationship. I also presented some ideas how DBRs are impacting third parties directly or indirectly related to the business relationship. This study as exploratory and conceptual study has limitations. First and foremost rather general model is not empirically tested and there exist some inadequacies in the relationships between the concepts. Further research includes elaboration and crystallization of the developed model and also the empirical validation of the model.

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