

Chapter 8

Optimizing Collaborative E-Commerce Websites for Rural Production Using Multi Criteria Analysis

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ABSTRACT

In this chapter, we will discuss the Website features to be accounted while designing a collaborative Website for e-commerce purposes, making the Website useful and attractive to revisit. Since the sector of rural production holds difficulties while adopting e-commerce models, the aim of this chapter is to present a methodology aiming to optimize the conceptual content model used in collaborative e-commerce Websites promoting rural production. The methodology approach concerns the retrieval of the relative Websites in the Internet. Qualitative and quantitative content characteristics are identified and discussed in the retrieved Websites to be used as criteria. Websites are further ranked according to 13 criteria using the multicriteria analysis method. Finally, the retrieved Websites are classified in groups concerning the above criteria and collaborative Web tools included, aiming to identify the optimum group of Websites. The optimum group can be used to benchmark the Web design of e-commerce Websites concerning rural production aiming to incorporate collaborative Web tools and become more appealing to Web users accustomed to the Internet culture.

INTRODUCTION

The aim of this chapter is to present a methodology aiming to optimize the conceptual content

model for collaborative e-commerce Websites promoting rural production using the multicriteria analysis method of PROMETHEE II through the qualitative Website's evaluation.

DOI: 10.4018/978-1-60960-581-0.ch008

Internet is an exceptionally dynamic environment, continually developing and as it has become a major resource in modern business, many enterprises have already created their Web presence (Andreopoulou et al., 2008). E-commerce consists of the distributing, buying, selling, marketing, and servicing of products or services over electronic systems such as the Internet and other computer networks. It is an innovation that changes the traditional ways of doing business as it provides a new marketing tool and potential customers for a firm worldwide. It can involve electronic funds transfer, supply chain management, e-marketing, online marketing, online transaction processing, electronic data interchange, automated inventory management systems, and automated data-collection systems. It typically uses electronic communications technology such as the Internet, extranets, e-mail, e-books, databases, and mobile phones (Lefebvre and Lefebvre, 2002, Lefebvre et al., 2005). To many small/medium enterprises (SME), e-commerce adoption seems to be a very prospective alternative to the way they do businesses. Enterprises and individuals have become more familiar to do business as and when they like, thus long-established enterprises in all areas of interest are continually searching for internet-enabling their products and services (Krueger and Swatman, 2004).

The perceived strengthening of a company's competitive position may often be the justification for a company to adopt e-commerce (Loughlin, 1999). E-commerce not only stimulates European companies to economic growth and to an investment in innovation, but also it can increase industrial competition because nowadays everyone can access the Internet (Edwards, 2002). Business-to-consumer electronic commerce (B2C) is a form of electronic commerce in which products or services are sold from a firm to a consumer. It is evident that, if a commercial business-to consumer (B2C) Website is to successfully generate sales, that Website must have features that appeal to potential buyers (Blake et al., 2005).

Companies that provide products or services directly to customers are called direct sellers. These types of B2C companies are the most well-known. There are two types of direct sellers: e-tailers and manufacturers. a) E-tailers: Upon receiving an order, the e-tailer ships products directly to the consumer or to a wholesaler or manufacturer for delivery and b) Manufacturers: The manufacturer sells directly to consumers via the internet. The goal is an extended e-commerce adoption aiming to remove intermediaries, through a process called "disintermediation" -not a new idea as catalogue companies have been utilizing this method for years- and to establish direct customer relationships (Haag et al., 2004). On the other hand, B2B, or B-to-B e-commerce represents roughly 70–85% of total e-commerce activities OECD, 2004).

This chapter discusses the special Website features that are necessary to be accounted while designing a collaborative Website for e-commerce purposes making the site useful and attractive to return to. Also, the perspectives and drawbacks concerning e-commerce adoption regarding rural production will be stated and will be presented the various stages of e-commerce adoption. Details will be presented about the adopted methodology using the multi-criteria analysis method of PROMETHEE II, and compared to other multi-criteria decision-making methods, aiming to optimize the conceptual content model of collaborative e-commerce Websites promoting rural production. The identified Website features to be used as criteria will be discussed with focus on the collaborative character of the Websites. The total ranking and grouping will be presented and the optimum group identified will be further described and will be discussed in comparison to the collaborative Web tools. Finally a case study of timber trade enterprises in Greece will be presented..

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