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The adoption of consortium B2B e-marketplaces: An exploratory study

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Abstract

Despite the considerable number of electronic B2B marketplaces formed and the benefits cited as arising from their use, many have gone out of business. This exploratory study seeks to provide a qualitative exposition of the specific factors influencing the adoption of consortium-owned B2B e-marketplaces. The study is based upon case studies of twelve companies trading through three different consortium B2B e-marketplaces. Twenty-six specific factors are identified and their impact on adoption is discussed. The identification of a significant number of factors specific to this domain provides real meaning and depth to those interested in the future of e-marketplaces. In particular, the factors identified provide those that operate such e-marketplaces with a detailed and actionable understanding of the issues they should address in order to survive, and provide users or potential users of consortium marketplaces with a practical framework with which to assess individual marketplaces. The factors can also form the basis of future studies of other types of marketplaces and of quantitative studies of adoption.

Keywords: Electronic marketplaces; B2B e-commerce; Adoption; Diffusion of innovation; Case studies

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1. Introduction

Business to business (B2B) electronic marketplaces, or e-marketplaces, have been in existence for over a decade, in which time they have been used to trade a wide range of goods. The development of the Internet caused heightened interest in this type of inter-organisational system (Kaplan and Sawhney, 2000), and the number of new e-marketplaces grew rapidly in 1999 and 2000. By 2001, Laseter et al. (2001) identified 2233 e-marketplaces. This contrasts starkly with the 750 active e-marketplaces registered on the directory of trade organisation eMarket Services in mid 2006. Many early e-marketplaces failed, high-profile casualties including Chemdex, MetalSpectrum, GoFish and E-Chemicals (Miller, 2001; Karpinski, 2001). More recently even the best-known marketplace, Covisint, has experienced difficulties (Arbin and Essler, 2005), having evolved from a collaborative venture established by leading automotive companies such as Ford, GM and Daimler-Chrysler, to one that by 2006 was independent of the automotive industry (in terms of its ownership) and that offered services to healthcare companies.

These failures seem to be mirrored in relatively low levels of adoption, though quantitative data is patchy. Research by the European Commission (2004) found that across multiple industries, on average 11% of organisations used electronic marketplaces for at least part of their trading. The sectors with the highest level of adoption were transport and equipment, with 32% and 28% of organisations adopting, respectively. Textiles and healthcare were the lowest with 4% and 5% adoption rates. A number of specific marketplaces are thriving, however: for example, SupplyOn, an e-marketplace in the automotive sector, became profitable in 2003 with revenues of 18 million Euros; and in early 2005, Exostar, an e-marketplace in the aerospace industry, was supporting over 20,000 companies and conducting over 700,000 transactions every month, after making its first operating profit in 2003.

There has been much speculation as to why adoption of e-marketplaces has seemed relatively slow. Wise and Morrison (2000) attributed the “sparse transaction volumes” and “low levels of revenue” to the emphasis in e-marketplace functionality on competitive bidding and on helping buyers find new suppliers. They believed that this caused marketplaces to fail to attract sellers, leading to low levels of transactions, and thus of revenue. Other authors have cited insufficiently developed standards (Albrecht et al., 2005); the characteristics of the particular vertical market (Yadav and Varadarajan, 2005); and a lack of trust between buyers and suppliers (Ratnasingam et al., 2005). There has been little systematic study, though, of this mismatch between early expectations and the experience to date. This leaves researchers and practitioners alike unsure as to how important the e-marketplace will become to business-to-business relationships, and unclear on how they can evaluate whether a given marketplace will flourish.

This paper therefore reports on an exploratory qualitative study that identifies factors influencing the adoption of B2B e-marketplaces. Our focus is on consortium marketplaces as these have been hypothesised as most likely to be sustainable (Devine et al., 2001). Our method involves 25 interviews with twelve organisations that trade through three B2B e-marketplaces as well as with managers within the marketplace organisations themselves. We start with five variable groups derived from the work of Rogers (2003) and others which have been found to influence adoption across a wide range of innovations. We identify 26 sub-factors of these five variable groups that give specific meaning and depth to the variable groups within this domain. We also report on the extent to which these sub-factors