Strategies for E-Procurement: Auto Industry Hubs Re-Examined

Mickey Howard, University of Exeter, UK
Richard Vidgen, University of New South Wales, Australia
Philip Powell, Birkbeck, University of London, UK, & University of Groningen, The Netherlands

ABSTRACT

Amid the turmoil of the current economic crisis, the wild expectations for business-to-business electronic marketplaces or ‘e-hubs’ as transformative modes of exchange for all industries have subsided. However, e-hubs continue to elicit interest in industries such as car production. Yet, there is little research that investigates firms’ strategies for e-procurement in the automotive industry and the potential benefits of e-hubs to them. This research re-examines the transition from bespoke electronic data interchange to generic electronic procurement, and conflicting motivations and complex barriers at firm and industry level are revealed. The article develops a framework that examines the benefits and barriers to firms joining e-hubs, applies the framework to the car industry, and proposes an e-procurement matrix that offers alternative strategies. Six cases from vehicle manufacturers and component suppliers demonstrate a shallow industry structure that lacks supplier integration, where a particular concern is the emergence of consortium e-hubs that combine a transactional approach for reducing price, with a collaborative approach that requires sharing knowledge. While this dispels the myth of simplistic e-commerce models, the governance of e-procurement across collaborative supply chains is still uncertain.

Keywords: Automotive, Information Systems, Supply Structure, Procurement, Strategy

INTRODUCTION

The car industry is undergoing profound changes as the global financial crisis hits the firms’, their suppliers’ and their customers’ ability to borrow. Some major automotive manufacturers such as GM and Ford are closing production plants while others are moving to short working and periodic shutdowns (Professional Engineering, 2008). There has been rampant press speculation as to the ability of some firms to survive, though government assistance appears to have reduced the immediate threat of bankruptcy. Despite its current problems, the world automotive industry could still produce over 94 million new cars per annum even though there are now buyers for fewer than 60 million (Economist, 2009), and the industry represents a significant

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proportion of gross domestic product in developed countries, for instance 5% in the UK (Crain, 2008). However, though the current crisis has been sharp and sudden, significant change has been occurring in the car industry for some time. The rise of the Internet and the rapid spread of electronic procurement across world markets have left few industries unchanged. Since its inception in the early 1990s, electronic commerce has been a focus of world markets seeking new solutions to business models and dramatic reductions in transaction costs (Timmers, 1998; Min & Galle, 1999). While initially acclaimed for the re-structuring of old-world economies and enabling inter-organization collaboration, e-commerce has since endured a ‘dotcom’ style crash and has been criticised for failing to deliver value (Boot & Butler, 2001; Connelly, 2001). This is particularly true of the automotive sector, whose old economy origins, information technology (IT) legacy systems and complex, hierarchical supply chains mean information system (IS) transformation is more difficult than in other industries such as grocery retailing (Smaros et al., 2000; Vanany et al., 2009). Intense competition in high-volume passenger vehicle manufacturing, an emphasis on cost, and the collaborative opportunities offered by electronic supply networks, has sustained interest in business-to-business electronic marketplaces or ‘e-hubs’ in this sector (Bakos, 1998; Kaplan & Sawhney, 2000; Baldi & Borgman, 2001; Barratt & Rosdahl, 2002; Jun, et al., 2008).

In 2000 the launch of ‘Covisint’, the biggest and most powerful automotive e-marketplace was heralded as the beginning of a new era in auto industry purchasing and supply chain management. The founder members, Ford, General Motors and DaimlerChrysler, anticipated significant component price reductions and customer responsiveness by combining purchasing economies of scale and Internet technology (Baldi & Borgman, 2001). However, rival vehicle manufacturers (VMs) and component suppliers were already developing their own solutions and were reluctant to subscribe over fears of accepting a subordinate role. As private trade exchanges proliferated, Covisint’s vision of offering collaborative procurement, lower transaction costs and the introduction of a universal system standard began to diminish (Kisiel & Whitbread, 2000; Helper & MacDuffie, 2002). While the e-hub has survived the on-going world economic and socio-political upheaval, their number has dwindled to around 10 per cent of the 2000 peak (Kisiel, 2002). The automotive industry needs to become leaner, more efficient and better integrated with its supply chain in order that it can survive the credit crunch and prosper thereafter.

With this in mind, this research investigates the strategies for e-procurement being implemented in the auto industry. It assesses why firms joined e-hubs and the benefits they foresaw and the barriers that emerged. The article first develops a framework that examines the motivation and barriers for firms joining e-hubs, and applies the framework to the car industry. This ‘industry transformation framework’ enables a cross-case comparison of the motivations and barriers to e-hub adoption between six firms consisting of vehicle manufacturers and component suppliers. The article then offers an e-procurement matrix that suggests alternative strategies for the cases by focusing on supply chain interaction in electronic markets and networks. The findings suggest that despite the growth in electronic business, neither the means for effective e-procurement integration, nor the impacts on industry are well understood.

The article is structured as follows. Section two explains the research method. Section three reviews the emergence of e-procurement and e-hubs in the auto industry, and models the benefits and barriers to integration. Section four conducts the analysis of the cases and applies the framework. Section five develops the e-procurement strategies, and section six presents the conclusions and implications.
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