

INTERNET EDI AND SMES

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ABSTRACT

The growth of the Internet has allowed business organisations to participate in e-commerce. E-commerce can exist between business organisations i.e. business to business e-commerce, sometimes referred to as Internet EDI (Electronic Data Interchange), as well as between business and customer. Small and medium sized organisations (SMEs) do not generally participate in traditional EDI largely because they lack the technical and financial resources. However, the development of Internet technologies and the resulting paradigm shift from EDI to Internet EDI should enable SMEs to take advantage of open standards and attain the benefits of EDI. A pilot survey of SMEs in a local area in Scotland was undertaken to establish if any local businesses are participating in Internet EDI and to detail the business-to-business e-commerce methods employed. The initial pilot study response was too small to give clear results but raised some questions for future research.

KEYWORDS

Business-to-business e-commerce, Internet EDI

1. INTRODUCTION

The growth of the Internet has allowed organisations to use a variety of electronic exchange systems commonly referred to as e-commerce. Ecommerce activities can exist between business organisations i.e. business-to-business e-commerce (B-to-B) or between business and customer where the customer is a consumer. B-to-B is sometimes referred to as Internet EDI (Electronic Data Interchange). Because Internet EDI uses Internet based technologies increased standardisation now exists for business to business exchange of information. The possibility now exists for a paradigm shift from traditional EDI to Internet based EDI.

Traditionally, because of the implementation and maintenance costs, SMEs are reluctant to participate in EDI. (Threlkel and Kavan, 1999). However, the development of open standards means costs can be significantly reduced. (Lankford and Johnson, 2000). The paradigm shift from EDI to Internet EDI should, therefore, have benefits for SMEs.

Internet EDI, or the use of B-to-B methods, may become accepted business practice in the near future. Based on open standards and using low cost effective technologies B-to-B has the potential to create opportunities for SMEs to participate fully in the electronic market place. There are opportunities for research in the areas of adoption, implementation and use of Internet EDI by both large businesses, and SMEs.

2. PILOT STUDY OF SMES IN TAYSIDE AND FIFE SCOTLAND

A number of Scottish businesses are participating in business to customer e-commerce. However, B-to-B also has the potential to offer economic benefits. In order to understand the current situation, and provide a baseline for future analysis, a pilot study of 55 SMEs in Scotland was undertaken. Five companies completed the survey.

The response to the study was too small to make firm conclusions but some comments can be made. None of the respondents had implemented a major Internet EDI initiative, however, they all use some B-to-B methods such as tracking the progress of orders on-line and making electronic payments alongside conventional methods. Costs savings seemed to be the main driver for using B-to-B methods. No clear picture of any single factor, which could act as a barrier to the adoption of B-to-B emerged, however, there were concerns about IT skills shortage and lack of B-to-B knowledge. The respondent's answers seem to suggest a low risk, low cost and possibly low return attitude towards B-to-B.

The survey was sent to operational managers. The B-to-B initiatives were taken by managers themselves at departmental level and not as a result of any strategic decision taken by the company. There did not appear to be any strategic decision to invest in either B-to-B activities or in a major Internet EDI initiative.

Where the knowledge and IT skills were available operational managers appeared to regard B-to-B as a natural way to do business. Where the knowledge and skills were not available the approach was more conservative and the adoption of B-to-B was restrictive.

3. CONCLUSION

The pilot scheme should be extended to include a wider geographical area. To ensure a better response rate organisations, which do not respond to emails, should be contacted by telephone and a questionnaire sent by post. The organisation which had traveled furthest down the B-to-B route could be used as a case study to address the research aims. No businesses were considering a participating fully in Internet EDI with business partners. However, most businesses used some B-to-B e-commerce methods such as tracking the progress of orders on-line and making electronic payments.

The following questions could form the basis of further research.

- Are the implementation issues likely to differ across industry sectors?
- What specific technical skills and knowledge are needed for a full implementation of Internet EDI?
- Is the adoption of B-to-B e-commerce more likely to succeed and give a positive return on investment if the skills and technology are in place?
- Is an incremental approach more likely to succeed than a major implementation?
- Will an initiative be more likely to succeed if it is implemented at departmental rather than strategic level?
- Can the conventional implementation models for IT be used for B-to-B by SMEs?

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