Internet Adoption Decisions in Small Businesses: The Impacts of a Local Web Portal

Heather Fulford, Charles P. Skene Centre for Entrepreneurship, Aberdeen Business School, Kaim House, Garthdee Road, Aberdeen, AB10 7QG, UK; E-mail: h.fulford@rgu.ac.uk

Leonidas Anastasakis, Loughborough University, Loughborough, Leicestershire, LE11 3TU, UK; E-mail: L.Anastasakis@lboro.ac.uk

ABSTRACT
This article demonstrates the role played by the establishment of a UK village community web portal on the Internet adoption decisions of small businesses. The article reports on some of the findings of an ongoing study of this local community web portal, focusing specifically on those small businesses that had, prior to the launch of the web portal, made a decision not to adopt the Internet into their business operations. The barriers these non-adopting small businesses perceived to Internet adoption are identified, and the impacts their portal presence had on their subsequent choice of Internet adoption pathway are discussed.

Keywords: small business; Internet; Internet adoption; web portal; non-adoption

1. BACKGROUND

Discussions in the diffusion of innovations literature suggest that the advent of any given innovation is likely to be met by a variety of responses: some individuals and / or organisations will readily embrace and adopt the innovation, while others will probably prove less enthusiastic and thus be slower to adopt it; and still others will decide not to adopt that innovation at all (for a comprehensive discussion of innovation adoption behaviour, see Rogers 1995). The Internet adoption behaviour of enterprises in the small business sector is no exception to this: within it, there is typically a mix of rapid and enthusiastic Internet adopters, more cautious or slower Internet adopters, and those who decline to adopt the Internet altogether.

The factors that might influence small businesses' Internet adoption or non-adoption decisions are many and varied. Fillis, Johannson and Wagner (2004), in their proposed conceptual framework for Internet adoption identify factors focussed largely on the characteristics of the CEO. These include the CEO's attitudes to e-business, his/ her approach to change (or resistance to it), his / her attitude to technology, and his / her attitude towards acquiring new skills. They further suggest that financial and resource constraints within a small firm may pose barriers to Internet adoption. Elsewhere, it has been noted that Internet adoption is likely to be industry-sector dependent (see for example Poon and Swatman, 1997; Martin and Matlay, 2001). Teo and Ranganathan (2004) discuss attitudes to risk and how these influence Internet adoption decisions.

Adoption of the Internet is arguably more complex than the adoption of many other innovations. The essence of this complexity lies in the fact that the Internet comprises not simply one single application or technology, but rather a collection of applications (e.g. email, static web site, transactional web site, and so on). A small business' decision to adopt the Internet might entail simply deciding to use email for communication purposes; on the other hand, it might involve transforming the firm into a fully integrated e-business. Research to date suggests that many small firms approach Internet adoption in a series of steps, moving from the adoption of non-complex applications (such as email), through to more complex applications (such as transactional and integrated web sites) as their confidence in, and familiarity with, Internet technology grows (see for example Daniel, Wilson and Myers, 2002). It is increasingly acknowledged that such progression may include 'leapfrogging' of individual applications, rather than being a strict linear progression taking in each application in turn (see for example Rao, Metts and Monge, 2003).

Typical Internet adoption progressions discussed in the literature tend to begin with either email adoption or adoption of a basic informational web site. Some authors have, however, suggested that the first adoption level might entail having a 'basic web presence', by which they mean the company 'places an entry in a web site listing company names' (Chaffey, 2002), but does not have its own web site. The rationale for such an entry, as Chaffey goes on to explain, is essentially to 'make people aware of the existence of a company or its products'.

This 'basic web presence' stage of adoption has, to date, received little attention in empirical studies of Internet adoption by small firms. The present study was set up in order to help address that gap in the research literature by determining the role played by a local community web portal in the Internet adoption decisions and progressions of a number of small firms in a UK village. It is anticipated that the findings of the study will make a timely and relevant contribution to existing understanding of small business Internet adoption decisions and processes.

2. LOCAL COMMUNITY WEB PORTAL: OVERVIEW

The local community web portal under investigation in this study was launched towards the end of the 1990s as part of a wider community initiative in a UK village. This web portal was designed to provide a forum for community groups and charitable organisations located in the village to communicate details of their activities and / or services to the local population. In addition, through the provision of an online business directory, the portal gave businesses based in the village the opportunity to promote their products and / or services. It is this online business directory component of the local community portal that forms the focus of the study discussed in this article.

The online business directory was, it seems, included in the portal without any prior consultation or discussion with local SMEs to ascertain demand for such a facility or to determine specific requirements. It was offered to local SMEs as a marketing and promotional tool, partly in the anticipation that those SMEs that found it fruitful would be prepared to contribute to the ongoing funding and sponsorship of the portal it in the future.

The online business directory is organised thematically, including for example, sections for retail organisations, building and property maintenance enterprises, and private health and welfare providers. Each entry in the directory includes the name of the business, its postal address, other contact details (e.g. e-mail address, where available), a link to the business' own web site (if it has one), and a brief summary of what the enterprise offers by way of products and / or services. No charge is levied for local businesses to have an entry placed in the online business directory. However, local businesses, together with the local council, are encouraged to participate in providing sponsorship to cover the costs of maintaining the local community portal. Costs are kept to a minimum as the portal is managed, maintained and updated by a small team of local unpaid volunteers, with web content being supplied, as appropriate, by local individuals, community organisations and businesses.

Table 1. Small businesses participating in the study

Case	Type	Enterprise size (employees)
Case A	Plumber	4
Case B	Electrician	3
Case C	Manufacturer & distributor of electrical components	7
Case D	Manufacturer & distributor of ceramic tiles	8
Case E	Food importer & retailer	5
Case F	Outdoor/expedition equipment suppliers	8

3. RESEARCH METHOD

The investigation of the small businesses participating in the online business directory component of the local community web portal was undertaken by means of semi-structured interviews with the owner managers. Each of the 77 small businesses listed in the online business directory was contacted by telephone and invited to participate. In this article, the findings of the interviews conducted with six of these small businesses are presented. These six have been selected for discussion because the local community web portal acted as the catalyst for each of them to become Internet adopters. A summary of the participating enterprises is given in Table I below.

Interviews were conducted during 2004-05. In order to provide a framework for the interviews, an interview guide was prepared. The core topics covered in this guide were as follows:

- Background data about the small business and the owner / manager;
- Rationale for not adopting the Internet (prior to involvement with the portal);
- Motivations for portal participation;
- Benefits derived from portal participation;
- Problems encountered with portal participation;
- Impacts of portal participation on further Internet adoption;
- Future plans regarding Internet adoption.

4. SUMMARY OF FINDINGS

The enterprises participating in the study can be categorised as micro businesses, that is to say, they each have under 10 employees (Storey, 1994; Curran and Blackburn, 2001). In this section, the core findings of the study are presented, beginning with those findings relating to the CEOs' decision not to adopt the Internet.

The Non-Adoption Decision

During the interviews with the CEOs of the participating enterprises, a number of reasons were identified regarding why they had, prior to the launch of the local community web portal, decided not to adopt the Internet into their business operations. For example, Cases A and B indicated that the limited (i.e. local) geographical reach of their enterprises represented the dominant barrier to Internet adoption. These two enterprises had no plans to expand their customer bases to a wider catchment area, and were instead focusing on growing their customer base within the immediate locality of the village and surroundings. They believed the Internet to be an important medium for firms covering a wide geographical area, but not for enterprises like theirs which had only a local focus. Another reason discussed for non-adoption was the lack of external pressure to adopt, notably the lack of pressure from customers (highlighted particularly by Case C). Cases D and E felt that their existing methods of doing business, and particularly of marketing their products and / or services, were working well, and so they did not believe that any additional benefit would be gained from Internet adoption. Other reasons discussed in the interviews concerned the perceived risk of Internet adoption, particularly a concern about costs and potential for wasted investments (both financial and otherwise). Organisational readiness was also mentioned (particularly by Case F), with a dominant issue here being the enterprise's perceived lack of the necessary in-house ICT skills to handle Internet adoption.

Motivations for Involvement in the Portal Project

For each of the enterprises participating in the study, the key reason for getting involved in the online business directory component of the community web portal project was that the CEOs believed the portal presented a low-risk opportunity to experiment with having a very basic presence on the World Wide Web. This opportunity enabled them to assess whether any value could be derived from such a presence, and was made more attractive by the fact that it was available at no cost to their enterprises.

Impacts of Portal Participation

Participants in the study were asked to indicate the impacts their involvement in the online business directory component of the local community web portal had made on their Internet adoption decisions and behaviour. Two major types of impacts emerged from this part of the ongoing study, and these can be summarised as follows:

Pathway I: Portal Presence Consolidation

The CEOs of Cases A and B found their involvement with the portal project to have been a positive experience. Specifically, they noted that because the portal was focussed on the village in which their enterprises were based, the client enquiries they received via the portal tended to be from people located in that village. This helped to eliminate the problem of travelling large distances between client visits. It also, they maintained, represented a considerable advantage over existing paper-based directories in which their firms were already listed, as these more traditional resources tended to cover a much wider geographical area and so attracted a number of irrelevant and unsuitable customer enquiries which led to wasted time and effort.

Apart from exploring the possibility of setting up email accounts, these two CEOs indicated that they had no immediate plans for further Internet adoption, such as the creation of their own company web site. They both believed that their portal presence was sufficient for their needs. Particularly in view of its strong local links, which fitted well with their need to maintain a local client base.

With regard to their existing portal presence and the design of the online business directory component of the community web portal, the CEO of Case A commented that he would like to see the scope of the individual directory entries expanded. He specifically suggested that it would be useful if each firm could have capacity within its directory entry to include more detailed information about the firm's products and / or services, as well as more details about the firm itself, in order to be able to promote it better to the inhabitants of the village community.

Pathway II: Portal Presence and Beyond

Cases C, D, E and F indicated that their participation in the local community web portal project had proved a useful means for them to determine whether they could derive any value from Internet adoption. As a result of participating in the online business directory component of the community web site project, each of them believed that the Internet did, despite their earlier reservations, have something to offer them. Consequently, a number of specific actions had been taken by them. For example, Case C, D and E had each employed the services of an external organisation to design and create a basic informational web site for their respective small firms. For Case D, the motivation for this had primarily been to cut the costs of marketing and reduce the time spent on marketing activities (such as trade fairs). For Cases C and E, the motivation was related more to a desire to try a new marketing avenue. When probed about ongoing site maintenance and updating, as well as further development of their web sites beyond their initial design and creation, it was clear that some embryonic development plans were in place, with indications being given that transactional web sites might be considered in the future. In particular, Case D had some quite advanced plans for future development of the company web site.

With regard to responsibility for site development, Case F took a rather different stance from Cases C, D and E. He had seen the value of the online directory and recognised now that some form of web site was likely to be useful to his firm (at the very least, an informational web site). However, he was determined to maintain control of all his business operations and not rely on the services of outside consultants for site design and development. Therefore, he had decided to embark on some IT training courses at a local community educational establishment in order that he might develop and run his own web site.

For Case C, D, E, and F, the local community web portal proved to act as an important starting point for the development of these micro businesses towards becoming more Internet-enabled enterprises.

It is evident from the findings that involvement in the online business directory component of the local community web portal provided a means for each of the small businesses participating in the study to begin to overcome their barriers to Internet adoption and to begin to plot Internet adoption pathways appropriate to the needs of the individual businesses. The implications of these findings are discussed in the next section.

5. CONCLUDING REMARKS AND EMERGING ISSUES

This study sought to explore the role played by a local community web portal on the Internet adoption decisions and behaviour of a number of UK small businesses. The study focussed specifically on small businesses that had not adopted the Internet prior to their involvement with the local community web portal project. The findings of the study highlight the importance of such portals for small businesses. For two of the small businesses participating in the study, the web portal was important in its own right as a marketing and promotional tool for their firm's products and / or services. These two businesses had a local reach, which they wished to preserve. Typical efforts to promote the Internet and electronic commerce focus on opportunities for expanding geographical reach, and consequently these firms had ignored the Internet up until the launch of the community portal. Having participated in the portal project, they deemed the portal to be sufficient for their needs, and did not believe that further Internet adoption was warranted for their enterprises. This suggests that an initial portal presence stage of adoption constitutes an important component of Internet adoption models for small businesses. This finding was further confirmed by investigation of the other four enterprises participating in the study: for these small businesses, the portal represented an important means of setting them on a progressive Internet adoption pathway. Their initial portal presence provided a low-cost and low-risk opportunity to determine what value (if any) could be derived for them from Internet adoption.

In summary then, the key implications of this study are twofold. From a theoretical perspective, the study suggests that models of small business Internet adoption should include an early stage comprising portal presence. From a practitioner perspective, the study suggests that when considering Internet adoption, small businesses should not ignore the portal presence stage of adoption as representing a useful experimental opportunity. Equally, those advising small businesses

about Internet adoption should not neglect the portal presence stage as a means of encouraging small businesses into Internet involvement. Local community web portals could be used by small business advisers and government agencies for demonstrating to small firms the value of the Internet even to those firms which traditionally see no need for the Internet in their operations, most particularly those with only a local geographical reach. In particular, there is scope here for local government initiatives to provide community portals, as a means of supporting national governments wider e-business agendas and aspirations.

As indicated at the beginning of this article, the study presented here is ongoing. In a future phase, it will be important to confirm these findings further with a larger sample of small businesses, to test their generalisability, and to provide additional evidence for the small business Internet adoption issues raised in this initial exploratory investigation.

REFERENCES

Chaffey, D. (2002) E-business and e-commerce management: strategy, implementation and practice'. Harlow: Pearson Education Ltd.

Curran, J. & Blackburn, R. A. (2001) Researching the small enterprise. London: Sage Publications Ltd.

Daniel, E., Wilson, H, & Myers, A, (2002) Adoption of E-commerce by SMEs in the UK: towards a stage model. International Small Business Journal. 20(3), 253-270

Fillis, I., Johannson, U. & Wagner, B. (2004) Factors impacting on e-business adoption and development in the smaller firm. International Journal of Entrepreneurial Behaviour and Research. 10 (3), 79-88

Martin, L., & Matlay, H., (2001) "Blanket" approaches to promoting ICT in small firms: some lessons from the DTI ladder adoption model in the UK. Internet Research: Electronic Networking, Applications and Policy. 11(5), 399-410

Poon, S. & Swatman, P. (1997) Internet-based small business communication. International Journal of Electronic Markets 7(2), 15-21

Rao, S. S., Metts, G., & Monge, C. A. M. (2003) Electronic commerce development in small and medium sized enterprises: a stage model and its implications. Business Process Management Journal. 9(1), 11-32

Rogers, E. M. (1995) Diffusion of Innovations. Fourth edition. New York: Free Press

Storey, D. J. (1994) Understanding the small business sector. London: International Thomson Business Press

Teo, T. S. H. & Ranganathan, C. (2004) Adopters and non-adopters of business-to-business electronic commerce in Singapore. Information and Management 42, 89-102

Related Content

Online Dating/Dating Apps
Vladimir Santiago Ariasand Narissra Maria Punyanunt-Carter (2018). *Encyclopedia of Information Science and Technology, Fourth Edition (pp. 7069-7076).*
www.irma-international.org/chapter/online-datingdating-apps/184403

RFID/WSN Middleware Approach for Container Monitoring
Miroslav Voznak, Sergej Jakovlev, Homero Toral-Cruzand Faouzi Hidoussi (2015). *Encyclopedia of Information Science and Technology, Third Edition (pp. 7289-7300).*
www.irma-international.org/chapter/rfidwsn-middleware-approach-for-container-monitoring/112426

Early Warning Model of College Students' Psychological Crises Based on Big Data Mining and SEM
Rui Liu (2023). *International Journal of Information Technologies and Systems Approach (pp. 1-17).*
www.irma-international.org/article/early-warning-model-of-college-students-psychological-crises-based-on-big-data-mining-and-sem/316164

Instructional Support for Collaborative Activities in Distance Education
Bernhard Ertl (2015). *Encyclopedia of Information Science and Technology, Third Edition (pp. 2239-2248).*
www.irma-international.org/chapter/instructional-support-for-collaborative-activities-in-distance-education/112635

Metadata for Information Retrieval in Archives
Vicent Giménez Chornet (2012). *Systems Science and Collaborative Information Systems: Theories, Practices and New Research (pp. 185-195).*
www.irma-international.org/chapter/metadata-information-retrieval-archives/61291