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Why *Should* Small Firms Adopt eBusiness? A Framework for Understanding the SME eBusiness Context

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Abstract

eBusiness research typically questions why small firms do not adopt these powerful technologies and suggests explanatory factors for these perceived shortcomings. This paper argues against the technological expansionist view by questioning why small firms should adopt eBusiness. Specifically, it proposes a new conceptualisation showing that each small firm has different circumstances and associated business goals, and that researchers and practitioners must convince each small firm why eBusiness should be used for its goals in preference to non-technology solutions. The paper also provides some preliminary insights, based on this view, into future theoretical and empirical directions to guide researchers who conduct small firm eBusiness adoption studies.

Keywords

Small firms, electronic business, adoption, business goals, conceptual.

Introduction

There has been considerable research conducted over the last few decades into small and medium enterprise (SME) adoption of IT, IS and, more recently, eBusiness. Our earlier examination of literature from 120 SME-eBusiness journal articles from 2003 to 2006 found that research in this area has focused predominantly on identifying the eBusiness technologies they have adopted, examining the benefits they have gained, and exploring the adoption (barriers and/or drivers) influencing their adoption decisions (Parker & Castleman 2007).

The plethora of adoption factor studies examining SME up-take of eBusiness have produced conflicting findings concerning the empirical significance of the various factors, which we believe is due to a number of reasons. Firstly, there is a tendency in the literature to treat SMEs as a homogeneous group of organisations who differ only by industry and number of employees (see also Macpherson et al. 2003; Parker & Castleman 2007), rather than a highly diverse group of businesses with different contexts and business goals. Secondly, the literature typically assumes a technological expansionist view which assumes that eBusiness should be adopted by all SMEs (Castleman 2004), rather than seeing eBusiness as one of the many possible (including non-technological) solutions which firms can employ to achieve their business goals (Coulthard, Castleman & Batten 2004). Thirdly, the literature tends to examine SME adoption of “the Internet”, “the Web”, etc rather than recognising that these technologies can be used for different business applications which are suitable for different business goals.

The objective of this paper is to propose a re-conceptualisation of eBusiness research focused on small firms, or businesses with fewer than 50 employees (MacGregor & Vrazalic 2005), to address the concerns with existing research. We focus on small firms because they are a very heterogeneous group with complex interrelationships involving owners, family, employees, business networks and external contexts. We argue that future research by the eBusiness academic community should focus on small firm business goals, and on business cases which match the business applications of eBusiness technologies with these goals and which help convince firms that these applications are better solutions to their goals than non-technology alternatives. More significantly, we argue that the academic community should be asking “Why *should* small firms adopt eBusiness?”

The paper is structured as follows. We firstly justify the need for a re-conceptualisation of eBusiness research in the area of small firms. We then argue that small firms are diverse and discuss how this diversity governs their business goals and, more importantly, how these business goals impact on the suitability of eBusiness for small

firms given their diversity. On the basis of this discussion, we present a model which illustrates an alternative view of the small firm eBusiness adoption context. Finally, we provide a preliminary outline of the implications of this re-conceptualisation for future research, theory and practitioner work in area of small firm use of eBusiness to highlight the contributions of the paper.

Re-conceptualising Small Firm Adoption of eBusiness

In an earlier paper we reported an extensive literature analysis of recent SME-eBusiness journal articles (Parker & Castleman 2007) and concluded that many studies are investigations of adoption factors (or a subset of them). The factors are typically categorised as: environmental factors (e.g., pressure from competitors, customer or suppliers, vendor support, government support or regulations); technological factors (e.g., complexity, cost, compatibility); organisational factors (e.g., size, staff eBusiness knowledge, industry or product/service type); and owner characteristics (e.g., education, attitude toward technology, innovativeness, eBusiness knowledge) (Al-Qirim 2005; see also Ching & Ellis 2004; Chong 2006; Premkumar 2003; Wymer & Regan 2005). The objective of many of these studies is to examine the strength of each factor in explaining small firm adoption decisions, and sometimes the relationship between the factors. The research often reveals conflicting support for the significance of the factors. For example, some surveys investigating barriers (among other things) found that competitor pressure was positively correlated with eBusiness adoption (eg, Wymer & Regan 2005) while others found this factor to be insignificant (eg, Al-Qirim 2005; Gemino, Mackay & Reich 2006). Similarly, some surveys found financial constraints to be a significant factor (eg, Wymer & Regan 2005), although others did not find this factor to be influential (eg, Al-Qirim 2005; Grandon & Pearson 2004).

There are a number of reasons for the conflicting picture of the influences on SMEs' eBusiness adoption and use. These can be summarised as follows:

1. While the literature argues that small firms are different from large ones (see MacGregor & Vrazalic 2005 for a summary) there is a tendency to treat small firms as a homogeneous group differing only by industry and number of employees. Yet individual small firms vary widely from one another and their owners may make decisions based on non-economic factors (eg, Beckinsale, Levy & Powell 2006; Castleman 2004; Levy & Powell 2003; Matlay & Addis 2003; Putterill 2004; Ramsey et al. 2003; Taylor & Murphy 2004).
2. Existing research tends to treat the Internet and Web as a homogenous adoption artefact. Instead, our analysis of the literature suggests that a distinction must be made between network infrastructure (e.g., Internet, mobile networks), software infrastructure (e.g., email, Web) and their business applications. For example, instead of investigating Website adoption factors, studies should instead investigate the specific business applications of the Web (e.g., product catalogue, online service delivery) to acknowledge that not all applications are applicable to every small firm or for every purpose (see Parker & Castleman 2007 for a more extended discussion).
3. Adoption factor research tends to assume that slow up-take necessitates remedial action aimed at small firms to reduce barriers and accentuate the drivers (examples illustrating this view include Chong 2006; Dholakia & Kshetri 2004; Kaynak, Tatoglu & Kula 2005; Lawson et al. 2003). While this type of research has helped highlight the potential issues to address, existing studies tend to embrace a technological expansionist view which implies that non-adoption decisions by small firms are inappropriate or indicate failure by small firms, government, etc. The adoption factor approach also leads to an inevitable conclusion that small firms will only adopt eBusiness applications if, for instance, they gain eBusiness knowledge, become more innovative or outward looking, change their management practices, have external pressure exerted upon them, etc.

eBusiness applications are just one of many different approaches (including non-technological ones) which might enable a firm to achieve one or more of its business goals. Small firms are unlikely to be looking to adopt anything (let alone eBusiness) unless they want to pursue a business goal, or believe they have a business problem (which would result in a business goal). Understanding each firm's unique context will be critical to interpreting its goals, and heeding this call necessitates looking at the business case for specific applications of eBusiness technologies, rather than an overarching adoption factor perspective. This view appears to be supported by Zheng et al's (2004) interviews with small firms which suggested they would find the money if they are convinced an eBusiness application would result in quantifiable, short term benefits (see also Egan, Clancy & O'Toole 2003; Gemino, Mackay & Reich 2006). As a consequence, this perspective puts the onus of eBusiness adoption on innovation suppliers to develop and present a convincing business case, rather than on the small firm or its context to change to produce an affirmative adoption decision. The value of this alternative perspective is also supported by MacGregor & Vrazalic's (2005) study which showed that the adoption barriers could be grouped either as "too difficult" or "unsuitable". This categorisation implies that those firms perceiving

eBusiness as unsuitable will not adopt unless they are convinced an eBusiness application will help achieve one or more of their business goals.

In the following section we examine six sources of diversity among small firms, their business goals and determine the suitability (or otherwise) of eBusiness.

1. Characteristics of Small Firm Owners

There is recognition in the literature that the characteristics of an owner influence small firm adoption, because the owner is seen as the principal decision-maker. The most common owner characteristics found to influence adoption decisions include: age; educational level (Burke 2005; Ching & Ellis 2004; Fillis, Johansson & Wagner 2003); gender (Fillis, Johansson & Wagner 2003); management experience (Burke 2005); attitude toward change; degree of determination or drive; and attitude toward or determination to gain new skills and knowledge (Fillis, Johansson & Wagner 2003). The owner also exhibits different qualities when running his or her business including: degree of cosmopolitanism or tendency to be outward-looking (Ching & Ellis 2004) which, if high, might result in market-oriented activities such as gathering competitor and customer information to inform strategy (Jones, Hecker & Holland 2003); innovativeness, creativity and attitude toward risk (Al-Qirim 2005; Fillis, Johansson & Wagner 2003; Wymer & Regan 2005) because if they are more conservative they are more likely to maintain the status quo (Piscitello & Sgobbi 2004); and number of years experience in and knowledge of the industry/ies in which the firm trades (Alexander, Pearson & Crosby 2003; Dholakia & Kshetri 2004).

It is worth noting that these characteristics, if present, would imply the owner is entrepreneurial (e.g., innovative, outward-looking, willing to take risks) and would be more likely to have business goals expected by economic rationalists (eg, growth, profit, etc). But Castleman (2004) argues that such owners are only a subset of small firm operators. For example, some owners have a high degree of pride and status associated with their firm (it is part of their sense of identity), so that decisions are based more on identity enhancement than business strategy. Still others might want to achieve leisure, enjoyment and social goals at the expense of growth and profit.

Small firm owners are also diverse in regard to their perceptions of eBusiness and technology generally, as is commonly recognised in the literature. These perceptions are influenced by such owner qualities as: support level given to projects or top management support (Alexander, Pearson & Crosby 2003; Al-Qirim 2005; de Guinea, Kelley & Hunter 2005; Del Aguila-Obra & Padilla-Meléndez 2006; Tsao, Lin & Lin 2004); attitude toward technology generally (Al-Qirim 2005; Caldeira & Ward 2003; Del Aguila-Obra & Padilla-Meléndez 2006; Fillis, Johansson & Wagner 2003); knowledge of and (past) experience with eBusiness and other related technologies (Al-Qirim 2005; Del Aguila-Obra & Padilla-Meléndez 2006; Dholakia & Kshetri 2004; Wymer & Regan 2005); and trust or confidence in eBusiness (Wymer & Regan 2005). These qualities will influence an owner's tendency to view eBusiness applications as solutions to their problems (assuming they believe they have any) and goals.

In summary, owners and their business goals vary widely and eBusiness research needs to be more sophisticated by taking into account this diversity. This will be further exacerbated when small firms are owned by more than one person, who will each have different characteristics. It is logical to assume that additional relationship factors between co-owners will influence business goals too such as: the dominance of one owner over the other; whether they are husband and wife, parent and child, unrelated business partners, etc. As researchers, we cannot always assume there is a single decision-maker, even if one owner believes they are the primary decision-maker!

2. Mix of Senior Management, Family and Employees

The decision-making and business goals of a small firm can also be influenced by senior management, family and other employees. For example, MacAdam, McConvery & Armstrong (2004) found that if an owner has a direct management style they might insist on family members having managerial positions within the firm instead of other employees. Other owners favour professionalism over nepotism so that family are only employed if they have the necessary skills (Gilding 2000). Similarly, Castleman (2004) argues that family issues can result in business goals which, without knowing this context, would contradict economic rationalist expectations. For example, she reports on findings where some owners' business goals were governed more by work-family balance issues. Gilding's (2000) research also highlights the influence of family business succession (eg, from a parent to one or more children), the relationships among family members, and the degree of autonomy which a family member may have in running the firm. Different business goals and management structures will arise depending on how families compromise between the goals of personal autonomy and family business continuity. The existing eBusiness adoption literature rarely accounts for these complex family influences on business goals.

The influence of employees generally on eBusiness adoption has, by contrast, been investigated to varying degrees in the literature. For example, adoption can result (in part) from employee pressure (Gemino, Mackay & Reich 2006); or a change agent, eBusiness champion or e-manager (Martin & Matlay 2003; Tucker & Lafferty 2004). Adoption has also been found to vary depending on the extent of employee eBusiness knowledge and skills (Al-Qirim 2005; Beck, Wigand & König 2005; Caldeira & Ward 2003; Del Aguila-Obra & Padilla-Meléndez 2006; Jones, Hecker & Holland 2003; Lawson et al. 2003; Stansfield & Grant 2003; Tucker & Lafferty 2004; Wymer & Regan 2005); experience with making major changes (Wymer & Regan 2005); and resistance to new changes or practices such as eBusiness (Beck, Wigand & König 2005; Tsao, Lin & Lin 2004). The ability of staff to gain new eBusiness knowledge through training also varies with firms, depending on the extent to which owners are concerned that staff will not be available for daily operations and that the knowledge gained will not be immediately usable in the firm (Ihlstrom & Nilsson 2003; Stansfield & Grant 2003).

The ability of employees to influence business goals and propose eBusiness solutions, however, might depend on the management style of the owner(s). For example, MacAdam, McConvery & Armstrong (2004) found that owners with a direct management style often do not encourage employees to contribute ideas, which suggests they would not influence business goals. Similarly, Martin (2005) categorises owners and their relationship with employees based on their approach to eBusiness adoption: “warriors” (strong leaders who impose change); or “interpreters” (who emphasise agreement, mediation and explaining change). She explained that employees under these managers sometimes took on the role of “clerks” who were responsible for fact finding, standardisation and control in relation to eBusiness. In other businesses, it was the employee with eBusiness knowledge (“priest”) who controlled its use and guarded this knowledge from other staff and the owner, because they felt that others having a little eBusiness knowledge as dangerous. This suggests that more research is needed to examine the complex interrelationships between owners and employees, which govern how business goals are formulated and which impact on perceptions of eBusiness suitability for achieving the goals.

Organisational structure and the number of employees has also been found to influence eBusiness adoption (Al-Qirim 2005; Del Aguila-Obra & Padilla-Meléndez 2006; Dholakia & Kshetri 2004; Wymer & Regan 2005). For example, Levenburg (2005) and Burke (2005) found that as a firm’s size grows, its organisational structure and processes become more complex (eg, job specialisation, formalisation, more coordination of business functions, larger number of customers, etc), which suggests that eBusiness could help solve associated business goals. Del Aguila-Obra & Padilla-Meléndez (2006) unsurprisingly found that firms with geographically dispersed staff were also more inclined to adopt eBusiness, because it helped solve the firm’s distributed communication needs.

In summary, it can be seen that the complex relationships between owners, family and employees makes each firm unique, and that business goals must be interpreted in this context. These relationships also influence the business goals which are formed, and impact on whether eBusiness is perceived as a viable solution to achieve these business goals. It also suggests that unless someone is proactive about eBusiness and will drive its adoption, a business case is needed to convince those who influence decisions in firms that eBusiness is suitable.

3. Influence of Social/Business Networks, Advisors, Consultants, Vendors and Associations

Non-eBusiness researchers have found that external parties are also called upon by small firm owners to advise on or give confidence in their decisions and associated business goals, where it has been found that accountants, banks, other businesses and family are the most common (Jay & Schaper 2003; Ramsden & Bennett 2005). The eBusiness literature suggests that consultants and/or vendors influence small firm adoption (Del Aguila-Obra & Padilla-Meléndez 2006; Premkumar 2003) and tend to be commissioned if there is insufficient expertise of employees (de Guinea, Kelley & Hunter 2005; Martin & Matlay 2003). However, there is limited but growing research concerning the effectiveness of these external parties in spite of the apparent important role they play.

This limited research suggests that the satisfaction of small firms with some external parties is inconsistent. For example, de Guinea, Kelley & Hunter (2005) found a positive link between vendor support against organisational impact of IS and overall IS effectiveness in Canadian small firms, but no significant findings concerning consultants. Simpson & Docherty’s (2004) study of government-supported business advisors found that some small firms did not feel advisors understood their business, with other authors finding similar results with respect to vendors and/or consultants (Al-Qirim 2006; Brown & Lockett 2004; Jones, Hecker & Holland 2003; Lawson et al. 2003; Martin & Matlay 2003; Stansfield & Grant 2003). We posit that this dissatisfaction with external parties will, in large part, be because they did not understand the small firm’s unique context and did not provide a convincing or proven business case on how eBusiness solutions would achieve the firm’s business goals. Related reasons identified included some cases where vendors/advisors were unable (or unwilling) to provide eBusiness “know-how” (Jones, Hecker & Holland 2003), did not demonstrate the ability to use eBusiness (Martin & Matlay 2003), or were learning about eBusiness with their clients (Lawson et al. 2003). This suggests more research is needed to explore the ability of these parties to help small firms achieve their business goals.

Recently, research into the role of formal and informal business networks which can support eBusiness adoption is also emerging (eg, MacGregor & Vrazalic 2005). For example, Beckinsale, Levy & Powell (2006) examined the influence of internal and external actors on small firm eBusiness projects, which depended largely on whether the CEO or staff had existing eBusiness knowledge, and where the impetus for the project came from (eg, internal, customer). While this study focused on adopters, Ihlstrom & Nilsson's (2003) action research studied the intervention strategies which can be used at different stages of small firm eBusiness maturity. The firms were part of an existing business network and an objective of the research was also to encourage networking among participants. Brown & Lockett (2004) examined eBusiness projects established by formal and informal network organisations which were intended to encourage greater eBusiness use by small firm members. Macpherson et al. (2003) found that both formal and informal business networks were often central to small firm learning generally.

In summary, this highlights that small firms will vary widely depending on their degree of access to external parties, knowledge of and previous experiences with the parties, etc. When combined with the issues discussed in the previous sections, it is clear that small firms are not a homogenous group and can vary from one another in a multitude of ways. It can also be seen that external parties can influence small firm business goals by offering advice or assurance, and can vary in their ability to convince firms of the business case for eBusiness suitability.

4. Influence of Customers, Suppliers, Industries, Competitors and Products/Services

A further dimension on which small firms vary, and which is recognised in the literature, relates to the interrelated influences of customers, suppliers, industry, competitors and products/services. We argue below that this context influences small firm business goals, but will not guarantee adoption due to intervening issues.

While it has been found that perceived pressure from customers and suppliers (or the degree of their eBusiness readiness) can provide a driver for eBusiness adoption (Al-Qirim 2005; Beck, Wigand & König 2005; Ching & Ellis 2004; Del Aguila-Obra & Padilla-Meléndez 2006; Gemino, Mackay & Reich 2006; Khazanchi 2005; Pflughoeft et al. 2003; Stansfield & Grant 2003; Wymer & Regan 2005), this pressure alone does not guarantee adoption. For example, Zheng et al. (2004) argue that some firms with a small customer base and low transaction volumes might find paper systems more viable than eBusiness. This would be especially true if the small firm does not rely upon the customer applying pressure for the majority of its trade. Also, some firms see face-to-face communication and associated trust with customers (and suppliers) as their primary competitive advantage over larger firms, so that eBusiness adoption will not occur if it risks impersonalising or even damaging relationships with trading partners (Beck, Wigand & König 2005; Castleman 2004; see also Piscitello & Sgobbi 2004; Zheng et al. 2004). For other firms, this social aspect of running the business might be more important than attracting new customers (see Castleman 2004), or the type of industry might mean that customers are typically not loyal and are instead more price-sensitive. This suggests that small firm relationships with customers and suppliers vary widely between small firms, and can result in different business goals and associated eBusiness suitability.

The business goals of small firms are also likely to vary depending on the industry they trade within. For example, perceived pressure from competitors can drive eBusiness adoption (Al-Qirim 2005; Beck, Wigand & König 2005; Ching & Ellis 2004; Dholakia & Kshetri 2004; Fillis, Johansson & Wagner 2003; Kaynak, Tatoglu & Kula 2005; Pflughoeft et al. 2003; Wymer & Regan 2005), but this pressure varies depending on the intensity of eBusiness use within the industry and on whether eBusiness is the norm or increasing (Kaynak, Tatoglu & Kula 2005; Khazanchi 2005). For example, McAdam, McConvery & Armstrong (2004) found that the rural manufacturing sector in the UK continued with traditional methods of doing business, and therefore did not encourage the adoption of new, innovative practices (which would include eBusiness). Fillis, Johansson & Wagner (2003) add that the extent of globalisation within particular industries differ widely, and Egan, Clancy & O'Toole (2003) found that primary businesses (producing generic products for business-to-business markets) had significantly lower eBusiness usage compared to the other sectors. These variances among industries, again, will give rise to variances in small firm business goals and in the suitability of eBusiness solutions. In addition, Coulthard, Castleman & Batten (2004) argue that many small firms trade across industries, which further complicates matters. Each industry the small firm trades within might have different (even contradictory) expectations (eg, business processes, government regulations, standards, etc), so that non-adoption of eBusiness might be the only cost effective option. This suggests that understanding small firm business goals, and the suitability of eBusiness, requires a thorough understanding of (among many other things) the industry norms and practices which exist within a particular geographical location in which the firm resides.

A related issue is the nature of the products/services being traded by small firms. Piscitello & Sgobbi (2004) found that small firm eBusiness adoption varied based on the degree of tacit knowledge embedded in products – if high, interpersonal rather than online communication was preferred. Poon & Joseph (2001), however, found that the degree of product digitisation was not a strong predictor of adoption, and Al-Qirim (2005) found that

the impact of information intensity of products on adoption was not strong in New Zealand. These conflicting findings suggest that product/service nature might influence the business goals of small firms, but on its own this factor will not result in eBusiness adoption due most likely to the other intervening issues discussed above.

In summary, there are many permutations of customer, supplier, industry and product/service related issues (together with the other areas of variance discussed) which might influence the business goals of small firms. All these interrelated issues and associated business goals appear to influence whether eBusiness is suitable or not.

5. Local, State and National Government, Economic Region and Global Context

The influence of government and macro-economic context on small firm eBusiness adoption is also recognised in the literature. The majority of studies are conducted in one country (Parker & Castleman 2007) and often further restricted to specific metropolitan or rural regions to reduce the number of independent variables which might influence the findings. Governments at all levels can influence eBusiness adoption to some extent through: revising legislation to remove the legal uncertainty of eBusiness (Wymer & Regan 2005), offering incentives such as financial support (Beck, Wigand & König 2005; Del Aguila-Obra & Padilla-Meléndez 2006; Lawson et al. 2003); requiring eBusiness when small firms supply to government (Beck, Wigand & König 2005; Jutla, Bodorik & Dhaliwal 2002); and ensuring the availability of an IT skilled workforce (Jutla, Bodorik & Dhaliwal 2002). We also saw previously that government-funded advice services might also play a role.

It appears, however, to be the geographical focus of small firms which varies considerably (see Zheng et al. 2004) and which is likely to impact most on business goals and eBusiness suitability. For example, Egan, Clancy & O'Toole (2003) found (unsurprisingly) a much higher level of website (and marginally higher email) use by internationally-focused firms when compared to domestic-focused firms (see also Pflughoeft et al. 2003). It therefore appears that eBusiness is more suitable when small firms have a clear internationalisation business goal.

6. Small Firm Business Goals and eBusiness Solution Suitability

The previous discussion shows that, while a range of owner and environmental contexts are taken into account in the eBusiness adoption literature, small firms encounter other influences which are overlooked such as family, owner self identity, co-ownership and social interactions. It is also clear there are many permutations of these contextual issues which make every small firm unique. This rich context needs to be understood to interpret the rationale of small firm goals which might otherwise be seen as economically and strategically unwise. The discussion also showed that a small firm's context and business goals might not lend itself to eBusiness, so that other non-technological solutions (or the status quo) might be better (Coulthard, Castleman & Batten 2004). Similarly, Alexander, Pearson & Crosby (2003) suggest that eBusiness adoption success depends on whether it addresses a business problem. While perceived benefits or relative advantage is a strong predictor of adoption (Al-Qirim 2005; Ching & Ellis 2004; Del Aguila-Obra & Padilla-Meléndez 2006; Fillis, Johansson & Wagner 2003; Gemino, Mackay & Reich 2006; Kaynak, Tatoglu & Kula 2005; Pflughoeft et al. 2003; Stansfield & Grant 2003; Wymer & Regan 2005), eBusiness must address a business goal before any benefit will be perceived.

The existing eBusiness research implies there are one or more business goals which small firms may want to achieve. These can include increasing, maintaining or reducing the number of customers; increasing, maintaining or reducing the trade levels with existing customers (Coulthard, Castleman & Batten 2004); reducing costs; expanding markets nationally or globally; entering new markets; improving coordination and communication with customers and suppliers (Beck, Wigand & König 2005); increasing productivity of processing and tracking transactions and inventory; reducing order errors, stock-outs (Khazanchi 2005); growing quickly or steadily or winding down the business (Levy & Powell 2003; Stansfield & Grant 2003); improving access to market or product research (Kaynak, Tatoglu & Kula 2005); reducing the number of staff (Wymer & Regan 2005); increasing their differentiation from competitors; and improving customer service of major customer accounts (Karagozoglu & Lindell 2004). The previous discussion emphasises, however, that while some small firms will have entrepreneurial goals (eg, growth, profit), others will have goals at odds with economic rationalist views.

One of the major challenges is convincing small firms that an eBusiness solution will achieve a specific business goal in a cost effective manner (see Ching & Ellis 2004; Wymer & Regan 2005) so that the owner(s) will give it priority over other projects requiring time and resources (see Wymer & Regan 2005). However, little recent literature examines how small firms can evaluate the cost-benefit of eBusiness (a notable exception being Love et al. 2005), but instead purely identifies the cost of eBusiness as a barrier (Al-Qirim 2005; Beck, Wigand & König 2005; Kaynak, Tatoglu & Kula 2005; Pflughoeft et al. 2003; Stansfield & Grant 2003). In addition, the concerns over the incompatibility of eBusiness with existing work practices, which is an adoption barrier (Al-

Qirim 2005; Ching & Ellis 2004; Khazanchi 2005), might be addressed if small firm decision-makers are convinced that process changes necessitated by eBusiness use will enable them to achieve a desired goal, will not be resisted by staff and will not negatively impact the cost-benefit balance.

Exacerbating the cost-benefit dilemma is recognition in the literature of a number of eBusiness implementation barriers, which include its complexity (Al-Qirim 2005; Ching & Ellis 2004; Stansfield & Grant 2003); lack of IT infrastructure in firms (Del Aguila-Obra & Padilla-Meléndez 2006; Gemino, Mackay & Reich 2006; Wymer & Regan 2005; Zheng et al. 2004); security concerns (Kaynak, Tatoglu & Kula 2005; Wymer & Regan 2005); and perceived unreliability of eBusiness infrastructure (Wymer & Regan 2005). Alexander, Pearson & Crosby (2003) also found that the case firm they studied experienced difficulties maintaining website content, which warns that a business case also needs to include the ongoing difficulties small firms might face after eBusiness adoption.

There are many applications of eBusiness technologies such as a sales channel, product catalogue, online service delivery, etc. The challenge for small firms, and external parties promoting adoption, is matching the applications to specific business goals and, just as importantly, to the specific circumstances, capabilities and context of the small firm. For example, an Enterprise Resource Planning solution is unlikely to be suitable to a firm with limited capacity for sophisticated eBusiness, even if it achieves their business goal. It is perhaps little wonder that small firms do not adopt eBusiness! Why should they? What is the business case?

Re-conceptualising Future eBusiness Adoption Research Directions

On the basis of the sources of small firm diversity outlined above, we present Figure 1 which illustrates a re-conceptualisation of small firm eBusiness adoption to guide future research by the academic community studying this area. More specifically, the rich firm and environmental context makes each small firm unique, provides the foundation for its business goals, and governs the suitability of a solution (eBusiness through to non-technological) for achieving its goals. While this re-conceptualisation is informed by adoption factor research, it shows that eBusiness suitability must be assessed based on the firm's business goal(s), interpreted in context, and on the quality of the business case.

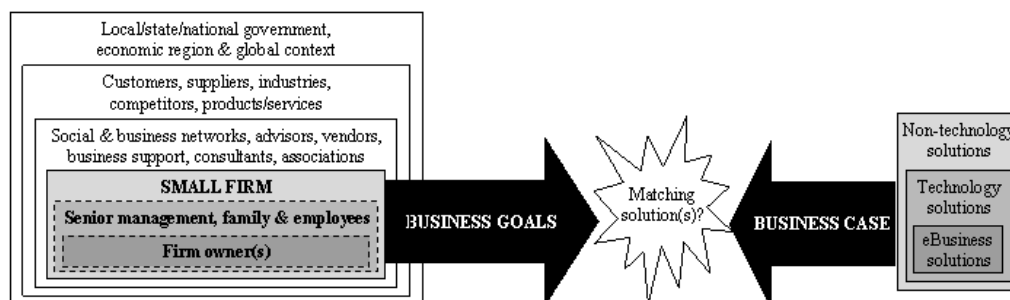


Figure 1: Matching small firm business goals with suitable solutions

Finding the right eBusiness solution (if such a solution is appropriate) requires understanding the firm's owner(s), employees, environmental context, etc. and, more importantly, the business goals which this unique context produces. This re-conceptualisation of small firm eBusiness adoption has a number of implications for future empirical research, theory development and practitioners. These implications will be taken up in some depth in future papers, but for now the size limitations of this paper will necessitate an overview of the broad implications.

From an empirical viewpoint we argue that researchers in the eBusiness community should be posing the research question "Why *should* small firms adopt (specified) eBusiness applications?", rather than taking the technological expansionist stance in the existing literature which essentially asks why they are not adopting. From this perspective, the main objectives of future research in this area would be on determining, for each business application of eBusiness technologies, a compelling business case which matches related business goals. A further research endeavour for the eBusiness research community would focus on how these business cases can best be communicated to small firms, which external parties should be responsible or take the initiative, and the intervention strategies which they can employ. Data collection instruments should attempt to elicit the diverse context of small firms and their related business goals, not adoption factors. If the research objective is to focus on eBusiness potential only in firms with economic rationalist goals, then questions concerning intentions for growth, profit, competitive advantage, etc should be included to eliminate respondents who would otherwise skew the results. Instruments should also include non-eBusiness solutions to business goals as viable alternatives when studying adoption decisions. In addition, questions might also need to be included which gain a more realistic understanding of the decision-making processes in small firms, rather than

assuming so simplistically that there is a single owner who is the only decision-maker just because they are a small firm.

From a theoretical viewpoint we argue that the theories used by researchers as part of their research models need to take into account the highly social nature of many small firms implied by the influence of family, employees, business networks, advisers and other internal and external players on decisions and business goals. The apparent social nature of small firm eBusiness adoption implies that using individual-based theories such as the Technology Acceptance Model and the Theory of Planned Behaviour might be inappropriate, because they assume there is a single decision-maker (de Guinea, Kelley & Hunter 2005; Premkumar 2003) when this might not always be so, and because they focus on individual perceptions and downplay the social processes which are at play. Porter's theories of strategy and industry forces are also used (eg, Karagozoglu & Lindell 2004) and they do take into account the business goals of small firms, but they are based on an economic rationalist view which we have argued is not applicable to all small firms. Rogers' diffusion of innovation theory is used widely (eg, Al-Qirim 2006; Ching & Ellis 2004; Chong 2006), but researchers tend to use the innovation characteristics only.

It is likely that complementary theories are needed to encapsulate the social nature of small firm eBusiness adoption, the role of business goals and business cases, and the process by which external parties communicate business cases to small firm decision-makers in a convincing manner. Rogers' (1995) innovation-decision processes (which initially involves gaining knowledge about an innovation such as awareness and know-how, then developing an attitude toward it and then making a decision) offers a useful starting point because a business case is likely to be central to this decision-making. Attewell (1992) argues that when it comes to complex innovations (which would include eBusiness applications) that an organisation learning view is required to take into account the know-how knowledge which needs to be acquired either internally during use or from external parties which Attewell refers to as mediating institutions. The learning perspective also suggests that adult learning theory generally will be relevant because it emphasises the changing of attitudes (which could occur via business cases) through to routinisation of new knowledge (Knowles 1990). Finally, Beckinsale, Levy & Powell (2006) suggest that network agency theory is highly applicable to this context because it considers the internal and external actors which might influence adoption such as family, employees, business networks, consultants, etc. In future papers we will explore relevant theories which might be integrated to support future research.

From a practitioner viewpoint we argue that the onus of small firm eBusiness adoption should be on innovation suppliers rather than the small firms themselves. If vendors, consultants and solution providers cannot develop a convincing business case for adoption, then it suggests that there is a problem with the eBusiness applications, the business case and the external parties, not with the small firms' lack of insight. Practitioners should therefore be looking at the specific business goals of small firms and targeting business applications of eBusiness technology accordingly. They should also be considering the areas of difficulty or concern small firms have with use of the solutions, and determining ways in which the solutions can be packaged to address the significant implementation barriers. Finally, the social nature of small firm eBusiness adoption suggests that these efforts might best be focused within the formal and informal business networks in which small firms might participate.

Conclusion

This paper has proposed a re-conceptualisation of the approach to eBusiness adoption research which acknowledges that small firms are highly diverse, and that their unique context will result in different business goals. This alternative view suggests that researchers and practitioners should focus on identifying more individualised types of business value and only then try to small firms why they *should* adopt eBusiness. If we cannot develop business cases which show how specific eBusiness solutions can achieve their business goals in a way which is consistent with their needs and context, then this failure should reflect more on the eBusiness community rather than on the small firms themselves. We must avoid an unreflective technological expansionist view and acknowledge that eBusiness will not be suitable or appropriate for all small firms.

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