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Abstract

The emergence of the Internet has provided a means of providing a low cost technological infrastructure that offers new opportunities for small businesses. Small business is a significant contributor to the Western Australian economy and electronic commerce technology, such as B2B Trading exchanges, presents unique opportunities to small businesses in Western Australia to overcome limitations of time differences and geographical remoteness. This study explored the factors and variables that influence adoption behaviour of these small businesses in relation to B2B Trading exchanges in the context of Western Australia. This paper reports a qualitative field study with seven randomly selected small businesses of various sizes and differing degrees of computer usage. The owner/managers of the selected small business were interviewed and the data collected was analysed using content analysis technique. The results identified a number of significant external, control and contextual factors. Using the factors identified and literature as a basis, the study also developed a preliminary research model. The paper also highlights industry and research implications

Keywords: B2B Trading exchanges, Small business, Adoption/Diffusion, Field study, Content Analysis

1. Introduction

The rapid spread of the Internet as a low cost business medium has increased interest in electronic commerce and provided the basis for businesses to communicate and engage in many forms of electronic commerce. There also appears to be an increasing trend whereby a number of organisations are adopting some form of electronic interaction with customers, suppliers and business partners. Electronic Commerce is a phenomenon that will substantially affect the way companies conduct business in the future (Zwaas 1996). It is re-shaping the nature of business in a fundamental way and has the potential to revolutionise small business.

Electronic Commerce offers small businesses to adapt to new markets and commercial opportunities by increasing their customer reach and reduce their transaction costs. There has been considerable growth in the small business population in the Western economies (Brouthers, Andriessen and Nicolaes 1998). This growth is reflected in the Australian economy, where the small business sector accounts for approximately 96.4% of total

business numbers (ABS 2003). Similarly, in Western Australia the small business sector accounts for 96.7% of total business numbers (ABS 2003). Electronic commerce and its associated technologies could provide unique opportunities to small businesses to overcome barriers caused by geographical remoteness and time differences.
These are relevant issues for Australian small businesses, as they are isolated from the major markets in the world in terms of location and time. Western Australian small businesses endure higher levels of isolation, as these time and location constraints also apply to major national markets in Australia. Poon and Swatman (1999) found that despite the fact that electronic commerce presents an opportunity to compete with larger businesses, small businesses in Australia have been slow in their uptake of electronic commerce and its associated technologies. Therefore, the adoption of electronic commerce and its associated technologies by small businesses in Australia is an emerging issue that needs to be addressed.

Based on the perceived importance of electronic commerce technology, such as B2B Trading exchange technology, and the significant contribution that small businesses make to the Australian economy, this study explores adoption behaviour of small businesses in relation to B2B Trading exchanges. This study formed part of a wider research process that was divided into a number of phases to enrich the findings of the research. This phase of the research involved a qualitative field study that focussed on exploring the factors and variables that influence the adoption of B2B Trading exchanges, as a type of electronic commerce technology, by small businesses in Western Australia. The data was collected using structured interview techniques.

The paper is organised as follows. The next section presents a background literature that identifies the lack of adoption research into B2B Trading exchanges in small businesses. The sample, measures and the data analysis method, based on the qualitative research paradigm, are presented in research method section. The findings are presented next. Finally, the paper concludes with the discussion and implications of the results.

2. Background

Business to Business Electronic Commerce (B2B) is at the apex of the Electronic Commerce framework and facilitates business relationships and transactions between firms. B2B Trading exchanges bring together buyers and sellers in real-time trading communities at relatively low cost (Kaplan and Sawhney 2000). It extends beyond the boundaries of a single enterprise and relies largely upon the electronic exchange of data in which buyers and sellers discover one another and transact business in a virtual market place. This leads to the creation of a new kind of commercial environment in which many of the procedures that normally intervene between a buyer and a seller in a commercial transaction can be electronically automated. Its growing importance is highlighted by the fact that the global market for B2B electronic commerce has grown rapidly and the size of the market was predicted by Gartner (2000) to grow from US$403 million in 2000 to US$85 billion in 2005.

2.1 B2B Trading exchanges

The Business-to-Business Trading Exchange concept dates back to the mid 1940s when the first documented trading exchange was Selevision, used to remotely market Florida citrus fruit (Henderson 1984). Whilst the technology has since evolved, the core function of facilitating trading transactions for buyers and/or sellers has remained. The evolution of the Internet has reduced the previous constraints of time and location. It has enabled B2B Trading exchanges to become widely used (Weber 1993). B2B Trading exchanges serve to mould the vast network of businesses into a virtual business community that can interact efficiently with each other using technology.

The intent of B2B Trading exchanges is to create a market for all market participants, without allowing any one of the participants' interests to dominate the exchange. There are no physical exchanges of goods of services in the trading exchange; instead, the exchange only facilitates the matching of buyers and sellers. The value proposition of B2B Trading exchanges is that they create value by assisting in the searching and selection of trading partners, aggregating buyers and sellers, executing trades, and reducing transaction costs (Yao, Palmer and Dresner 2002). B2B Trading exchanges also serve to extend a company's market reach by removing some of the geographical and time constraints associated with traditional buyer and seller interactions (Zwaas 1996).

In the context of this research, a B2B Trading exchange is a trading portal or trading hub, which aligns buyers and sellers in a virtual marketplace for the online exchange of goods and services (Rayport and Sviokla 1994). The theoretical literature available addressing the organisational adoption of B2B Trading exchanges is limited and relatively little is known about the extent to which specific factors impact the intention to adopt a B2B Trading exchange, in small business.

2.2 Adoption Process

Literature on innovation adoption spans many disciplines and focuses on patterns of behaviour at both organisational and individual levels (Kwon and Zmud 1987). Rogers (1995) defines an innovation as an idea or practice that is perceived as new by the adopting organisation. The adoption of the innovation must result in a significant change in the adopter's existing behaviour.

Therefore, the adoption of a B2B Trading exchange by small business can be considered as an innovation. Innovation diffusion theory provides a general explanation of the processes by which new ideas or practices are adopted through social systems over time (Rodgers 1995). In this study, the social system can be broadly defined as the small business population. Zaltman, Duncan and Holbeck (1973) studied organisational innovation adoption and found that adoption occurred in two stages. The first stage was the initiation stage, which was followed by the implementation phase (Zaltman, Duncan and Holbeck 1973). In the initiation stage, the organisation develops an awareness of the innovation, forms an attitude towards it and evaluates the innovation (Gopalakrishnan and Damanpour 1997). The actual adoption decision was found to occur between the

initiation and the implementation phases. Since this study is concerned with the factors that influence the intention to adopt, it will be restricted to the initiation phase of innovation adoption and diffusion theory. Broadly, all of the traditional innovation adoption and diffusion models follow the same principle. These models propose that an adopter first becomes aware of the innovation's existence. This awareness of the technology leads to the potential adopter obtaining further knowledge about the innovation. The knowledge gained leads to the formation of an opinion or attitude. A positive attitude towards the innovation will ultimately lead to a decision on adoption of the innovation.

Intentions are the single best predictor of any planned behaviour, including the intention to adopt B2B Trading exchanges (Azjen and Fishbein 1980). Research on innovation adoption and diffusion has long converged on a core set of theories that seek to explain the adopter's attitudes and their behaviour. The core theories are the Diffusion of Innovations theory (Rogers 1983), the Theory of Reasoned Action (Ajzen and Fishbein 1975), the Technology Acceptance Model (Davis 1989) and the Theory of Planned Behavior (Ajzen 1991). These theories were developed from a range of disciplines, with each focusing on different aspects of the innovation process. These models have been validated for the adoption of technology-based innovations such as Corporate Web Site adoption (Beatty, Shim, and Jones 2001), Electronic Data Interchange (Chwelos and Dexter 2001), Internet banking (Tan and Teo 2000), Personel computer (Igabaria et al. 1997), Expert Systems (Liker and Sindi 1997), word processors (Adams, Nelson and Todd 1992), Databases (Nilakanta and Scamell 1990), among many others.

Whilst these theories have been used in a number of studies relating to technological adoption in organisations, Fichman (1992, p. 204) concluded that, "in most cases, only weak or inconclusive support for classical diffusion predictions were found". Fichman (1992) recommended that future studies on organisational adoption should include factors that are specific to the technology and how adopters are made aware of the innovation and are influenced to adopt the technology. Since B2B Trading exchange adoption is executed at the organisational level, in an inter-organisational context, simply applying these theoretical models does not capture the factors that influence B2B Trading exchange adoption by small businesses. B2B Trading exchange adoption can also be hindered or enabled by the organisation in which it is being implemented. Small businesses, in particular, generally lack the expertise relating to technology within their organisation.

As such, the owner/manager plays a key role in the adoption of technology in small business. Therefore, the attributes and experiences of owner/managers are an important guide to the innovative attitude that prevails in a small business (Thong and Yap 1995). These attributes of the owner/manager are generally ignored when the question of the adoption of technology is considered. Previous studies in IT adoption identified a number of other organisational factors that influenced the adoption of IT based innovations (Tornatzky and Fleischer 1990). All of the innovation diffusion theories share a common view that the potential adopter's decision to adopt is based on their perceived beliefs towards the innovation, and that these beliefs explain the adopter's attitude towards an

innovation (Ajzen and Fishbein 1975; Davis, Bagozzi and Warshaw 1989; Rogers 1995). Based on the literature review, this study used the traditional view of innovation adoption as the basis of the enquiry. It starts with the premise that is based on the adopter's perception of the innovation, the adopter then forms an attitude that translates into an intention to adopt.

Researchers have also consistently argued that it may not be possible to develop a unifying theory of adoption due to fundamental differences between the innovation types. Therefore, this research will investigate, via a field study, the extent to which a generic model is applicable to the innovation type, B2B Trading exchanges and context, small business. The generic model proposes that external influences raise the awareness of an innovation. In turn, the awareness leads to the evaluation of the benefits, and a positive evaluation leads to a positive attitude towards the innovation. The attitude developed leads to the intention to adopt. Furthermore, B2B Trading exchange adoption can be hindered or enabled by the organisation in which it is being implemented. Therefore, this study proposes that contextual and control factors also drive the attitude towards B2B Trading exchanges.

3. Research Method

Kaplan and Maxwell (1994) argued that the goal of understanding a phenomenon from the point of view of the participants and its particular social and institutional context was difficult to achieve when textual data were quantified. Since the purpose of this study is of a descriptive and analysing nature the qualitative paradigm was considered the most appropriate. Therefore, it was believed a field study that involved a qualitative study of a small number of small businesses would meet the objectives of this study. The field study refers to the application of a specific qualitative research method in a specific setting. Researchers adopting qualitative methods do not have the same data-gathering tools and techniques to assist in data collection as those using quantitative techniques (Lincoln and Guba 1985). The major method available to the qualitative researcher for data collection is the interview method (Maykut and Moorehouse 1994). The field study involved interviewing the owner/managers of a random sample of small businesses. Details of the field study research process are presented below.

3.1 Sample

The initial qualitative field study involved a random sample of seven small businesses meeting the research definition of a small business. The small businesses were randomly selected from a sample of businesses registered on the Government Electronic Market (GEM) in Western Australia. The GEM is a Western Australian government initiative that requires all businesses that wish to trade with the government to register on the GEM. The GEM list was not restricted to small businesses and businesses were randomly chosen from the list. A short telephone interview with the owner/manager of the small business determined whether they met the research criterion. After explaining the purpose and objective of the study, the owner/manager of the business was then invited to participate in an interview. If they agreed to participate, the researcher scheduled an

interview time that was convenient. The reason the researcher requested the owner/manager is that they play a major part in business decisions affecting the small business. The study was interested in the results from their perspective. Participation in the study was completely voluntary. Table 1 provides a brief overview of the demographics of the companies involved in the field study.

Table 1 - Field Study Participants' Demographics

Company	Nature of Business	Interviewee's Position	Number of employees	Computer Usage
A	Recruitment Company	Manager	4	High
B	Paper Wholesaler	Owner	18	High
C	Manufacturing of Mats and Rugs	Owner	5	Medium
D	Food Wholesaler	Owner	15	High
E	Importer and Wholesaler	Owner	3	Medium
F	Flooring products Wholesaler	Owner	8	High
G	Furniture Manufacturer	Owner	6	Low

3.2 Data Collection

As mentioned earlier researchers adopting qualitative methods do not have the same data-gathering tools and techniques to assist in data collection (Lincoln and Guba 1985). However, qualitative approaches to research have developed and refined some specific procedures for data collection and analysis (Lincoln and Guba 1985). The major method available to the qualitative researcher for data collection is the interview method (Maykut and Moorehouse 1994). This study used semi-structured interview technique to collect the data. Prior to conducting the field study, an interview protocol was developed from the generic model. The semi-structured interview questions focused on exploring areas of information to identify the factors and variables that influence the intentions to adopt B2B Trading exchanges in small business. The interview protocol provided the structure for the data collection and focused on exploring the following key areas identified:

- Perception of B2B Trading exchanges
- Influences that drive awareness of B2B Trading exchanges
- Pressure from trading partners to adopt B2B Trading exchanges
- External hindrances that hamper adoption
- Specific features of the organisation that facilitate adoption
- Specific conditions that need to be in place within the organisation to make adoption easier
- Benefits of adoption
- The influences on and characteristics of the owner/manager

The interview protocol was tested by a third party prior to conducting the interviews, to identify any weaknesses.

The majority of the interviews were scheduled at the convenience of the participants, with some scheduled early in the morning to take advantage of the early morning "free time" of business owners/managers. Prior to conducting the interview the researcher briefed the individual respondent on the context and the objectives of the study. As part of the briefing the researcher also clarified the definition of a B2B Trading exchange with participants. On average, each of the interviews lasted approximately one hour. All interviews were transcribed verbatim into an electronic form to allow the interviews to be analysed and interpreted. Notes about the individual interviews were recorded, and at the end of each day on which interviews were conducted, the researcher reflected on the key issues and cues that surfaced during the interview process - as a means of improving the process for future interviews. In total seven small business owner/managers were interviewed.

3.3 Data Analysis

Many different approaches to qualitative data analysis have been debated in the social sciences literature (Miles and Huberman 1994). This field study adopted a data analysis approach that focussed on making sense of the participant's account (Miles and Huberman 1994). The data was captured by translating the interview tapes verbatim into electronic interview transcripts, as a means of capturing the words and concepts of each of the respondents. Even though the number of interviews was relatively small, the amount data collected was reasonably large.

The data collected was analysed using the content analysis technique (Holsti 1969). The volume of data generated by the six interviews was broken down into more manageable chunks. The interview data was transformed into text units and was represented by meaningful sentences that were considered to more closely imitate the factors and variables that influence the adoption of B2B Trading exchanges in small business (Richards and Richards 1990).

The codes developed were viewed as being important based on the number of times an item was mentioned and the intensity of the response. The codes were also revised and cross-referenced to factors and variables in the literature. A further review of the literature led to the development of a research model. In total 14 factors and 47 different variables were identified. This process resulted in the development of a factor and variable matrix, detailed in Table 2 (See Appendix).

4. Results and Implications

4.1 Interview Sample Demographics

Table 1 details the demography of the small businesses involved in the field study. They cover a diverse range of industries including recruitment, manufacturing, wholesaling and importing. The size of the company also varies from 4 employees to 18 employees. The companies also have varying degrees of computer usage ranging from low to high end

user of computers. It should be noted that all of the companies interviewed had some level of exposure in trading electronically with government, using the GEM initiative. As a result, the majority of the participants were aware of the issues involved in trading electronically with the government through their GEM experience. All of the participants were also aware of information technology infrastructure and software required for their businesses to participate in electronic trading.

4.2 Factors and Variables

As mentioned earlier, in total the analysis of the interview data identified 14 factors and 47 variables. Using the content analysis framework suggested by Holsti (1969), Table 2 (See Appendix) shows the number of times the variables was mentioned by the different interview participants. The analysis process attempted to maintain a consistency between the interview data and the literature. However, some of the variables identified differed in their meaning from those found in the literature, as they were intended to represent the responses of the participants in the context of B2B Trading exchange adoption.

The responses from the interview participants confirmed the influence of external factors. The external influences identified were the factors Vendors, Competition and Government. Some of the interview participants' responses that reflected the support for external influences of competition and government are *"Small businesses, if they are being driven, they are being driven by competitors"* and *"Government does support technology and trade exchanges by providing infrastructure, like providing the telephone network or the communications network"*.

The variables that related to Government were reasonably well supported. This can be attributed to the fact that the sample for this field study was sourced from the database of subscribers to the Western Australian GEM network. Therefore there may be an inherent bias in the sample towards the level of influence of government.

There was limited support for the influence of Trading Partners from the field study participants, even though this construct was identified in the literature as an important factor in the adoption of inter-organisational systems, such as EDI. The response "*If we were approached by a large customer we obviously put in the facility for them to do it but have yet to be approached"* provide an example of the support for this construct amongst interview participants. There was also strong support amongst the participants for the facilitating influences. Using previous studies on IT, EDI and electronic commerce adoption as a basis, these factors can be categorised as contextual and control factors. Therefore, the factors Organisation Characteristics and Owner/Manager Characteristics can be grouped as contextual factors. The interview participants' support for the contextual factors of Organisation Characteristics can be summarised by the interview participants' responses: *"Small organisations you can't do it!"*; *"It is very much dependent on the particular industry" and "If you are selling car parts with code numbers, nothing can go wrong as a result of ordering it, that's very good"*.

The factors Organisation Readiness and critical mass can be grouped as control factors. The interview participants' support for the critical mass construct can be summarised by the interview participant's response: *"It is not good enough to do it in isolation today as it is too damn expensive"*.

Most of the interview participants supported the importance of having an owner/ manager with a strong attitude towards electronic trading. The interview participants' support for this variable can be summarised by the interview participants' responses: *"I am very open minded about electronic trading and obviously that is the future" and;"…more and more of our business will be conducted electronically I am sure of that"*.

This finding is similar to that in the study by Thong and Yap (1995) relating to IT adoption in small businesses, which found that an Owner/Manager with a strong attitude towards IT would have a favourable attitude towards B2B Trading exchanges. The interview participants also showed only marginal support for the availability of Vendor Support, even though this factor was shown to be significant in studies relating to IT and EDI adoption by small businesses. The recruitment company (Company A) was the only participant to identify the need for vendor support. This can be attributed to the fact that this company was a sophisticated user of IT software packages, and understood the issues involved in implementing and supporting information systems without having adequate in-house IT expertise. The company's support for the Vendor Support construct can be summarised by the interview participant's response: *"… at least is going to have access to someone that who can make it work"*. The majority of the participants identified the importance of having the necessary resources for the implementation and operation of a B2B Trading exchange that can be interpreted as a form of Organisation Readiness. The interview participant's support for a level of organisation readiness can be summarised by the response: *"…we don't have the intellectual quotient to be able to run these systems"*.

There was limited support from interview participants for the Awareness construct. The awareness relates to the organisation being made aware of an innovation by an external influence. The awareness of the existence of an innovation may result in the organisation making judgements about the benefits of this innovation to the organisation. All participants also supported the notion that a positive perception of the benefits of a B2B Trading exchange would lead to a positive attitude towards the innovation. The variables relating to Perceived Benefit were reasonably well supported by the field study participants. All participants considered "operational efficiency" to be important. This variable (operational efficiency) was considered to be similar in nature to the variables of reducing paper work and decreasing clerical errors, which were identified in the literature on IT and EDI adoption. The variables "operational efficiency", "reduce costs", "increase turnover" and "reduce staff" were all considered to be similar to the relative advantage construct identified by Rogers (1995). The interview participant's response: "*Benefits to a small company is a reduction of costs and I mean, when you've only got 8-10 people, then if you can save one person you've just saved 12% of your salary, and that's a massive change*" summarises the support for this factor.

The participants also identified negative variables, such as a high cost for a solution and security, as part of the perceived benefits factor (Kendall et al. 2001). All of the participants were concerned with the "security risk" associated with the adoption of a B2B Trading exchange. The main concern centred around maintaining the privacy and confidentially of the business operation and prices. This concern can be attributed to the fact that maintaining privacy of information can be a source of competitive advantage in small business.

The interview participant's response: *"The confidentiality, having the confidence to know that you are dealing in secure environment is absolutely critical in this business"* encapsulates these concerns. The variables "cost of installing", "costs of training", "compatibility", "security risk", "ease-of-use", and "integrated with other systems" are all similar to those identified in related studies on IT adoption, EDI adoption and electronic commerce technology adoption. The field study participants also confirmed the Coercion factor, in that it was strongly supported by a number of participants. The interview participant's response: "*Government because we were really coerced, if you like, to a large degree because they were a major portion of our business"* summarises the interview participants' support for this factor. The literature also identified the concept of coercion as a relevant factor in inter-organisational theory, as B2B Trading exchanges are enabled by inter- or extra-organisational electronic interaction. The concept of coercion is concerned with a powerful trading partner coercing another trading partner to adopt an innovation. There was also overwhelming support for the Attitude construct.

The attitude towards adoption was concerned with the prospective adopter's positive or negative feeling about adopting the innovation and is consistent with other intention-based models such as the TRA and DOI. Out of the 47 variables, only "operational efficiency", "level of computer usage within the organisation", and "had to be of some benefit" were mentioned by all of the participants. In general, the responses reflected the small businesses' level of IT sophistication. For instance, Company G did not have the same level of IT sophistication as some of the other interview participants, and therefore only identified 15 out of the 47 variables. Their basic view towards the adoption of B2B Trading exchanges can also be attributed to the fact that they are an unsophisticated small business with an operational focus.

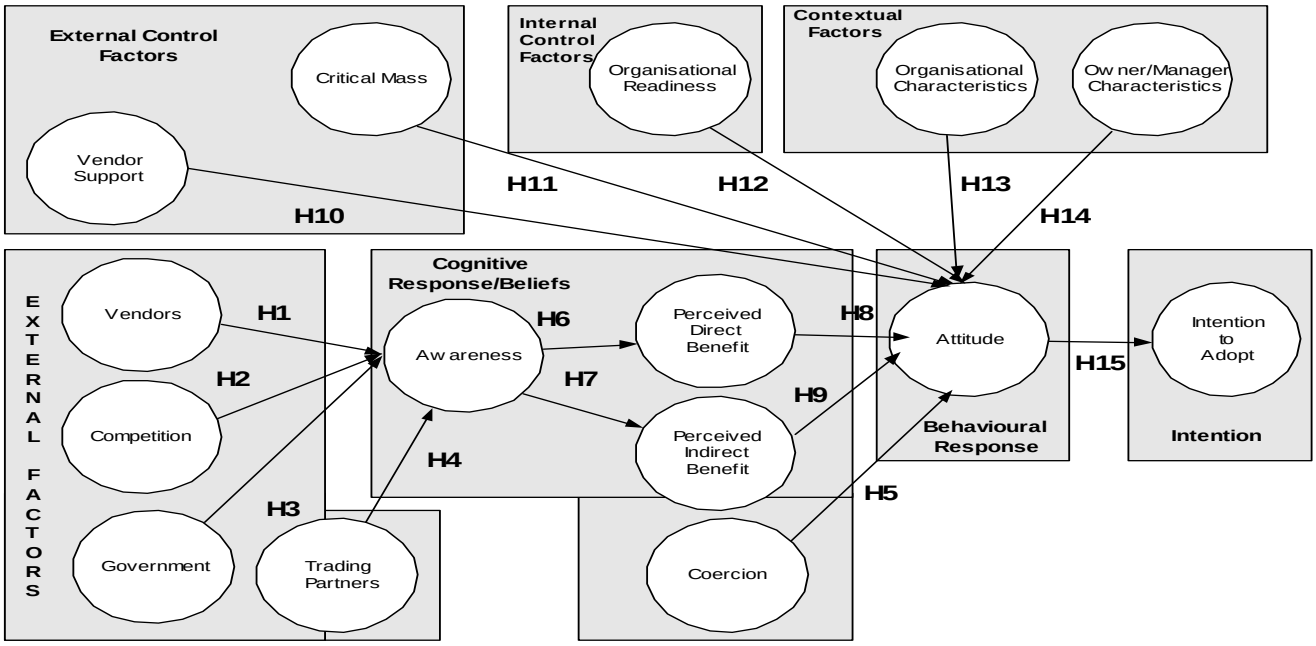
Therefore they are less concerned with strategic issues and positioning. Company E is an importer/distributor and is a significant user of IT. This accounts for the fact that they identified 28 out of the 47 variables.

Their significant contribution can also be a result of the fact that the company trades internationally and to save on costs, the company makes use of email and transact with some of its suppliers electronically. Whilst company C was categorised as a relatively low to medium level user of IT, it used the Internet to communicate with international suppliers as part of their sourcing strategy. The fact that this respondent identified 24 out of the 47 variables reflected the owner manager's interest and comfort level with the subject area in this study. Companies B, D, and F were relatively high users of IT with

limited exposure to B2B Trading exchanges and they responded with 26, 25, and 25 variables out of 47 respectively. Company A is a recruitment company that was sophisticated in their use of IT and identified 33 of the 47 variables. This can be attributed to the fact that they used computers and packaged computer solutions extensively in their business operation.

The focus of the field study was on exploring the factors and variables that influence the adoption of B2B Trading exchanges in small businesses. The relationships between the factors were not within the scope of the field study. However, the relationships between the factors were developed using previous studies on the adoption on IT adoption, EDI adoption and electronic commerce technology adoption that extended the DOI, TRA, TPB and TAM, as a basis. The findings of this study were thus used to develop a research model. This model is shown in Figure 1 below. The model shows that the generic model developed using previous adoption studies can be applied with adjustments for the innovation type, B2B Trading exchanges and context, small business.

Figure 1 - Research Model



4.3 Research Implications

The model in Figure 1 shows a comprehensive model that was developed through a process of identifying the similarities and differences between the factors identified in the field study and those in similar studies relating to innovation adoption. The model is unique in that it was developed by analysing the data from seven interviews with small businesses. Even though, there is no formal hypothesis proposed in this paper, we believe that the model can be taken as a research model that can further explore using quantitative techniques, such as Structural Equation Modelling (SEM). The links between the factors (constructs) can be taken as the hypotheses to be tested (see Figure 1). Since

there are no specific theoretical models that relates to this research in the literature, the model is regarded as an estimate model. At this point more exploratory research is required to further fine tune the research model to allow the model to be explored quantitatively.

4.4 Industry Implications

The results of the study provide a better insight into the factors that influence the intention of small businesses to adopt B2B Trading exchanges. Understanding these is becoming increasingly important due to the unique opportunities that electronic commerce provides to small businesses in Australia.

There is also a growing relevance given that there appears to be a growing number of organisations that are adopting some form of electronic interaction with customers, suppliers and trading partners. Therefore, understanding of the relevant factors that influence B2B Trading exchanges in small business could lead to the development of strategies that could improve the adoption rate of B2B Trading exchanges within small businesses in Western Australia.

5. Conclusions and Future study

This paper presents a study to determine the factors and variables that influence the intention to adopt B2B Trading exchanges in small business. The study employed a qualitative field study approach that interviewed the owner/manager of seven small businesses in Western Australia. The companies interviewed had some level of exposure in trading electronically with government, using the GEM initiative and had various degrees of computer usage.

The interviews were transcribed verbatim into an electronic form and the interviews were analysed using content analysis. The analysis of the data identified 14 factors and 47 variables from which an estimated research model was developed. The research identified Vendors, Competition and Government as significant external influences with limited support for Trading Partners. Organisation Characteristics and Owner/Manager Characteristics, Organisation Readiness and Critical Mass were also identified as significant facilitating factors. Whilst there was limited support for the Awareness construct, factors of Perceived Benefit and Attitude were reasonably well supported. The Coercion factor was also strongly supported.

In contrast to other innovation adoption studies that start with *a priori* model from which hypotheses are derived that are subjected to empirical tests, this study was exploratory in nature. (Anderson 1983). The model presented can be used in a further study to develop a set of hypothesis that can be measured and tested. The results of this future study can add value to the literature on B2B Trading exchange adoption.

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Appendix

Table 2 – Interview Factors and Variables

Factors	Variables	A	B	C	D	E	F	G
Critical Mass	Critical mass of suppliers	√			√	√		
	Critical mass of trading partners			√	√	√		
	Amount of users indicates success			√	√		√	√
Vendor Support	Access to someone to make it work	√						
Vendors	Awareness of its benefits to the business	√	√	√			√	
	Awareness raised by direct mailing	√		√		√	√	
	Awareness raised by journals and magazines	√		√	√	√		
	Awareness raised by seminars			√	√	√	√	
	Awareness raised through sales people	√				√	√	
Competition	Influence of competitors	√	√			√		
	Driven by competitors	√			√	√		
Government	Government leadership	√	√		√			
	Government as user	√	√				√	√
	Government incentives		√	√		√	√	
	Government provides infrastructure						√	
Trading Partner	Influence of clients	√						
	Initial move made by suppliers					√		
	Support trading partner if requested	√						
Coerced	Coerced by government	√			√	√		√
	Dedicated by a major supplier		√	√			√	√
	Demanded by a important client	√	√	√				√
Awareness	Awareness of use when making selections	√			√		√	
Perceived Benefit	Operational efficiency	√	√	√	√	√	√	√
	Reduced costs	√	√	√				√
	Security risk	√	√		√		√	
	Costs of installing	√	√		√	√	√	
	Costs of training staff	√			√			
	Status symbol		√	√	√	√		
	Compatible with business	√	√	√	√	√		
	Improve working relationship with trading partner					√	√	
	Increase turnover	√	√			√	√	√
	Reduce staff		√	√				
	Integrated with other systems		√		√			
	Ease-of-use		√		√	√	√	√
Organisation Readiness	Level of financial resources	√	√	√	√	√		√
	Skill level of staff with computers	√	√	√	√	√		
	Company level of electronic trading			√		√	√	√

Factors	Variables	A	B	C	D	E	F	G
Organisation characteristics	Industry type	√		√			√	√
	Nature of product	√	√		√	√	√	√
	Level of computer usage	√	√	√	√	√	√	√
	Size of company	√			√			
	Trading partner use of computers	√	√	√		√		
Owner manager characteristics	Age of owner/manager	√	√				√	
	Innovativeness	√		√	√	√	√	
	Attitude to electronic trading	√	√	√	√	√	√	
	Attitude to risk taking		√	√		√	√	
Attitude	Would have to be some benefit for us	√	√	√	√	√	√	√