

IMPLEMENTING ACCOUNTING SOFTWARE IN SMALL BUSINESSES IN NEW ZEALAND: AN EXPLORATORY INVESTIGATION

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ABSTRACT

The implementation of off-the-shelf small business accounting (SBA) software has become widespread among small and medium sized enterprises as it has become affordable and technically powerful. At the same time, selecting and implementing a suitable accounting software from among the numerous available software packages is often difficult for small businesses. Using interpretive approach based upon a qualitative research methodology, this paper explores the challenges faced by small businesses in New Zealand implementing SBA software. User confusion, lack of external guidance and support, and lack of accounting skills have been identified as major issues faced by small businesses in implementing SBA software. The external consultant's play significant role in successful implementation of SBA software, but currently very little research has been done in this area.

Key words: Small Business, Accounting Software, Information Systems, Information technology

INTRODUCTION

The accounting software, which comes under the broad definition of Accounting Information Systems (AIS), is a computer software that records and processes accounting transactions within functional modules such as accounts payable, accounts receivable, payroll and trial balance. It may be developed in-house by the organisation using it, may be purchased from a third party (off-the-shelf packaged software such as MYOB and QuickBooks), or may be a combination of a third-party application software package with local modifications. It varies greatly in its complexity and cost. Today's packaged accounting software not only records financial transactions and produce accounting reports, but they include functionality for managerial decision making aimed at gaining competitive advantage. According to Collins [14], "small business accounting (SBA) software has made enormous technological leaps in power, speed, sophistication and flexibility in recent years." Mohamed [39] noted that "over the years, software suppliers have been adding more innovative features to their finance packages, such as web interfaces and better integration with supply chain and other applications, and they have also altered products to make them more useable for non-accountants."

Many of the accounting software products have add-ons that can be used to integrate the software with other software or web / internet. For example, Intuit, one of the US based SBA software, offers more than 450 add-ons that a third party can integrate with QuickBooks [11]. Accounting software for specific market segments, such as retail industry, are also available in the market. Basic version of a stand alone SBA software costs as low as \$US100. According to one estimate, in New Zealand, over 18,000 new copies of off-the-shelf accounting software packages are sold every year. MYOB is the leading SBA software in New Zealand and Australia [4, 7] and has a worldwide following of 500,000 users [14]. The other popular software used in New Zealand are QuickBooks, MoneyWorks and Quicken. Almost all of these accounting packages have large customer base, which is good for small businesses as it is a hedge against obsolescence [25].

Accounting and payroll application software packages are widely used packages among small businesses [5, 26, 28, 31, 32, 39]. In a survey of Finland small businesses carried out by Heikkila [26], 85 percent of the respondents were using an accounting package. Similarly, in a survey of IT use in small businesses carried out

in UK in 1998, 86 percent of the 800 respondents reported that they had computerised their accounting systems [18]. In 2001, in New Zealand, 77 percent used IT systems to complete accounts [56]. These figures would have increased significantly in the last few years.

However, small businesses are at crossroads in terms of adopting a computer system to manage their accounts. Their dilemma is, which one of the ever increasing brands in the marketplace is suitable for them? If they already have one, should they upgrade it to a new system? Do they need an external consultant? Which consultant they should approach? Can they afford? Are there any risks?

Research on IT adoption in small and medium enterprises (SMEs) is rapidly increasing particularly during the last decade [45]. There are also a number of research studies on implementation and adoption of specific IT projects such as implementation of e-commerce and Electronic Data Interchange (EDI) in SMEs. However, published research on the implementation of accounting software in small businesses is sparse, even though it is one of the widely used software among small businesses.

Given the limited research in this area, the aim of this study is to increase our understanding of issues and challenges faced by small businesses in New Zealand in implementing SBA software. Adoption (making decision to adopt), implementation and post-implementation (review and further technology adoption) are three different stages in the technology innovation cycle [60]. The focus of this study is only on the implementation stage of SBA software. That is, the focus of this study is from the point the small business owner / manager decides to adopt (or upgrade) SBA software till the point when the implementation is complete and the small businesses start using the system. We believe adoption of SBA software is not an issue any more, as majority of the small businesses are implementing some form of computerised accounts.

The paper is organized as follows. A brief literature review is presented next, which is followed by an outline of the research methodology. An analysis of findings is then provided. The discussion and conclusions are presented last.

LITERATURE REVIEW

A 'small business' is defined differently by different researchers (Table 1) and different countries. In this study, a small business is one with nineteen or fewer employees as defined by New Zealand Ministry of Economic Development [42]. The SME sector plays a significant role in the national economies. In New Zealand in 2008, 97 percent of enterprises were small businesses, 87 percent of the enterprises employed five or fewer people and the SMEs (businesses employing less than 99 people) accounted for 37.3% of the economy's total output [42]. In Australia SME sector accounts for 99% of all businesses, and within the United States and the European Union they account for over 97% of all businesses [52]. Given the important role played by small businesses in national economies and given a large proportion of these small businesses use IT for accounts, we believe, this research on implementing SBA software in small businesses will be useful for small businesses as well as researchers.

Table 1: Employee sizes used in defining micro, small, medium enterprises by a sample of IT researchers.

| Author(s) | Country | Micro | Small | Medium | SME |
|----------------------------|--------------------|-------|--------|---------|--------|
| Holmes & Nicholls (1988); | Australia | | 1-19 | | |
| Burgess (2002) | Australia | 1-5 | 1-20 | | |
| Cragg & King (1993) | New Zealand | | 1-50 | | |
| Igbaria et al. (1998) | New Zealand | | 20-100 | | |
| Chau (1995) | Hong Kong | | 1-49 | | |
| Ismail & King (2007) | Malaysia | | | | 20-150 |
| Thong (1999) | Singapore | | 1-99 | | |
| Duan et al. (2002) | UK | | | | 10-249 |
| Mathews (2007) | UK | | | | 1-200 |
| Wynn (2009) | European Countries | | | | 1-249 |
| Duxbury et al. (2002) | Canada | 2-9 | 10-99 | 100-500 | |
| Hunter et al. (2002) | Canada | | 1-100 | | |
| El Louadi (1998) | Canada | | 1-300 | | |
| Qureshil et al. (2009) | USA | 1-9 | | | 1-499 |
| Bharati & Chaudhury (2006) | USA | 1-10 | 11-100 | 101-500 | 1-500 |

There is a gradual increase in the number of small businesses adopting IT. In 2006 in New Zealand, 93% of businesses used computers and 46% of staff had access to

the internet [57]. Past studies have shown that the use of Information and Communication Technologies (ICT) can play an important role on the growth of small businesses [37, 49]. These studies suggest that IT can be employed to bring about increased operational and administrative efficiencies [37, 50], cost savings, enhanced internal communication, expand customer base, increase sales, better customer service [53], help implement business strategy [33] and in general increased competitiveness [37, 50].

However, according to Burgess [10], “*small businesses are often placed in the situation of knowing that IT can support their businesses in some way, but they lack the expertise and resources to know how it can be effectively applied.*” Typically, the introduction of IT in SMEs is piecemeal and fragmented lacking any strategy and is not well managed [23, 47]. The following is a summary of barriers and challenges faced by small businesses as reported in the IT literature on small businesses.

Affordability [19, 51]: The costs associated with implementing an IT project include the cost of hardware and software, the cost of hiring consultants, the cost of employee training and the cost of on-going maintenance. This is a major issue with small businesses as they operate on very restricted budgets and do not have sufficient capital to invest towards state-of-the-art technologies.

IT expertise [19, 48, 51]: Small businesses do not possess any technical knowledge or skills and are oblivious to the benefits that IT can bring. They lack information on available technologies and finding useful impartial advice is difficult. Ignorance of the power of IT is a major inhibiting factor for small businesses.

Owner’s cultural and technical background [46]: Conservative entrepreneurs and entrepreneurs with limited technical background are expected to “remain attached to traditional information sources and communication systems” while aware businesses are expected to “add new information channels to the traditional ones.” Professional background and knowledge of the entrepreneur play strategic role in implementing new technologies.

Owner’s Management skills [10, 15, 48]: Small business management is informal and ad hoc. Much of their time is spent in ‘surviving’ so that little time can be devoted to examine IT projects. They lack time and planning and control procedural skills.

Organisation size [10, 19, 61, 62]: A number of studies suggest that business organisation size has a direct positive relationship to the adoption and successful use of management information systems because larger organisations have more opportunities to use IT, a more developed infrastructure and a more developed strategic planning function.

External consultants and vendors [2, 3, 10, 19, 30]: In adopting IT systems by small businesses, hiring a consultant is a common practice. However, one of the common criticism of vendors and consultants is that they 'do not understand the small and medium business market and that the level of support provided by them is only adequate or less than adequate.'

Other factors [15]: User resistance, lack of acceptable software may also inhibit the use of IT in small businesses.

How to overcome these barriers is also covered extensively in the literature. Igbaria et al. [30] cite a number of references to support the view that management support can promote the acceptance of IT. Burgess [10] suggests that lack of IT knowledge and lack of understanding of IT benefits can be overcome through appropriate training leading to successful implementation. Igbaria et al. [30] have also found that good external support provided by vendors and / or consultants such as technical support, training and harmonious working relationship can reduce the risk of IT failure in small businesses. Careful selection of vendors and / or consultants as providers of hardware or software to integrate the IT into the business and / or to fill the IT knowledge gap within the organisation is therefore vital to the successful use of IT in many small businesses [10].

As mentioned before, even though, implementation of accounting software is very common among SMEs, research on this and in general on packaged software is limited and is over a decade old when packaged accounting software was in its early stages. In an exploratory research on success of software packages in small businesses, Heikkila et al. [26] argue that small businesses have often been disappointed with their software packages because they are either difficult to use (for businesses with less than 20 employees) or do not meet the needs of the company (in businesses of more than 50 employees). Further they recommend that "*small businesses should place more emphasis on the acquisition, especially the*

requirements specification, and developers should improve user-friendliness, the quality of support and documentation to fulfil the needs of the smallest of small businesses." Using a survey of 68 small businesses in Hong Kong who purchased packaged software in early 1990s, Chau [13] examined the differences in the importance given to software selection criteria by the owner and the relevant manager involved in the software selection. They found that the owner and the manager did indeed differ in the importance given to the different selection criteria. Interestingly, of the 21 software selection criteria considered, 'vendor technical support' was ranked highest by both the owner and the manager.

Ismail et al. [32] investigated the status of computer-based accounting systems (CBAS) adoption among small and medium manufacturing businesses in the northern region of Peninsular Malaysia. Specifically they investigated the following questions: What was the extent of CBAS adoption among SMEs in Malaysia? What was the quality of CBAS adopted by the SMEs? And, what were the factors that influenced the extent of CBAS adoption? Their findings were: Over 90 percent of the (32 survey respondents) firms adopted CBAS; years of adoption was positively correlated with the overall quality of CBAS adopted; maturity stage of CBAS adoption was significantly positively correlated with age of business; no evidence to suggest that age and size of the businesses and type of ownership influenced the adoption of CBAS. Their research did not address issues and challenges related to implementing CBAS.

RESEARCH METHOD

Since this study attempts to get a deeper understanding of the issues and challenges faced by small businesses in New Zealand in implementing accounting packages, we have employed an interpretive approach based upon a qualitative research methodology [20, 29]. This method is useful in addressing practical problems where the experience of those who are familiar with and involved in the particular scenario is important and the context of their actions is critical [24, 35]. According to Elharidy et al. [20], interpretive research is useful "...in studying real world practices, decisions and settings, with the objective of analysing, interpreting and understanding them: thereby identifying solutions to pragmatic problems. Its focus is the everyday life of organisations as they exist "on the ground"; rather than

exploring abstract problems and providing artificial solutions, "sitting at a distance" and using some remote lens held by a "detached" researcher. ... The primary aim of interpretation is to explore individual and collective experiences in order to develop an holistic understanding of people's actions and interactions in the field." We selected a convenient sample of eight small businesses (owner managed independent businesses with less than 20 employees and using some form of computer based accounting software) and eight IT consultants who provide services to SMEs as our research participants. In addition, detailed discussions were also held with the Managing Director of a leading SBA software company. We selected the sample of small businesses and consultants from local yellow pages. In order to give us maximum opportunity to capture all issues faced by these businesses, we tried to include the small businesses from different industry sectors. The basic characteristics of the case study firms and the consultants interviewed are given in Tables 2 and 3.

Table 2: Characteristics of Case Study Firms

| Firm | Industry | Number of Employees | Number of Years In Business (Years) | Length of Use of Accounting Software (Years) | Current Level of IS Applications |
|-------------|---|----------------------------|--|---|---|
| RT | Radio transmitters- Manufacturing, distribution | 8 | 20 | 10 | Switched from DOS based software to MYOB with advanced modules; some use of MS office; |
| GA | Garments- Sales/distribution | 7 | 10 | 6 | Switched from DOS based software to MYOB; some use of Excel spreadsheets |
| VG | Vegetables - sales/ distribution | 8 | 6 | 4 | Moved from manual accounting processing to MYOB basics; then to premier and networked multi-user system; uses Lynx and MS windows platforms |
| GW | Giftware wholesaler | 10 (+ 4 sales reps) | 11 | 10 | Started with MYOB basic package; Later expanded to Premier 9 version of MYOB and payroll function; Maintains company website and B2C e-commerce facilities; recently installed Virtual Merchant (software that links MYOB with the web for data sharing) |
| PD | Printing and Design | 13 | 2 | 2 | Accounting software used from the inception of the company. Owner/manager has had previous exposure to QuickBooks accounting software; Website in place; Business is operating at two locations and data transfer between the locations takes place through internet. |
| VP | Small toy making and greeting card sales | 6 | 12 | 10 | Uses QuickBooks; used customer management module, but not any more |
| RJ | Manufacturer and sales of Skis | 8 | 2 | 2 | Uses QuickBooks; Website in place |
| TS | Wholesaler and distributor of skincare products | 15 | 8 | 8 | Uses MYOB with payroll module; Uses Virtual Merchant |

Table 3: External Accounting Software Consultants Interviewed In This Research

| Name | Expertise | Background and Experience |
|-------------|------------------------------------|--|
| CP | Independent MYOB consultant | Has accounting background; Was supporting MYOB since late 80's; provides training courses on MYOB |
| MV | Independent MYOB consultant | Lecturer; learned MYOB; does consulting; provides training |
| PO | Independent MYOB and IT consultant | Has accounting as well as IT background; was doing accounting software development; knows MYOB, QuickBooks and XONet |
| AL | Independent MYOB and IT consultant | Network Consultant for 7 years; accounting software consultant for 4 years |
| NBS | Independent MYOB and IT consultant | IT consultant for over 13 years; Familiar with a number of accounting packages including MYOB and QuickBooks |
| MS | Independent MYOB and IT consultant | IT and accounting background; Worked for MYOB for five years; Certified MYOB consultant |
| WD | Independent MYOB and IT consultant | IT and accounting packages; 20 years of experience |
| DB | Belongs to an accounting firm | Working for an accounting firm; Accounting background; worked for MYOB |
| DT | Senior Manager | Senior Manager of a leading software company in New Zealand |

The backgrounds of the case study businesses include: radio transmitter manufacturing and distribution, garment sales and distribution, giftware wholesale, vegetable sales and distribution, and printing and design. The number of years they were in the business at the time of this study ranged from 2 to 20 years with employee sizes ranging from 6 to 15. At the time the data were collected, five of the study businesses were using MYOB and the remaining three businesses were using QuickBooks. Of the eight businesses two businesses switched from DOS based accounting systems to Windows based off-the-shelf systems. Three of the eight businesses were using only a basic version of the accounting software mainly for bookkeeping. The remaining businesses had advanced versions of the accounting software. Two of the businesses were using payroll modules and one business was using inventory module. Four businesses networked the in-house computers and two

of them were using “Virtual Merchant”, a piece of software that links MYOB with the Word-Wide-Web. Of all the potential research participants contacted, only one small business declined to participate in our research.

Of the eight consultants interviewed one of them belonged to an accounting firm and the remaining seven were independent solo consultants. All the consultants were familiar with MYOB while four of them also worked with other SBA software. Five of the consultants had networking and other computer hardware consulting experience as well. Four of these consultants were trained accountants. At the time of this study, all of the consultants interviewed had a minimum of five years of SBA software consulting experience.

A few days before undertaking the interview, the participants were sent a letter explaining the purpose of the research study and the interview questions. We used semi structured face-to-face interviews, which lasted about one hour each and were guided by an open ended questionnaire, in addition to some demographic questions. The small business investigations were centered around the following themes: (a) Company background; (b) Need for accounting software and the required functionalities; (c) Software acquisition and the implementation process; (d) Issues and challenges faced in acquisition and implementation of accounting software; (e) Skills and knowledge demanded for successful implementation and the availability of such skills in the company; (f) Use of external support/expertise; (g) Price, cost and scope considerations and (h) Overall quality and satisfaction. The IT consultant interviews included the following themes: (a) Consultant’s background; (b) Software implementation process (c) Issues / challenges in effective implementation of the software. The interview proceedings were audio recorded and transcribed. The interview data were then analysed to identify issues, challenges and the factors contributing towards the successful implementation of the accounting software. The findings of the data collected are described in the next section.

FINDINGS

Successes and Failures of Implementation

In our exploratory research on implementing SBA software in small businesses, no major failures have been reported, although certain minor problems were identified especially in the early stage of using the systems after installation. The external

consultants as well as the business owners reported that they were generally happy with the systems that they have implemented. In some cases, the performance far exceeded their expectations.

In an exploratory research on success of software packages in small businesses, Heikkila et al. [26] argue that small businesses have often been disappointed with their software packages because they are either difficult to use (for businesses with less than 20 employees) or do not meet the needs of the company (in businesses of more than 50 employees). Based on our exploratory research, we believe that this may not be valid any more with the currently available SBA software. Further research of course is needed. Admittedly these conclusions are drawn using small sample size. Further research of course is needed.

SBA Software Implementation Issues

Our exploratory survey research identified a number of key issues related to the implementation of accounting software in small businesses. These are discussed below.

Accounting Software Proliferation and Owner / Manager Confusion. In small businesses, before computerisation of accounts, typically only two people managed the accounts: the owner/manager and the business' external accountant. The work involved and the costs associated in 'doing the books' are clear and there are no uncertainties or risks to the owner / manager. With computerisation of accounts involving DOS based software, the number of people involved in the management of accounts grows to three or more people: the owner/manager, the accountant, the IT consultant and a few employees. The software is purpose built. There are no automatic updates to the software, unless it is requested by the owner. The initial costs are usually high, but there are no hidden costs. With the currently available packaged software, benefits such as affordability and high functionality come with potential complexity, risks, uncertainties and dependency. For example, the owner / manager is now dependent on several specialised experts (sometimes on ongoing basis): the accountant, the software consultant, the IT consultant and IT/ software trained employees. The cost of coordination for the small business owner / manager increases and the risk of something going wrong in maintaining and using the accounting software also increases. The increased complexity of the "supply chain" associated with implementing accounting software is depicted in Figure 1.

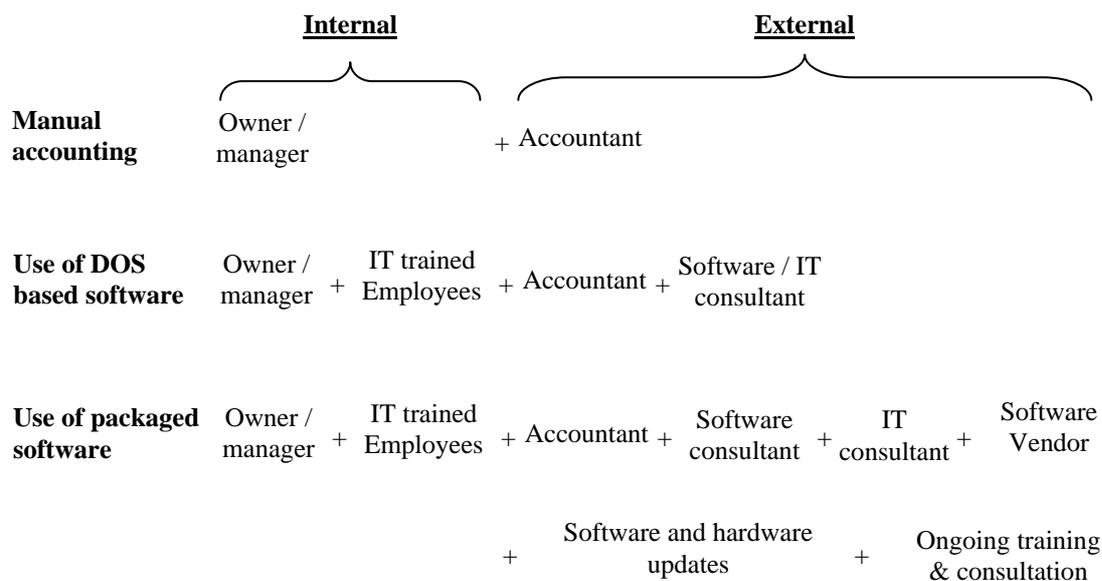


Figure 1: Increase in System Complexity When Switching from Manual Accounting to IT Based Accounting

Looking the software industry from the eye of small businesses, the small business owner / managers are overwhelmed with choice and information. This phenomenon may be somewhat similar to what is described as ‘consumer confusion’ in marketing literature [38]. Deciding which package to choose is now more complicated and it may have a negative effect on the decision behavior of the owner / manager [39]. Due to the condition known as ‘resource poverty’ [58], small businesses are often not in a position to objectively evaluate if they needed an accounting software and if so, which particular software should they acquire and how it can be implemented. Unlike larger businesses, small businesses benefit from independent advice on selection and implementation of accounting software. Lack of such independent advice increases the risk of selecting wrong software, cost escalation and implementation failure and it can be a barrier to uptake of IT in small businesses.

In summary, we observe that the complete absence of advice and support services in selection and implementation of accounting software is a major issue for small businesses. We believe, New Zealand Ministry of Economic Development (NZMED), which formulates New Zealand nation’s economic and ICT policies and the Small Business Advisory Group which was established by NZMED in 2003, could take active role to help smooth implementation of accounting packages in small

businesses. For example, they could take strategic training initiatives on accounting packages for small businesses and provide necessary knowledge, support and funding. They could provide web-based knowledge repositories. The web-based knowledge repositories could consist accounting software package options, the applicability of the software to different industry sectors, advice on employing consultants, costs and benefits, and best practice case studies [6].

Role of External Consultants. Selection and implementation of accounting package usually requires the help of an external consultant. According to Thong et al. [58], “...*top management may provide the resources needed for the IS (Information Systems) implementation, but ultimately it is the external experts who will implement the systems.*”

Based on our survey research we can classify the external consultants into four categories. The first category is ‘accountants’ belonging to a small accounting firm. They prefer and recommend their clients to use the accounting software that they use. It is convenient and easy to manage clients’ accounts that way. Many in this group have limited knowledge of the software and usually do not keep up with the software and technology updates. Often they help their clients with basic version of the software. If the implementation is comprehensive with modules such as inventory management, payroll and computer networking, the accountant refers the small business to a software and / or IT consultant: “.. *they (accountants) tell somebody to take MYOB and then they call me (the software consultant) to come and install it and do it all properly.*”

The second category is ‘IT consultants’ who in addition to their IT skills are adept at learning different accounting software. They often can implement more than one accounting software. This category of consultants often do not have accounting background, but work with clients’ accountants when implementing an accounting package. The third category of consultants is ‘solo consultants’ who are neither accountants nor IT consultants, but have learned the software and have gained the expertise by helping to implement for a number of small businesses. This category of consultants is growing and has a niche market of small business owners who need help with implementing stand alone standard accounting modules. These consultants develop good working relationships with the clients and their charge rates are usually low. The last category of external consultants is ‘large accounting firms’ who often have both accounting software and IT expertise. Their

implementation is more comprehensive and their hourly charges are usually high. None of our survey respondents used such consultants.

Installation of basic version of the software (including training) is straight forward and takes about ten hours. Problems are rare with such implementations. The consultants provide ongoing support, the requirement of which is minimal with the implementation of basic modules. For implementation of advanced versions of the software, the expertise and experience of the external software consultant is critical to the successful implementation. In addition to accounting and software knowledge they need to have business analysis skills and coaching skills. With the implementation of advanced modules, they should be good at customising the software installation, providing training and be committed to provide ongoing support. For example, in the last two years, the New Zealand Government has made changes to holiday act as well as introduced a 'Kiwi Saver' programme. The help of external consultant is almost always required in these cases to make changes to the computations in the payroll module of the software.

The better the initial setup and customisation the easier for the small business to operate the system. This will also reduce the training costs and on-going support costs [27]. The affect of good customisation is, according to Hilson [27], "dumbing down" the skill required to process repetitive entries. Hilson reports the following comments of a small business owner on the importance of customisation: "...*There is zero accounting skills or knowledge required. It does all kinds of double checking for you and it doesn't allow you to make a mistake.*"

According to Spinelli [55], "*Most small business users and their CPAs find the initial set-up in many applications easy - and that may be part of the problem. Without forcing users to contemplate their initial preferences or stressing the impact of these choices, these easy-to-build systems give small business owners very able accounting systems with very incorrect data.*"

The external consultants are likely to recommend to small businesses the packages that they are familiar with and use it. However, this may not necessarily be the best for IT needs of the business. While very few in our survey reported any issues with the software that they are using, one consultant reported that one of his clients was using a wrong software prior to his involvement. In another case, the owner was using a basic version of MYOB (cash book) for bookkeeping and spreadsheets for managing inventory. The external consultant should have recommended him to use

standard MYOB with inventory module. Some software consultants in our survey have commented that certain consultants (particularly accountants turned software consultants) are not completely familiar with all the functionality of software packages that they help setup for small businesses: *“As soon as an accountant does a journal entry into the control account, they have ruined it all. Some accountants are aware but others are not. So you have to keep an eye on things.”* According to Feiler [22], *“many of the professionals (accounting software consultants) involved do not fully grasp the project’s implications, leading to confusion, misunderstanding and errors.”* In order to protect their brand name and to make sure the small businesses get the best service possible, all major SBA software vendors have certification programmes for consultants and provide a list of approved consultants of their software on their respective web pages.

It is also revealed that some small business owner/ managers try saving costs by procuring and implementing the accounting software (and hardware) by themselves, without taking expert advice. This sometimes leads to wrong selection of software and / or incorrect setup and compatibility problems. However, invariably such small businesses solicit the services of an external software consultant to fix the problems. In summary, the external consultants play a major role in implementing accounting software in small businesses. Further, the IT consultancy business is growing rapidly fuelled by the increased use of IT in SME sector. In 2006 in New Zealand, computer consultancy services have increased by 39 percent compared to previous year and accounted for 50 percent of all ICT businesses [57]. In view of the importance of IT consultants, further research is warranted to understand the role and effectiveness of the different categories of external consultants.

System Integration. One area of frustration for small businesses is system integration. According to one consultant in our survey: *“...I am helping someone buy a computer at the moment. The issues involved around buying a computer are lot more complicated than just going and getting one. ... he has got an older version of MYOB. It will not run with VISTA. So we are trying to get a machine with Windows XP on it so it will run with his older version of MYOB. There are all sorts of issues ... he wants network his computers so he has to have network card”*

System integration is an issue for large [7, 16] as well as small businesses [55]. According to Spennelli *“products from same vendor did not communicate.”* Continuous change in technology and the associated software updates further

aggravate this problem. The small business owner / managers are not only required to adopt IT but also required to change along with the fast changing IT industry. This is a big ask for resource poor small business owner / managers. These changes are thrust on them, they have very little control over these changes. We believe this is going to be increasingly a major issue in the future with more features and options being added by the software and hardware vendors. Vendors need to pay particular attention to this issue when coming up with new software updates.

Owner / Manager IT Competency. Based on our survey research, we could classify business owner / managers into two groups: those who have aptitude for computers and those who have fear of computers. For the first group, who have aptitude for computers, the implementation is quicker and less costly. They master the software and exploit all important functions of the programme. They take less help from external consultants and some of them implement the software themselves. For this group of business owner / managers, the availability of such affordable, user friendly and powerful off-the-shelf packages is a boon. The implementation for this group is smooth. The second group, who have phobia for computers, are slow learners, take more help from external consultants and use minimal functionality of the programme. Because of this the implementation costs are also likely to be high for this group. According to one consultant: *"...they don't like using computers. They don't trust them and they don't have confidence. If you have confidence, it makes whole lot easier to use them. Kids of this generation don't have that problem. ... Once they get over they are away I can do this, it is not going to break. The other thing about MYOB is when they are using it they can't see what is happening behind the scenes. When you put something in, it automatically balances. A lot of people find it a huge leap to take from manual accounting. ... A lot of people have trouble with this concept..."* We believe those small business owner / managers who have not yet switched from manual accounting to computerised accounting also belong to this second group, who have fear of computers.

Almost all the external consultants in our study reported three most common issues in implementing accounting software: not creating or incorrectly creating backup files, file management problems and inability to use productivity features such as short cut keys and 'auto fill' features: *"...This person has been told to recycle floppy disks using three rather than one for backup purposes. So every time she did a backup which is at least once a week, she put the floppy disk in, saved it took it out*

and then went home. Eighteen months later the office got burgled and everything stolen. ... I came to restore the data. There were three backup disks, first one blank, second one blank, third one blank. And what she has done, she put it in (the backup disk) and on the backup window on the screen it was pointing to a folder on a C: / drive."

Although these are common recurring issues, in terms of successful implementation of the software these are only minor issues. Lack of IT competency, in particular poor understanding of computers and lack of internal computer expertise have been identified as inhibiting factors of successful implementation of IT projects in small businesses by a number of researchers [15, Thong et al. 1994). We argue that this is becoming increasingly less of an issue with the availability of low-cost accounting software that are user friendly with easy-to-use flow-chart-style navigation and providing input efficiencies such as auto-fill [41].

Owner / Manager Accounting Knowledge. The evidence from our research indicated that lack of internal accounting expertise is a more common problem than lack of computing skills among small businesses. It is not uncommon to come across owner / managers who have *"phobia for numbers, they cannot even add two numbers."*

Even though the currently available SBA software packages are "user friendly" and the need for accounting skills such as double entry bookkeeping is significantly reduced, one AIS consultant indicated that *"entering data in wrong accounts and invoking wrong accounting functions"* are common mistakes of small businesses and they require the help of external consultant to correct these mistakes. This happens particularly with the businesses who have cut short training in order to save money. Sleeter [54], a prolific writer on QuickBooks, gives an example of a typical data entry error in using accounting packages:

"From my experiences over the years, I've discovered that people make the strangest errors. Some have left me scratching my head, wondering how someone could possibly have come up with such entries. Here's one example: An entry in QuickBooks was attempting to write off an open invoice. The invoice was dated in a prior year and rather than entering a credit memo to properly record the reduction in AR and debit the bad debts expense account, the user opted for a discount transaction, dated in the next year, that credited AR and debited an EQUITY

account! Yes, EQUITY and to be specific, it was the Opening Balance Equity account that QuickBooks uses for your setup entries. Sheesh!”

We believe this is going to be an on going problem in the foreseeable future, unless the software vendors make paradigm shift in the way they develop their packages keeping the ‘dumb small business owner / manager’ in mind. Small business entrepreneurs cannot be expected to have a good accounting knowledge. If the small business owner to be comfortable in using an accounting software package, their front-end interfaces need to be formulated to match the mindset of the small business owner. The need to bridge this gap between “poor accounting knowledge of small business owners” and “the demand of a good accounting knowledge of SBA packages” may be the real issue associated with the implementation of accounting software in small businesses.

Owner / Manager Leadership and Managerial Skills. Project Management literature identifies, among others, two critical success factors for successful management of projects: Top management support and project manager leadership and management skills [1, 40]. In small businesses, however, the owner / manager is often the “top management” as well as the project manager. When asked the external consultants about issues in implementing accounting packages, there were hardly any specific comments on owner / manager’s managerial or leadership skills. However, we believe, the relative importance of the role of the owner /manager (being top management as well as project leader) depends on the project scope. If the implementation is a very basic version of the accounting software (for example, just book keeping), the leadership and managerial skills of the owner / manager may not be critical. However, if the implementation is a comprehensive involving advanced functions of the software (involving more money and time), then, managerial and leadership skills do matter. The bigger the project the higher the commitment and the more the need for leadership and managerial skills of the owner / manager. Larger and complex projects demand more control.

Work Pressure, and Lack of IT and Financial Resources. The owner/ managers of three sample businesses indicated that work pressure was a cause for acquiring and implementing the new software and it is also a major hurdle while implementing the software: *“It’s just purely pressure of trying to do/ make work and everything that needed to be done.. It’s (upgrade to multi-user system) to be done and it was only me who was able to do it.”* According to Cragg & King [15], *“Systems were often*

acquired to save time as well as to reduce costs. But the installation and implementation of systems alone absorbed considerable amounts of senior managerial time - time these businesses could ill afford. This problem, linked with the lack of expertise, caused some businesses to take a very cautious approach."

Small businesses lack slack resources and cannot afford to have IT champions to professionally manage the acquisition and implementation process. Research indicates that in large corporations, these champions play critical roles in leading successful innovation adoption and diffusion [34]. Small businesses are also often not as willing to pay for ongoing support and services as larger businesses. A number of external consultants in our survey reported that some owner / managers cut training to save money. According to one consultant: *"They are usually enough price conscious and they say that they have enough of an idea on how to use it and they don't need any more training."* Small businesses, in general, underestimate the total cost of implementation that includes consultant's fees and training expenses.

We observe that in spite of dramatic reduction in the cost of personal computers and packaged accounting software, lack of resources continued to be an issue for small businesses. Small businesses also fail to ascertain the real cost of the total project. Further, these businesses typically have fewer slack resources with which to absorb the shocks of an unsuccessful implementation.

CONCLUSIONS

The purpose of this research is to increase our understanding of issues and challenges faced by small businesses in New Zealand in the implementation of accounting packages. Given that small businesses account for 97 percent of New Zealand businesses and a large proportion of these small businesses use IT for accounts, this research has significant relevance to New Zealand economy. Neither the owners nor the external consultants reported any major failures with the software implementation. However, there were a number of recurring issues such as owner / manager's lack of confidence, lack of skills in IT and accounting and problems associated with IT systems integration. An important implications of this research for vendors is that there is lot more scope for further improving the SBA packages keeping the 'dumb small business owner / manager' in mind. External consultants play a critical role in the implementation of accounting software in small businesses.

In addition, IT consultancy businesses are growing rapidly. In view of the critical role played by external consultants, further research is needed to understand their role and effectiveness in implementing SBA software. Currently, published research in this area and, in general, on the implementation of SBA software is limited. As a direct result of this research, the author is currently undertaking a research project that explores the role and effectiveness of consultants in implementing SBA software.

This study has some limitations primarily due to its exploratory nature using a small sample size. The study sample, while represents both small businesses from different industries and consultants, was a convenient sample which makes it difficult to generalise the results obtained. A more comprehensive theory building and empirical analysis is required for further research.

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