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THE USE OF PROPERTY MANAGEMENT SOFTWARE IN RESIDENTIAL PROPERTY MANAGEMENT

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ABSTRACT

Property management once a job heavily weighted with administration tasks and paperwork has evolved into more strategic market positions due to the advances in information and communications technology. A third of New Zealand residential properties are rental properties and a significant proportion of these properties are managed by property management companies. However little known about how and to what extent property management software is used by residential property management companies in New Zealand. Employing a questionnaire survey and in-depth interviews with small scale residential property management companies, this study examined the current use of computer software in the residential property management sector and property managers' perceptions and experience of the software being used.

The study identified that small scale residential property management companies were well equipped in specially-designed property management software packages and invested substantially in information technology for further upgrading of software. Software packages performed a wide range of functions relevant to property management such as tenant database management, rent roll and payments, vacancy management, maintenance record keeping, financial accounting and reporting, and communication with tenants. Reporting capabilities, ease of use, technical support and security procedures were the main criteria property managers considered when selecting software. The results suggest that property managers were mostly satisfied with mail merge facilities, scalability and storage and retrieval facilities offered by software. Most property management companies used software developed in other countries and as a result experienced issues with the flexibility of software and technical support. Though property management software was extensively used in residential property management in New Zealand, it was revealed that they did not explore the full capacity of software. The findings highlight the significance of property management software in modern property management practice.

Key words: Property Management, Residential Property, Computer Software, New Zealand

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INTRODUCTION

Residential property management once a job heavily weighted with administrative tasks, paperwork and showing of properties to prospective tenants is evolving into more strategic market position with the advances in Information and Communications Technology (Dobrain, 2011). Modern residential property management companies are well equipped in property management software, with most tasks carried out by property managers being assisted in some way by computer software. There are currently a vast array of pre-written and easy to learn residential property management software packages available and each package provides slightly different property management functions. Among various property management tasks, a number of tasks are highly computer automated. These include rental payment management, lease management, vacancy management, preparation of notices and circulars, and preparation of invoices (Han and Lim, 2001). The pressures for accurate and up-to-date information are immense, and computerised systems offer significant benefits to property managers (Dixon, 1993).

About 33% of New Zealand households live in rental properties and this percentage has been increasing every census (Statistics New Zealand, 2007 Census). A significant portion of these rental properties are managed by professional residential property management companies. Despite the fact that property management companies are dealing with a large portion of rental properties in New Zealand, little is known about how and to what extent property management software is used for residential property management tasks. Employing a questionnaire survey and in-depth interviews with small scale residential property management companies, this study examined the current use of computer software in the residential property management sector and property managers' perceptions and experience of software being used. The term 'property management software' used in this paper referred to those programs specifically developed for basic administration or general property management tasks such as lease management, rent collection and accounting, and maintenance. In particular, the following research questions are addressed:

- What property management software is used in residential property management companies in New Zealand?
- What factors were considered when selecting their property management software?
- How satisfied are they with their current property management software?
- What are the problems associated with their current software?

The remainder of the paper is in four parts. The following section provides a brief review of the relevant extant literature. The methodology is then presented followed by a summary of the results. The concluding section highlights the key findings of the study.

LITERATURE REVIEW

The idea that property management needs to embrace computer and apply information technology in the management of property is a matter which has attracted a considerable amount of attention in property research (Deakin, 1998). Since the personal computer was made widely available, it has become a major area for advancement for property professionals to computerise property management tasks (Bergsman, 1997; Christudason, 2008; Han and Lim, 2001; Kirkwood, 1994). Residential property management companies are increasingly employing property management

software to facilitate their day-today management tasks in order to provide faster and more accurate service to their clients. Property management software streamlines the wide range of tasks that a property manager performs on a regular basis. These include rental management, integrated accounting, reporting capabilities, web based platforms, online portals and centralised databases, and maintenance activities (Foong, 2009; Han and Lim, 2001; Nelson, 2011; Marin, 2007; Rogal, 2006). Computerised property management systems have freed up much of property managers' time and thus they are able to spend more time on 'hands-on' management rather than paperwork and administration (Dixon, 1993). The most notable advantage of property management software is that it is able to integrate and automate virtually all the previously manually performed tasks associated with property management (McDonald, 2007). Greater efficiency in computerised property management systems leads to "cost savings through less repetitive work, improved cash flow, regular and accurate fee information, and better client response with improved service" (Dixon, 1993, p 155). Furthermore, property management software is able to amalgamate portfolio, lease and other data into one database which leads to "better informed decision-making and faster access to information on new or expanded markets" (Sester, 2008, p 85).

The existing literature also highlights the importance of systematic and strategic approach when selecting appropriate software and the key company specific and software specific criteria to be considered. These include company's IT policy, existing hardware, vendor viability, cost of software, property management tasks performed by software, technical support, ease of use, scalability and flexibility of software, and completeness of software (Burger, 2008; Gibler et al. 2010; Menefee, 2004; Wardlow, 1995; Wales, 2011; Hein, 2006; Foong, 2009). Despite the benefits provided by computerised property management systems, several studies have identified the problems associated with implementing property management software, particularly in small residential property management companies. These include lack of strategic IT policy, lack of awareness on how software can assist in property management tasks, resistance to make a capital investment in a software system, lack of integration between various property management functions, having the view that property management is a job strongly based on the human touches, and lack of availability of locally or nationally developed property management software (Han and Lim, 2001; Dixon, 1993; Deakin, 1998).

The review of literature highlights that the majority of literature relating to residential property management software is based on the US market where the general size of portfolios dwarf those found in New Zealand due to the massive population difference. There is lack of research in the New Zealand context to understand how extensively computerised software is used in the residential property management sector. Given that one third of New Zealanders live in rented residential properties, it is important to understand how effectively and efficiently those properties are managed with the assistance of computerised property management systems.

METHODOLOGY

The study employed a survey of 30 residential property management companies supplemented with five one-to-one, in-depth interviews. These property management companies had business locations throughout New Zealand, but only property managers in the Auckland market were surveyed. All property management companies participated in the

survey used residential property management software in their company. Several senior property managers participated in this study had involved in the decision to purchase their current software and had influence over the decisions related to IT resources in their organization. The questionnaire survey was divided into four parts. The first part of the survey sought background information on the property management company and property management software used. It was designed to identify the nature and size of the company, property management software being used and property management functions performed by software. The second part of the questionnaire examined the key selection criteria used by property management companies when selecting their current software. The third section examined property managers' perceptions and satisfaction with their current software. The last section of the survey aimed to examine weaknesses or problems associated with their current software.

One-to-one in-depth interviews were carried out in the second part of the sequential multi-method research design, which allowed the findings of the survey to be clarified and described comprehensively by five senior residential property managers. They were selected on the basis that they had experience of using property management software and that they were senior members of the profession. The use of both surveys and interviews in this research provided richer and more inclusive outputs than may have been obtained by utilising a single method approach.

KEY FINDINGS

Residential property management software used

Twenty three out of thirty residential property management companies participated in the survey were small companies, with ten or less staff. Five companies had staff between 11 and 25 and only two companies had staff over 25. Fourteen out of 30 companies participated in the survey specialized in property management business only. Other 16 companies were multi-disciplinary real estate companies, but residential property management was the main business that they were conducting. 23% of the survey respondents managed less than 100 properties; 60% managed between 101and 500 properties; 10% managed between 501 and 2000 properties while 7% of respondents managed over 2000 properties. Among the residential properties that companies managed, approximately 65% were apartments and the remainder was detached houses, semi-detached houses or town houses. Two of the property management companies interviewed were specialized in property management only and the other three worked for multi-disciplinary real estate firms.

Despite their size and the number of properties managed, all property management companies surveyed were using property management software to facilitate property management tasks. They were well-equipped both in computer hardware and software and invested substantially in information technology for further upgrading of software and hardware. Greater efficiency of the company leading to cost savings through improved and faster service was indicated as the main reason for using computerised property management systems by these companies. All property management companies participated in this research used pre-written software applications programs. These programs did not offer users the ability to tailor the program to their exact needs. Interestingly, 28 out of 30 property management companies participated in the survey used property management software applications developed in Australia while only two companies used a property management software system developed in New Zealand. When asked why their

organizations selected property management software developed overseas rather than local software focusing on localized needs and procedures, interviewees indicated that Australian property management software products were more comprehensive, integrated, reliable and easy to use. It was also suggested that those software applications were better suited for the management of a large number of properties. Table 1 below shows the software applications used by survey participants.

Table 1: Type of residential property management software used

Name of software package	**Property management companies**		**Developer of software**
	No. of companies	**%**	
REST	19	63.3%	Rockend, Australia
Gateway Live	7	23.3%	Console, Australia
Palace	2	6.7%	RealBase, Australia
Realnz RPM	2	6.7%	RealNZ, New Zealand
Total	30	100%	

Among a wide range of property management tasks performed by their property management software, six tasks were highly computer automated. They were tenant database management, rent roll and payments, vacancy management, maintenance record keeping, financial accounting and reporting, and communication with tenants. Tenant databases enabled storing vital tenant information such as their contact information and allowed property managers to evaluate tenants' credit history and lease and transaction history. Rent roll and payment facilities enabled online rent payments and its automatic alerts informed landlords and tenants of rent arrears and late fees. Vacancy management functions in software facilitated automated vacancy postings for properties to be listed, notifications on upcoming lease expirations and identification of vacancies and under-utilized properties. Maintenance record keeping functions facilitated online maintenance request submissions and ensured that all maintenance issues were dealt with promptly. Financial and accounting facilities allowed property managers to prepare and maintain general ledger, income statements, accounts payable and receivable, and operating expense budgets. Communication functions in software facilitated communication with tenants by automated text messages, preparation of tenant payment and arrears documentation, preparation of lease related documentation, and preparation of notices and circulars. Equipped well with good computer hardware and property management software, all property managers surveyed and interviewed emphasized that computers played a significant role in their business and continued to grow in popularity and importance.

Criteria used when selecting software

Selecting the correct applications software for property management tasks requires a systematic procedure to avoid expensive mistakes and there are specific criteria which need to be borne in mind when selecting such software (Dixon, 1993). To investigate the main criteria considered when selecting their company's property management software, the survey respondents were given a list of key characteristics related to software and asked to indicate how important those characteristics were when selecting their existing software. The responses were measured using a five point scale where 1 = not important at all to 5 = very important. The results set out in Table 2.

Table 2: Residential property management software selection criteria

Property management software characteristic	**Mean ranking**
Reporting capabilities (e.g. rental areas statements, financial statements)	4.72
Ease of use	4.61
Technical support (help service)	4.54
Security procedures	4.27
Flexibility (process can be modified by user to meet needs)	4.23
Communication capabilities (e.g. send rent arrears to tenants by text message etc)	4.12
Scalability (ability to handle an increase in the number of properties managed)	4.0
Track record of the software supplier	3.94
Data storage and retrieval (e.g. store old landlord details etc)	3.78
Maintenance activities (e.g. send work orders to contractors etc)	3.56
Cost of the software	3.21
On-line integration (ability of software to communicate through their website)	3.14
Completeness of software (integration with other property software)	2.78

The most important criterion considered when selecting property management software was its reporting capabilities, with 94% of survey respondents rating this area as important or very important. This finding was reinforced in follow-up interviews and it was suggested that reporting capabilities was probably the mostly used function in their computerised property management system. Interviewees indicated that they expected two main reporting capabilities from the software. Firstly, the software should have a system to inform property managers of important dates related to rental properties such as rent review and lease renewal dates, and dates for tenants' and landlords' repair and maintenance activities. Secondly, the software should be able to create reports such as end of month reporting to landlords, management reporting, analyses of property expenditure, tenant expenditure, service charges, and end of year reports to landlords. This facility was not only used for property management tasks but was also used for presentations to the company and landlords. Easy to use property management applications with good menu-driven features and help facilities were considered as the second main criterion when selecting software. The interviewees emphasized that it was important for them to have property management software that *"flows logically and presented in a user friendly format"*. Well-documented software manuals increased the user friendliness of software and it was suggested that manuals should be explicit so that users who are unfamiliar with the software program should be able to understand how the package worked.

Technical support or the consultation service from software supplier was identified as the third most important requirement in software selection, with 85% of survey respondents rating this as important or very important. Interviewees confirmed this and suggested that *"the software package is only as good as its support mechanism that is sitting in behind it"*. In addition to expert help desk support, the provision of staff training or induction courses after the purchase of software, help menus along with training manuals, vendor's responsiveness to problems, and how well they

are able to remedy them were identified as significant parts in technical support. Security features in software that prevent commercially sensitive confidential information related to the company and properties managed by the company from getting into the wrong hands were also considered as one of the main criteria in software selection. As stated by one respondent *"we rely on the software for security and reliability, especially in situations like tribunal hearing and rent arrears. If we had software that wasn't secured and reliable, we would simply lose cases"*. The scalability or the ability to handle an increase in the number of properties managed was also considered significant together with the flexibility or the ability to modify the software programme.

Survey and interview participants also emphasized that the track record of the software supplier was vital when choosing appropriate software. The interviewees indicated that peer recommendations, software demonstrations from vendor, vendor's client base, and the stability of the vendor company were carefully examined before deciding which software to purchase. Interestingly, the cost of software was not considered as an overriding factor in software selection and the interviewees indicated that *"the quality and value generated by software are much more important than the cost of it. It is uneconomical to buy cheaper software only to realize that it is not meeting our demand"*. It was also suggested that higher initial costs of the package would yield returns in the future in the form of an increase in efficiency of the service provided by the company. Online integration facilities or the ability to communicate through their website and the future integration of separate business functions were considered as the least important criteria when selecting property management software by the survey respondents. All of the interviewees explained that online integration was not seen as an important requirement as *"the majority of our owners and tenants do not really want to login and view anything"*. However it was felt that it would become more important in the future as more Information and Communication Technologies are being introduced to property management practice. The possibility of future integration of separate functions such as accounting and property valuation was also considered as less important. As indicated by two interviewees *"generally one simple property management software is required for us to carry out our job"* and "*separate software systems such as accounting software are used for other business activities"*. Overall, the results suggest that property management companies tend to be more concerned with the value and service provided by software as opposed to the cost of software when selecting their residential property management software.

Level of satisfaction with residential property management software used

In order to examine property managers' satisfaction with their property management software, the survey asked respondents to indicate their assessments as to the level of satisfaction with the current property management software they used. The responses were measured using a five point scale where 1 = very dissatisfied to 5 = very satisfied. The results suggest that the majority of property managers were somewhat satisfied with their current software, with 13% of survey participants being very satisfied, 54% being somewhat satisfied, 16% being neither satisfied nor dissatisfied and 17% being somewhat dissatisfied. None of the respondents were very dissatisfied with their current software. In order to further examine property managers' satisfaction with the software being used, survey respondents were then provided a list of key property management software characteristics and asked to indicate their level of satisfaction with each characteristic. Results are shown in Table 3.

Table 3: Satisfaction with residential property management software

Property management software characteristic	**Mean ranking**
Mail merge documents (e.g. automatically input tenant information into letter template)	4.31
Scalability (e.g. ability to handle an increase in the number of properties managed)	4.23
Data storage and retrieval (e.g. store old landlord details etc)	4.05
Ease of use	3.97
Security procedures	3.88
Communication capabilities (e.g. send rent arrears to tenants by text message etc)	3.75
Reporting capabilities (e.g. rental areas statements, financial statements)	3.66
Maintenance activities (e.g. send work orders to contractors)	3.59
Completeness of software (integration with other property software)	3.31
Flexibility (e.g. process can be modified by user to meet needs)	2.97
Technical support (help service)	2.69
On-line integration (ability of software to communicate through their website)	2.43

Surveyed property managers were most satisfied with mail merge documents facilities offered by software followed by the scalability of software. Mail merge functions in property management software enabled them to save time by being able to produce emails or letters to multiple recipients at the click of a button. All interviewees confirmed that mail merge facilities of their system was *"a huge plus simply because the busier you get the more properties you have, the longer it takes to send out letters and emails; if you can mail merge, it just cuts down the time and streamlines everything"*. Both survey and interview participants stated that they were very satisfied with the scalability of software. Increasing the number of properties in the software system was described by interviewees as a simple procedure with no complications or adverse effects on the system; as suggested by one interviewee "*you keep adding properties and it doesn't make any difference"*. Interviewees also emphasized that scalability of their software provided confidence in expanding business. As indicated by one interviewee "*it does mean that you are ready for business expansion and you know that your software can handle it before it happens. You know that if you get 50 new clients in a week they are still going to be able to get the same service as your current clients"*. Scalability in software provided ability to increase data sharing capabilities, the number of concurrent users and transactions the system can cope with, and speed of the system as their business grew. Furthermore, about three quarters of the property managers were either very satisfied or somewhat satisfied with data storage facilities (80%), ease of use (75%), security procedures (73%), and communication capabilities (71%). The interviewees confirmed these findings and indicated that their software had good data storage and retrieval facilities and tools in reviewing and sorting current and historical data to provide relevant information. Their property management software had good communication capabilities and it had effective tools to generate various documents such as interdepartmental reports and to communicate with landlords and tenants by text messages and emails. 70% of respondents were either very satisfied or somewhat satisfied with reporting capabilities of their software. Their software enabled them to create instant reports and these reports enabled property managers to check outstanding receivables, occupancy levels, lease expiry dates and key performance indicators for the

entire portfolio or more specifically individual units. The majority of survey respondents (66%) were satisfied with maintenance activities and tracking functions available in software. As suggested by one interviewee *"work orders can be sent and tracked, these work orders can be lodged by tenants easily through the webpage"*.

The components that respondents felt least satisfied with were online integration, technical support and flexibility of software. 32% of survey respondents were either somewhat dissatisfied or very dissatisfied with online integration facilities, 30% were either somewhat dissatisfied or very dissatisfied with technical support and 25% were either somewhat dissatisfied or very dissatisfied with flexibility of software. Discussing about online integration facilities, all interviewees confirmed that their software provided options for putting advertisements online; however the process was *"very long, drawn out and time consuming"*. It is likely that this component was rated least satisfying because property managers simply did not require this facility or had not received proper training on how to use it effectively. The interviewees also indicated that they were least satisfied with technical support and help service. This problem related to the difficulty with contacting the Australian based technical support service. The time taken to lodge a support call was felt to be unsatisfactory with the support team often telling them they will call the user back and taking some time to do so. However, it was mentioned by all interviewees that once they got in touch with the technical support, the service was good. In summary, the property managers felt that their current property management software met their requirements and they were generally satisfied with the functions offered by it.

Issues associated with currently used software

In order to examine if property managers experienced any issues when implementing their current property management software, the survey provided a list of functions related to property management software and asked respondents to indicate any of the software components that they had experienced problems with. The responses were measured using a five point scale where 1 = no problems at all to 5 = very problematic. Results set out in Table 4.

Table 4: Areas of property management software which users have experienced issues

Property management software characteristic	**Mean rank**
Flexibility (e.g. process can be modified by user to meet needs)	4.23
Technical support (help service)	4.07
Completeness of software (integration with other property software)	4.00
On-line integration (ability of software to communicate with website)	3.65
Communication capabilities (e.g. send rent arrears to tenants by text message etc)	3.12
Maintenance activities (e.g. send work orders to contractors)	2.84
Reporting capabilities (e.g. rental areas statements, financial statements)	2.37
Ease of use	2.12
Data storage (e.g. store old landlord details etc)	2.03
Mail merge documents (e.g. automatically input tenant information into letter template)	1.84
Scalability (e.g. ability to handle an increase in the number of properties managed)	1.53

Flexibility or the ability to change or moderate the software system was by far the most problematic area highlighted in both the survey and interviews. Interviewees emphasized that flexibility in software was very important due to the constant change of the environment in which the software operates such as changes in hardware. Interviewees indicated that some elements in software they used were too general to meet the needs of their property management practice, but the system was a pre-written programme without authority for any alternation. These software systems did not offer flexibility so that as the company grows or their needs changed, they were not able to add additional modules. As indicated by two interviewees, *"we are not able to change simple things ourselves to address our exact needs"* and *"we have to learn how to work around it for our own needs"*. Several interviewees also emphasized that as they used software developed in Australia it was important to be able to *"modify it for environments other than those for which it was specially designed"*. They also discussed their frustration of not being able to change terminology and procedures used in software developed in Australia. For example, one respondent stated that *"the yearly summary sent to landlords was showing the disbursement fees as postage and stationery, so we had a lot of complaints where our landlords thought we were charging them postage and stationery"*.

Technical support from the software supplier was considered as the second most problematic aspect in their existing software. 93% of survey respondents used software packages developed in Australia and experienced with difficulty in contacting the support service and the lack of communication from the support service. As stated by one respondent *"REST is based in Australia and you have to ring up Australia, wait for them to call you back. Half the time you will be waiting for them to ring you and someone will call, you miss their call and then you leave a message and then you basically play backwards and forwards until someone gets through to each other and that can be frustrating when you have got a client waiting for an answer"*. Online integration was also identified as a main problematic area and property managers were having issues with integrating their company website and property management software into a single process. All property management companies participated in this study maintained those two areas separately requiring them to constantly update their website when properties are available for rental. Two out of five property managers interviewed indicated that they had not been trained how to use online integration functions. When compared with property management software used in other developed countries such as the US, software users in New Zealand show poor use of online integration capabilities.

CONCLUSIONS

The results of this study shed light on the use of property management software systems in the residential property sector in New Zealand. Employing a questionnaire survey and in-depth interviews with small scale residential property management companies, this study examined the current use of computer software in residential property management and property managers' perceptions and experience of software being used.

The study identified that small scale residential property management companies are well equipped in specially-designed property management software packages and invest substantially in information technology for further upgrading of software. Software packages performed a wide range of functions relevant to property management such

as tenant database management, rent roll and payments, vacancy management, maintenance record keeping, financial accounting and reporting, and communication with tenants. Technical support was identified as a key requirement of software as it is required to resolve any software problems when they arise. However it was identified as one of the areas that property managers felt least satisfied with and had experienced problems with. It was found that the problem was not with the technical support service itself but in the difficulty with getting in contact with the technical support service. Reporting capabilities, ease of use, security procedures, flexibility and scalability of software were the other the main criteria considered in software selection. The majority of property managers felt that their software system met their requirements and were satisfied with it. The results suggest that property managers were mostly satisfied with mail merge facilities, scalability and data storage facilities offered by software. Most property management companies used software developed in other countries and as a result experienced issues with the flexibility of software and technical support. Unlike residential property management software users in other developed countries, web/software integration was not commonly used in New Zealand and online resident portals are not popular among tenants and landlords. Though property management software was extensively used in residential property management in New Zealand, it was revealed that they did not explore the full capacity of software. This study contributes to the understanding of computer applications in residential property management companies in New Zealand by examining software use in small scale property management firms. A study addressing computer use in large scale, more sophisticated property management firms would add another dimension to the findings of this research and provide the basis to compare large and small companies in the use of IT in their businesses.

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