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Factors Affecting the Adoption of GL Module of Oracle and SAP Accounting Programs

บทคัดย่อ

วัตถุประสงค์หลักของบทความวิจัยนี้เพื่อสอบทานปัจจัยที่ส่งผลต่อการยอมรับโปรแกรมทางการบัญชีขององค์กรในประเทศไทยสองโปรแกรมคือโปรแกรม Oracle และ SAP งานวิจัยนี้ใช้วิธีการวิจัยเชิงกรณีศึกษาโดยจัดเก็บข้อมูลจากบริษัทตัวอย่างมากกว่าหนึ่งบริษัท (Multi-Case Research Design) ข้อมูลที่ได้จากกลุ่มตัวอย่างจะนำมาวิเคราะห์ผลเพื่อตอบคำถามสำหรับงานวิจัยสองคำถามด้วยกันคือ (1) อะไรเป็นปัจจัยหลักที่ส่งผลกระทบต่อการยอมรับโปรแกรมทางการบัญชี และ (2) โปรแกรมทางการบัญชีทั้งสองโปรแกรมนั้นมีปัจจัยการยอมรับที่แตกต่างกันหรือไม่ อนึ่งงานวิจัยนี้พิจารณาว่าปัจจัยความง่ายต่อการใช้ ประโยชน์ที่ได้รับ และปัจจัยด้านองค์กร สามารถนำมาอธิบายการยอมรับโปรแกรทางการบัญชีขององค์กรได้หรือไม่ งานวิจัยนี้จัดเก็บข้อมูลจากหน่วยงานทางบัญชี 9 หน่วยงานจากองค์กรขนาดใหญ่ต่างๆ ที่แตกต่างกันโดยใช้วิธีการสัมภาษณ์เชิงลึก (4 หน่วยงานใช้โปรแกรม Oracle และ 5 หน่วยงานใช้โปรแกรม SAP) ผลการวิจัยแสดงให้เห็นว่าปัจจัยความง่ายต่อการใช้งาน ประโยชน์ที่ได้รับ และการสนับสนุนจากผู้บริหาร เป็นปัจจัยที่มีความสำคัญต่อการยอมรับโปรแกรมทางการบัญชีดังกล่าว นอกจากนี้ปัจจัยที่กำหนดการยอมรับโปรแกรทางการบัญชีทั้งสองโปรแกรม (โปรแกรม Oracle และ SAP) จะเป็นปัจจัยเดียวกัน

ABSTRACT

The main objective of this research is to investigate factors related to the adoption of two major accounting programs (Oracle and SAP) in Thailand. This research applies multi-case research design in order to answer two research questions; (1) What are the main factors affecting the adoption of the two accounting programs? and (2) Does the two accounting programs have different acceptant factors? This research investigates major acceptant factors such as ease of use, usefulness, and organizational factors. Data has been collected from 9 operational accountants (4 users using oracle and 5 users using SAP) from various companies by depth interview. The result indicates that ease of use, usefulness, and management support are the main factors affect the adoption of accounting software. In addition, both accounting programs (Oracle and SAP) have the same factors affecting the adoption of the programs.

Key words: Adoption, GL module, Oracle, SAP, ERP

1. Introduction

More and more organizations are choosing complete software solutions, called enterprise resource planning system (ERP), to support their operations and business processes (Hoffer, 2003). The ERP software consists of a series of integrated modules such as accounting, distribution, manufacturing and human resources. Meanwhile, the accounting modules support revenue, expenditure, human resources, production, and financial systems. These various systems relate to one another and interface with the general ledger and reporting system which is used to generate financial information for both management and external parties (Wilkinson et al., 2002). Though ERP software comes with many modules, the organization does not need to implement every module. One of the commonly installed modules is general ledger system (GL). The general ledger produces regular periodic financial reports which are the results of an organization's activities.

There are several major vendors of ERP systems. The best known is SAP, a German firm. SAP was the tenth largest software company in the world and sixth in terms of revenues from software licensing (Hoffer, 2003). Another well-known supplier of enterprise solution software is Oracle, a U.S. firm. The two companies own over 50 percent of the market for business applications software, and they are the only two companies having the worldwide infrastructure needed to support that software. Both SAP and Oracle attempt to provide users with more unified software packages. In addition, both of them believe that the user's acceptance of their software is vital to their business. However, little research has been conducted to examine the factors related in acceptance of these major accounting programs. Generally, the first application to be considered from the companies in South-East Asia is accounting (Nilsen, 1979). Many Thai companies have also installed this accounting software. As the computerization in Thailand is in initial stage, many companies normally consider to implement accounting applications especially GL module. The main purposes of using this module are to eliminate manual intervention and to help companies improved accounting capabilities and speed up financial reports to meet the requirements of manager, stakeholder, and third parties. Although there are many accounting programs in the market (i.e., J.D. Edwards), many Thai companies install the software from two major market leaders: Oracle and SAP. It is difficult to justify the use of this accounting software from these two vendors. Therefore, the objective of this paper is to investigate factors relevant to adoption of GL module of Oracle and SAP accounting programs. Using a multi-case research design the two research questions are: (1) What are the main factors affecting the adoption of the two accounting programs? and (2) Does the two accounting programs have different acceptant factors? The paper contributes to practice by providing information that is likely to improve the development of

accounting software to meet requirement of end-users which in turn the adoption of the software.

2. Prior research

There are several factors affecting the acceptance of GL modules of both Oracle and SAP software applications. Previous researches such as the technology and acceptance model (TAM) and the extension of the TAM model by including the organizational issues have shown that the factors involved in individual's acceptance are ease of use, usefulness, and organizational issues.

2.1 Ease of use

Perceived ease of use can be defined as the degree to which a person believes that using a particular system would be free from difficulty or great effort (Davis, 1989). The effort is a finite resource that a person may allocate to the various activities for which he or she is responsible (Radner & Rothschild, 1975). In addition, the term ease of use can be viewed as inverse relation to the concept of complexity (Davis, 1989). Rogers and Shoemaker (1971) define the complexity of an innovation as the degree to which innovation is perceived as relatively difficult to understand and use. Meanwhile, Tornatzky and Klein (1982) concluded that complexity was negatively related to adoption. Therefore, an application perceived to be easier or less complex to use than another is more likely to be accepted by users (Rogers, 1983; Lu et

al., 2003). In term of acceptance of software, ease of use includes some type of task analysis and the considerations of ergonomics and user interface (Keil et al., 1995). Furthermore, the acceptance of computer technology depends on the technology and the level of experience of the individual using the technology (Igbaria, 1994). Computer experience and user training are likely to improve a person's perception and attitude toward using the technology by reducing or eliminating any fears they may have which in turn the users will found that the system is easier to use (Igbaria, 1994).

In summary, this research applied three main categories (physical effort, mental effort, and perceptions of how easy a system is to learn) from Davis (1989). However, some items from those categories, which are appropriated for GL module, have been selected. These items are easy to use, recovery of error, providing guidance, and effort to become skillful.

2.2 Usefulness

Davis (1989) defines perceived usefulness as the degree to which a person believes that using a particular system would enhance his or her job performance. Adams et al. (1992), Aladwani (2001), Anandarajan et al. (2000), Davis et al. (1989), and Hu et al. (2003) reported that user acceptance of computer systems is driven to a large extent by perceived usefulness. Other studies have also reported that perceived usefulness is positively associated with system usage (Igbaria, 1994; Thompson et al., 1991).

In addition, Rubensteing (1974) examined the factors affecting the adoption of a Monte Carlo simulation program. They found a strong positive correlation between the perceived value of the data generated by the model and an individual's willingness to adopt the system.

Souder et al. (1975) consider that functions provided by the software are one of the factors that will affect the acceptance decision. Due to the vital importance of accounting data and information, management needs to have a reliable and up-to-date reports to support their decision making. Adopting any software would, therefore, consider the functions provided by software package (i.e., reports, duplication of input, efficiency and effectiveness, etc.).

For usefulness, this research also applied two main categories (job effectiveness and the productivity and time saving) from Davis (1989). However, some items from those categories, which are appropriated for GL module, have been selected. These items are quality of work, increase productivity, and make job easier.

Table 1 summary of TAM findings emphasized on the effect of ease of use and usefulness construct on usage of the previous research.

Table 1: Summary of TAM Finding

Researcher	Year	Construct	Finding
Chun and Todd	1995	Usefulness	One-factor usefulness construct held up better
Chau	1996	Usefulness	Differentiated between log-term and short-term usefulness
		Behavioral	intention Predicted by usefulness rather than ease of use
		Ease of use	Predicting short-term usefulness
Gefen and Straub	1997	Gender	Found that women tend to be more cooperative in their conversation and men tend to be more competitive and that woman view e-mail as being higher in social presence than men
		Usefulness	Found that women purport a higher value for perceived use than men
		Ease of use	Found that men had higher ease of use scores than women
Agarwal and Prasad	1998	Usefulness	Personal innovativeness positively moderates the relationship between the perceptions of relative advantage, ease of use, and compat-ibility and the decision to adopt an innovation
Van der Heijden	2000	Usefulness	Relationships between perceived usefulness,

			perceived entertainment value and website revisit were found to be significant
		Ease of use	Relationships between ease of use, perceived attractiveness, and website usage were not significant
		Usage	Perceived usefulness and perceived entertainment value are both significant factors in determining Website usage, ease of use only indirectly influences website usage through usefulness
Venkatesh and Davis	2000	Usefulness	Moderated by social influence processes and cognitive instrumental processes
		Behavioral intention	Model explained up to 60% of the variance in perceived usefulness as a determinant of user intentions
Chau and Hu	2001	Usefulness	Perceived usefulness was the most significant factor for the physicians' technology acceptance while perceived ease of use was not a significant factor
Legris, Ingham, and Collerette	2003	Usage	Self-reported use predictive capacity may increase if organizational and social factors were included in the model

Source: extract some research from Schneberger et al. (2007-2008)

2.3 Organizational issues

A review of the relevant literature suggests that organizational issues are organizational policies including management support (such as providing resources, training, and information center) and security concern. Pressure from top management through different policies may encourage computer usage. On the other hand, if the policies were perceived as more restrictive, individuals may feel discouraged to use the system (Igbaria, 1994). Ettlie and Briges (1982) found that perceived environmental uncertainty promoted an aggressive technology policy. They found that firms with an aggressive technology policy consistently tried out new processing equipment when it became available. In addition, the firms will actively recruit the best possible technical and production, and are strongly committed to technological forecasting. Organizations that had an aggressive technology policy tended to have a specialized group to evaluate new process innovations, which in turn led to the adoption of major process innovations.

Management support is one of the key recurring factors affecting system success and computing acceptance (Igbaria, 1994; Kwon and Zmud, 1987; Lucas, 1975). The need for top management support and commitment during the assessment of an innovation and the adoption and implementation of any IT project have consistently been found to be important. Support for innovation by management ensures that there is commitment in resources. If top management does not provide support for innovation, it is hard to find champions in the organization for new ideas. Top management support is also crucial in overcoming

barriers and resistance to change and innovation. Therefore, management support is associated with greater system success. The lack of management support is considered a critical barrier to the effective utilization of information technology.

Many companies have become increasingly dependent on computerized accounting systems. As system complexity increase, companies face the growing risk of their systems being compromised (Romney, 2003). The System Security Association estimates that 65 percent of security problems are caused by human errors, 20 percent by natural and political disasters, and 15 percent by fraud. If com panies do not protect their systems from these four threats, they may face an additional threat, a lawsuit. As a result of these problems, controlling the security and integrity of computer systems has become an important issue. Nowadays, companies are recognizing the problems and taking positive steps to increase computer control and security. Many are establishing and enforcing formal information security policies. As an accountant, he/she must have a good understanding of IT and its capabilities and risks. The fundamental controls that accounts should aware are access control (protecting access control to accounting database by using password), and backup data.

3. Methodology

To investigate the case questions developed above, this research is based on a multi-case research design to collect evident. This multi-case design is the most sophisticated of the four case designs discussed by Yin (Spicer,1995). The research chose to use a case research design because this appropriate for the research questions to understand which factors are important in affecting the adoption of GL module of Oracle and SAP accounting programs.

This research was carried out in nine multi-national firms in Thailand which install Oracle or SAP GL module. The main businesses of these companies are petroleum refining, retailer, electricity generator, and general merchandisers. A snowball sampling procedure is applied in the selection of suitable companies. This is a form of judgmental sampling that is appropriate when it is necessary to reach a small and specialized population (Svensson, 2002). This research targeted large firms because large companies can afford the implementation of ERP.

The research was done with ERP's users who work in accounting department to provide firm's financial reports to the hearquarters and to the various divisions. The participants in each firm range from operational accountants to a project management team with working experience form 3 to 13 years. The interviews were performed by researchers in the office of the ERP's users without interrupting telephone calls, colleagues, or other disturbances. In addition, the data were collected through recorded depth interviews. Each interview lasted approximately 45-60 minutes. They followed the same pre-determined structure and pre-defined questionnaire. Each interview commenced with the researchers pointing out that the revealed perceptions and collected data were strictly confidential, completely anonymous, and no quotations were going to be used. The content in the recorded interviews was transcribed and saved as a written manuscript

(approximately 90 pages) in order to be qualitatively analyzed by the researchers.

4. Analysis and interpretation

The data collected from nine multinational firms were analyzed and interpreted within the context of three factors: ease of use, usefulness, and organizational issues. For each individual case, the analysis concentrates on whether the information about each case is consistent with the explanation of those three factors. If the findings obtained in subsequent cases also were consistent with the above three factors, we concluded that the viability of the factors were strengthened. Thus, if the pattern observed in the second case was similar to the pattern observed in the first case we would interpret this as a replication. If the patterns were not similar we tried to understand why the patterns observed did not match those factors. The following sections present the analysis and interpretation for the three factors.

4.1 Description of all cases

4.1.1 Perceived ease of use

As stated above, this research examines perceived ease of use in term of easy to use, recovery of error, provide guidance, and effort to become skillful. The analysis of data of perceived ease of use is as follows.

4.1.1.1 Easy to use

Easy to use means the level of how users are able to interact and get the system to do what they want. As ease of use involve with user interface of accounting software, this paper investigates complexity of user interface, the instruction from system, and ability to create new report by users. The results reveal that 9 out of 9 participants feel that the user interface of both programs is not complex. However, one of participant claimed that the accounting software has its own technical terms that could not be possibly understood. Other claimed that they can use software to perform some functions without any training course. 8 out of 9 participants explained that they could follow the instructions from user interface to do their work. Furthermore, they found that the instruction is quite easy to follows. In addition, all of them are satisfied with the format of the user interface. If the instruction is easy to follows, users would be willing to use the software. Some participants claimed the following statements.

"It is easy. Just look at the user interface. The user interface has blank fields that direct users to fill in all the data",

" It's not difficult to get SAP do what I want because SAP has a detailed menu bar, which I could select whatever I want"

Sometimes management needs ad hoc or special reports to support their decision making. Therefore the ability to create special reports other than normal reports is necessary. 2 out of 9 participants are satisfied with functions provided by accounting software, but 7 out of 9 participants are indifferent. They could not create reports by themselves because of limitation of authority or the lack of knowledge. However, none of the participants seems to bother with this limitation. The standard reports provided by the systems cover all demand reports. Moreover, informa-

tion system department can create those reports for the users. The others explain that they would export accounting data to excel file and then create special reports from the excel program. Creating new reports from excel are easier and consume less time.

4.1.1.2 Recovery of error

Recovery of error means how often the errors occur and how long it takes to fix the errors or problems. Most of the participants agree that they have never experienced any major errors or problems from the system. Whenever they face the problem, they can solve problem within short time period.

For problems that they have to rely on vendor support, 2 out of 9 participants are satisfied with supporting services but 1 out of 9 participant is not satisfied. This participant was highly unsatisfied with the software company. One participant found that vendor has never provided help as problems arise. Thus, the problems have to be fixed by company's internal staffs. The others do not have any comments on vendor support because of no direct contact with vendor. Information system department's staffs call for vendor support for them. Even though one participant does not satisfy with the supporting service from vendor, all of them indicate satisfaction with the accounting software. This satisfaction implies that vendor support is an unimportant acceptant factor.

4.1.1.3 Providing guidance

The guidance refers to informal or formal training, user manuals, and any other things that would help users understand software. Most of participant except one user explains that using accounting software without guidance is impossible due to technical terms and software installation. However, the participants feel that the systems are easy to use after they have been trained. For user manual, some users are satisfied while the others feel otherwise. 1 out of 9 participants are not satisfied with the user manual because manual does not have detail information and is written in English (the native speaker for user is Thai). 3 out of 9 users are satisfied with the user manual and find the manual is easy to use and follow. Meanwhile, 5 out of 9 users are quite indifference about the user manual. In addition, users indicate that the manual should be written in more detail. In summary, the users indicate that the accounting systems are complicate and difficult to use without guidance especially using for the first time as shown by the following statements.

"I would not be able to do the job just by simply looking at the user interface. There must be someone to guide me how to use program, how to run. The user interface is not difficult to follow if you understand"

"Absolutely not. You could not learn how to use by just looking at the user interface because of the technical terms. For example, would you know what navigate or responsibility means? I mean even if you understand English very well, it doesn't necessarily mean that you would understand how to use Oracle. You need to have the user manual or someone who knows how to use to guide you, otherwise you couldn't perform you work"

"Well, the thing is the manual was written in English. And the manual already exists in the program.

If we print it out, there would be a lot of pages. Sometime reading the manual might not be clear. To understand, it needs skill and experience. It would be better if we have someone to train us. If we have troubles and problems, we could still ask him or her. If we read the manual, we would not know whether we're doing correctly or not"

"I can use program by reading user manual if the manual has more detail."

"After training, the accounting user interface is simple. In addition, one training course with 2 weeks on the job training will make me skillful"

4.1.1.4 Effort to become skillful

Skill means expertise of the individual in using the accounting programs. All participants find that their skills in using accounting applications are very likely to improve in a short period of time. According to Davis (1989), effort to become skillful is ease of leaning. Therefore, effort to become skillfull is one of the major acceptance factors.

In summary, ease of use is one of the major acceptance factors of accounting software. The major acceptance factors that are highly relevant to the user acceptance factors of accounting software are complexity of user interface, using after training, easy to instruct and time spent to become skillfull.

4.1.2 Perceived usefulness

This research examines perceived usefulness in term of quality of work, increase productivity, make job easier, and decrease workload. The analysis is as follows.

4.1.2.1 Quality of work

Quality of work means software that helps users control human errors or mistakes as well as helps users to get more accurate data for their work. All participants are highly satisfied with accounting software in term of helping them to control their errors. In addition, the software keeps incorrect data in suspense file. Therefore users can search for and correct error within time. 9 out of 9 participants are satisfied with this factor.

4.1.2.2 Increase Productivity

Increase Productivity means the increment of quantity of works. All of the participants find that on-line accounting system helps them to work faster. One manager and users indicate that real-time system provides recently updated data. In addition, the network system allows all staff to access information and print various reports which are requested by management. Since the accounting software is automatically linked to all database within servers, anyone, who has access right, can use data stored in database for further processing without having to reinput the same data all over again, thus reducing duplication of work. As the accounting software is on-line processing, users do not have to wait for certain level of quantity in order to process work, thus reducing extreme workload in certain period of time and distribute workload equally throughout the time. Some participants claimed that without the accounting software, they would not be able to finish their work within time.

4.1.2.3 Make job easier

Make job easier means the level of convenience that accounting software provides for users.

The convenience should be in form of providing guidance to users during the process, cross-examining the transactions as well as help detecting some errors (e.g., imbalance transactions), and providing the help function to locate any errors or data. In addition, one of the main criteria for selection is to choose accounting software that helps user work easier. All participants perceive that using the accounting software make them work faster and help them meet deadline. Time for processing is lesser than time used in manual system. All participants are fully satisfied with this factor, which leads to their acceptance of the accounting software.

In summary, Perceived Usefulness is considered as one of the major acceptance factors of accounting software in users' perspective. Users are highly satisfied with all of the sub-factors of the "Perceived Usefulness", which are quality improvement, increase productivity, and make job easier.

4.1.3 Organizational issues

It is generally believed that a set of policies, standard, and guidelines must be developed to ensure a standard technical environment. The establishment of organizational policies will increase the use of computers by creating the right environment (Igbaria, 1994). The policies also include management support (such as provided resource, training and information center) and security concerns.

4.1.3.1 Management Supports

(1) Provided resource

Provided resource means management provide most of the necessary help and resources to enable users to be able to use the accounting software. The Help and Resources in this context includes monetary help and non monetary such as provided training, upgrading software and hardware, purchase new PCs. Help fixes the system errors and everything that will help users understand and use the accounting software in full capability. 9 out of 9 participants appreciate the managements in that they always provide the necessary help and resources in order to be able to use the software effectively. One of the participant comments are that managements decided to purchase new PCs with a larger memory. The management also sent users for training when there was an upgrading of the accounting software. The other participants complimented on their management team who arranged related training courses such as Excel Program in order to let the participant be able to use the software effectively. Without necessary help and provided resources could resulted in the frustration in using the software and therefore lead to rejection of the accounting software.

(2) Training

Training means formal and informal training which organization provides to users. Normally, organization provided formal training at the time of implementation of accounting software. Even though management does not seem to provide the regular training, management does, however, provide training upon requests. Some companies provide training to IT staffs who has more skill and knowledge on software than users. The IT staffs, then, arrange in house training for company users. Most of the participants receive on-the-job training from previous users because of expensive fee for formal training especially training arranged by vendors. All participants satisfied with training provided by company. Without any provided training before real usage, they would be confused and might not be able to use the software properly. This probably resulted in the dissatisfaction and frustration of using the accounting software, which might lead to the rejection of the software eventually.

(3) Information center

Information center means a certain person or a group of support person in IT or MIS department within organization available for assistance on fixing

the systems' problems. All participants appreciate service provided by information center. Having the supporting group in the company is useful on helping fix the system problems more immediate. In addition, internal supporting group is better understanding of the nature and structure of business of the organization than the external supporting group such as the accounting software company. Some participants prefer to contact the internal supporting group abroad (i.e, Singapore MIS center) for fixing their system problems rather than contact the accounting software company in Thailand due to less time and money consumed for fixing the problems.

4.1.3.2 Security

As stated above, this research examines security in term of access control and backup data. The analysis is as follows.

(1) Access control

The ability to gain access to computer data should be restricted to authorized users. To restrict accessing to a system, the system must differentiate between authorized and unauthorized users. The most common approach is a user identification (id) and authentication system (password). Normally, the company should assign id and password to each user separately so that the users cannot access data outside their permitted domain. In addition, the users who own the password are responsible on any threats to company's data. For control purpose, guidelines for password selection are that each user should be assigned password differently. Furthermore, users should change password regularly.

For security control of password, participants are not aware of weakness of security control of password. Most companies assign one id and password to more than one user. The reasons are as follows. First, the software company charges fees per user id. Therefore, the companies assign one id and password for 4-5 people within the same control level. Though different users have the same password, the manager is still able to trace work done by different users. Second, participants prefer to access system more than one at the same time.

(2) Backup data

All data files should be backed up regularly and frequently so that the files will exist for recovering lost or destroyed files. All participants explain that backup data are not the functionality of users. This function is responsibility of information system department. Therefore, participants do not pay attention to this function.

In summary, the research found that provided resource, training, and information center are important determinant of user acceptance of accounting software. Participants consider all factors in management supports as one of major acceptance factors. However, the participants do not concern with security issues. Therefore, security factors, in term of access control and backup data, are not an important factor for adopting accounting software.

4.2 Comparison of acceptant factors between Oracle and SAP accounting software

From the interviews of 4 ORACLE users and 5 SAP users, the acceptance factors of Oracle and SAP are quite similar. These factors are "Perceived Ease of Use", "Perceived Usefulness", and "Organization issues". However, there are some considerable differences in acceptance factors that need more detail explanation. The explanation is as follows:

4.2.1 Providing guidance

All Oracle users are quite satisfied with the user manual. Oracle manual is concise, detailed and easy to follow. SAP users, in contrary, feel differently. The users complaint that the user manual provided by SAP is too complicate to follow. In addition, the users have problem with technical term and English

language, which lead to dissatisfaction in system's user manual.

4.2.2 Easy to use

No difference is reported between Oracle and SAP users in the ability to create new report. Both Oracle and SAP users find it impossible to create new report by themselves since users do not have the authority to access such functions. Though one user from SAP indicates that he/she can use functions to create new report, this user is exceptional. The user used to be technical staff for SAP consulting company.

4.2.3 Management supports

From the interviews, management of companies that use Oracle tend to neglect the importance of the regular training where as management of companies that use SAP tend to provide training to their staffs. One possible reason may be that SAP program is a little bit more complicate than Oracle. SAP is a very large and complex program, which is designed to be used widely for several types of businesses. SAP always upgrading the software to make the software suit the companies and the new upgrade program provide some functions differently than previous version. Therefore, training for SAP is relatively more important than training for Oracle

5. Conclusion and suggestions for future research

There are many factors that affect the acceptance of accounting software. Some of them are considered as major acceptance factors such as Perceived Ease of Use, Perceived Usefulness, and Management Supports. However, the users did not pay attention to security factors. The contribution of this research has two folds. First, understanding each acceptant factor in detail could help managements in selecting the appropriate accounting software. The management can use the acceptant factors in order to introduce accounting software successfully and study the structure and needs of users.

Second, knowing acceptant factors, accounting software firms would provide products that suit customer needs.

Based on the finding, we propose factors affecting the adoption of GL module of Oracle and SAP accounting programs in Thailand as shown in figure 1. The modified model consists of the original constructs of TAM (perceive ease of use and perceived usefulness) with the addition of the management support. The organizations which implement Oracle and SAP accounting programs have to consider the effect of training program and other support (i.e. information center) on the usage or adoption of accounting program.

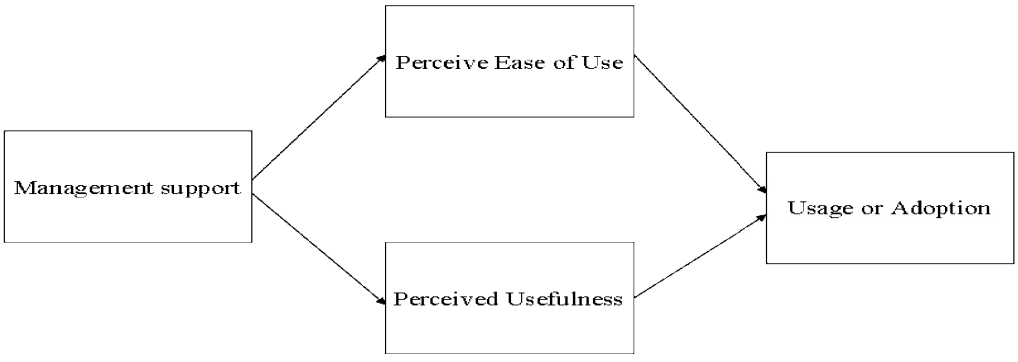

Figure 1: Extended model of the adoption of GL module of Oracle and SAP accounting programs

The limitation of this research is sample size. The sample size of 9 users might not be representative for the whole population. However, this research could show some trend, which will be useful for determining acceptant factors. Another limitation is that one of the participants was from SAP consulting firm. She possesses many knowledge of SAP and technical issues in accounting software. Her answer, therefore, might not be the same as other normal users.

This research was done to find out the acceptance factors in general and does not provide an insight for each acceptance factors. One area of future research could therefore look further into the acceptant factors to see if there are any other factors influencing user acceptance of accounting software. The acceptant factors in this research are based on the previous research, which might not cover all the relevant acceptance factors. Future work could therefore specify other factors that are not included in this research. In addition, future work could be done using different methodology in order to replicate research. This research used multi-case study by using depth interview. Future research could use the questionnaire to reach a larger sample size for more accurate representative for the whole population. In addition, it should expand the adoption of ERP to other modules such as distribution, manufacturing and human resources.

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Appendix

Items	Big C	Baan Poo Power Trading Ltd	Unocal - Nuttakorn	Unocal-Somsanit
Participant's work experience (years)	7	3.5	4	12
Participant's position	Accountant	Accountant	Accountant I	Unit Accountant
Type of business	Retailer	Produce electricity	Sales Natural Gas and Oil	Sales Natural Gas and Oil
Number of employee	8,000-9,000	30	-	-
Sales per year (in millions baht)	-	10	-	-
Asset (in millions baht)	-	4	-	-
Enterprise's software	Oracle	Oracle	Oracle	Oracle
Experience in enterprise's software (years)	4-5	4 months	5	5
Previous software	TITLE	Express	Coshetech	IBM
Experience in previous software (years)	3-4	3	3 months	7

Items	Clariant Chemicals Ltd.	Dupont Performance	Caltex	Triaton (Thailand) Ltd.
Participant's work experience (years)	7	12	3	10
Participant's position	Accountant	Financial Accountant	Accountant	Accountant
Type of business	Produce & Import Color Chemical	Trading, import and sell car painting color	Oil and Gas operation	Service company supporting IT network and SAP consultant
Number of employee	270	Over 100	-	25
Sales per year (in millions baht)	-	1,200	-	0-30
Asset (in millions baht)	-	250	-	-
Enterprise's software	SAP	SAP	SAP	SAP
Experience in enterprise's software (years)	5	1.5	1	10
Previous software	-	Enterprise software	SAP	AS400
Experience in previous software (years)	-	3-4 months	1	10

Items	United Information Highway
Participant's work experience (years)	13
Participant's position	Deputy director, finance
Type of business	Service type
Number of employee	Over 200
Sales per year (in millions baht)	1,500
Asset (in millions baht)	1,600-1,700
Enterprise's software	SAP
Experience in enterprise's software (years)	10 months
Previous software	ACCPAC
Experience in previous software (years)	7