

A SURVEY ON THE APPLICATION OF ACCOUNTING INFORMATION SYSTEM IN ORGANIZATION IN MALAYSIA

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Abstract: This survey was conducted to gain understanding on the application of Accounting Information System in organization in Malaysia. The results of this study show that, the most preferred accounting software is Microsoft Excel with the main reason are cost and its simplicity. PC base is the most preferred type of hardware and Microsoft Access is the most popular database used regardless of the organization size. It was found that cost and effectiveness, either individually or in combination of both, are fundamental for most of the respondents in the selection of hardware.

Keywords: Accounting Software, Database, Hardware

INTRODUCTION

The term 'Accounting Information System' or AIS in short, may be generally understood as a computer program which handles day-to-day bookkeeping and, at the end of each accounting period, produces financial reports. According to Gelinas, Sutton and Oram (1999) [3], AIS is a man-made system that generally consists of an integrated set of computer-based and manual components with the purpose of collecting, processing and reporting information relating to financial transactions.

Nowadays, organization's value not only determined by its tangible assets, but also by its ability to utilize the information technology to collect and use information (Boggs, 2001) [1]. Therefore, the key success factor is not how much an organization used the information technology, but how smart it utilizes the potential and the advantages of information technology such as database, software and hardware. Quarmby (1987) [5] stated that the best system provide integration right through to the general ledger. In the process this system meets complete business needs in a way that earlier system (manual operation) could not match.

MATERIALS AND METHODS

The purpose of this survey is to study on the application of accounting information system in organization in Malaysia. Specifically, the objectives of this paper are to investigate types of accounting software that are commonly used by different businesses sector in Malaysia, to identify the types of hardware and database used by organizations with different annual turnover in Malaysia, to examine factors influencing the selection of the type of hardware used in organization in Malaysia, to identify the software's development approach used by the organization in Malaysia, to examine the database administrator and the ownership of accounting database in organization in Malaysia.

In choosing and selecting the right accounting software for an organization, buyers of accounting software (organization) gave much thought to the underlying database provided by the accounting software. According to Collins (1999) [2] it is now very important that prospective buyers gives careful consideration to database selection, which depends mostly on the volume of transaction processed across an organization's local or wide area network (LAN or WAN). In general, the more transaction, the stronger the database needs to be and the higher it's cost in term of purchase price, implementation and maintenance.

This survey involved the self-administered questionnaire on the application of accounting information system to the organizations. Basically this survey was done through telephone interview, personal interview, e-mail and mail. This study used convenient sampling by distributing the questionnaire to organization that will give high probability to response to the questionnaire and to the organization which the researchers have person in contact. This method has been adopted in order to get quick and good responses from the samples.

The questionnaire sent to the respondents was divided into two parts. Part A of the questionnaire contained questions regarding demographic information of the organization and the respondent. Part B of the questionnaire was about organization accounting database and the application of accounting information system.

RESULTS AND DISCUSSION

Demographic Profile of Respondents

A total of 71 out of 110 questionnaires distributed were returned, which means approximately 65% response rate. However, 5 were rejected due to incompleteness, thus leaving 66 questionnaires available for data analysis. 39 of the questionnaires were received through mail, 11 through e-mail and the remaining from telephone survey.

Table 1 shows that more than 50 percent (or 36) of the respondents involved in service oriented business whereas 39.4 percent (or 26) came from manufacturing establishment. The remaining four of the respondents came from other sectors and all of them are involved in utilities business.

Table 1: Respondents by Business Sector

	Frequency	Percentage
Manufacturing	26	39.4 %
Service	36	54.5 %
Others	4	6.1 %
Total	66	100.0 %

Next, the respondents are being grouped according to their annual turnover in order to determine their size. Businesses with annual turnover less than RM250,000 considered as small scale business, those with turnover between RM250,000 and RM1 million as medium size business, while the large businesses are those with annual turnover exceeding RM1 million. Table 2 shows that 33% or half of the number of the businesses are large scale businesses, 21 of the medium scale and the rest are small companies.

Table 2: Respondents by Annual Turnover

	Frequency	Percentage
Less than RM250,000	12	18.2 %
RM250,000 to RM1 million	21	31.8 %
More than RM1 million	33	50.0 %
Total	66	100.0 %

Table 3 reveals that 26 or 39.4 percent of the questionnaires have been answered by account executives and accountants, 20 or 30.3 percent by other executives, 15 by managers and 5 from other designation. Company secretary, account clerk and principal are among those who comprised other designation.

Table 3: Designation

	Frequency	Percent
Manager	15	22.7 %
Account Exec/Accountant	26	39.4 %
Other Executive	20	30.3 %
Others	5	7.6 %
Total	66	100.0 %

Software Application

This section discusses on choice of software application in Malaysia and the development of accounting software among businesses. The following table and chart summarized the type of accounting software used by the businesses.

Table 4: Type of Software Used by Different Business Sector

Business sector		Software type				Total
		Accpac	UBS	M Excel	Others	
Manufacturing	Frequency	10	2	4	10	26
	% of Total	15.2%	3.0%	6.1%	15.2%	39.4%
Service	Frequency	1	9	10	16	36
	% of Total	1.5%	13.6%	15.2%	24.2%	54.5%
Others	Frequency	1			3	4
	% of Total	1.5%			4.5%	6.1%
Total	Frequency	12	11	14	29	66
	% of Total	18.2%	16.7%	21.2%	43.9%	100.0%

The analysis shows that the most preferred accounting software is Microsoft Excel (21.2% or 14) with the main reason are cost and its simplicity. Compared with other software, Microsoft Excel requires minimal training and it is 'user friendly'. Other software such as JD Edwards, SAP and BaaN are expensive, therefore not affordable to small business businesses. ACCPAC and UBS are next preferred accounting software (18.2% and 16.7% respectively), whereas other accounting software include Oracle, SAP, MYOB, Quick Accounting, Century, Peachtree Complete Accounting System, BaaN Finance and Inola.

Further analysis according to business sector reveals that respondents from business sector preferred using ACCPAC (10), while Excel and UBS are preferred by respondents in service businesses. ACCPAC is preferred by manufacturing establishment because it can cater large amount of transactions and has special features of direct connection to internet. This internet connection ability enables businesses to develop effective and efficient control on inventories by developing good rapport with suppliers. In addition, it offers a true dual-currency system that tracks exchange rates at the transaction level, automatically calculating and posting realized exchange gains and losses. Manufactures that import and export goods benefit much from dual-currency system. Service sector preferred UBS because it offers pre define reports, which can be modified to their requirements, whereas they preferred Excel due to its flexibility.

Respondents were also asked on the method of accounting software development, whether being built-in house or being purchased. The analysis is summarized in table 5.

Table 5: Development of Software

	Frequency	Percent
Built in-house	5	7.6
Purchase with customization	33	50.0
Purchase w/out customization	28	42.4
Total	66	100.0

Table 5 shows that 61 of the respondents purchased their accounting software leaving only 5 respondents who have their software being built in-house. Inability of businesses to provide the resources and expertise to develop the accounting software internally can be sighted as one of the underlying reasons why they preferred to purchase the accounting software. Other reason may include the availability of various brands of accounting software in markets where businesses can choose from, which needs only some modification or customization to suit to the businesses needs.

Hardware Application

In this section, respondents are required to indicate the type of hardware used in their organization and the reasons for selecting the hardware.

Table 6 shows that PC base type of hardware is the most preferred by the respondents (68.2%) regardless of their annual turnover (size). The chart also shows that mainframe is used only by respondents with annual turnover of more than RM1 million whereas none of the respondents with annual turnover less than RM250,000 used other than PC base hardware. Respondents have been asked to indicate the reason for the selection of hardware. The following table (table 7) shows the criteria used by respondents in selection of hardware.

Table 6: Type of Hardware Used by Different Size Organizations

		Annual Turnover			Total
		Less than RM250,000	More than RM250,000	More than RM1 million	
Mainframe	Count			9	9
	% of Total			13.6%	13.6%
Miniframe	Count		4	2	6
	% of Total		6.1%	3.0%	9.1%
PC Base	Count	12	15	18	45
	% of Total	18.2%	22.7%	27.3%	68.2%
Others	Count		2	4	6
	% of Total		3.0%	6.1%	9.1%
Total	Count	12	21	33	66
	% of Total	18.2%	31.8%	50.0%	100.0%

From table 7, it can be observed that cost and effectiveness, either individually or in combination of both, are fundamental for most of the respondents in the selection of hardware. Competitiveness is the next factor to be considered, while including in 'other' reasons are simplicity and user friendly. The following analysis on association between cost of hardware and respondents' annual turnover provides further evidence that cost is an important factor to determine the selection of hardware.

Table 7: Reason in Hardware Selection

Factor	No. of responses	Percentage
Cost	35	42.2
Competitiveness	11	13.3
Effectiveness	32	38.6
Other	5	6.0
Total responses	83	100.0

Database Application

The selection of database is important to organization as it accommodates the accounting software purchased or built by the organization. If an organization needs to process large volume of transactions, it would need for the more robust database (Collins, 1999) [2]. This section analyzed the type of database used by respondents and who administer and own the database.

Table 8 show the type of database used according to the annual turnover of the organizations. Microsoft Access is the most popular database used regardless of the organization size. This can be explained by the fact that it is among the cheapest database and usually included in the acquisition package of computers. Oracle became the second most preferred by organization and mainly used or employed by the organization with turnover more than RM1 million and less popular among organization with smaller turnover. The cost of Oracle that is higher than Microsoft Access can be one of the factors why it is mainly used by larger organization. Other factors include the ability to handle unlimited number of transactions, Oracle is best suited for companies with unlimited turnover and it can be used by unlimited numbers of concurrent users (Collins, 1999) [2].

Table 8: Type of Database by Annual Turnover

Annual Turnover	Type of database	Type of database						Total
		M Access	Oracle	Informix	Sybase	Others	n/a	
Less than RM250,000	Count	8	1			2	1	12
	% of Total	12.1%	1.5%			3.0%	1.5%	18.2%
RM250,000 to RM1 million	Count	7	3		1	1	9	21
	% of Total	10.6%	4.5%		1.5%	1.5%	13.6%	31.8%
More than RM1 million	Count	11	10	2	1	4	5	33
	% of Total	16.7%	15.2%	3.0%	1.5%	6.1%	7.6%	50.0%
Total	Count	26	14	2	2	7	15	66
	% of Total	39.4%	21.2%	3.0%	3.0%	10.6%	22.7%	100.0%

The next issue in database application is to verify who are responsible for database administration and the ownership of database. Ownership of database means the person responsible for the organization of data in the database whereas database administrator is responsible for maintenance, upgrading, selecting type of database to be used and ensuring that the database can fulfill the requirement of the organization. It is better for organization to segregate the duty between the two as part of internal control measures. The following table is attempted to show if any dual role of database administrator and database ownership exist in respondents' organizations.

It can be observed from table 9 that among respondents' organizations, accountant plays the major role as database administrator (26), followed by IT managers and others designation. The same goes to database ownership where 28 out of 66 of respondents' database ownership are accountants with top management came second. It is interesting to highlight that a total of 21 cases where duality role exist

in respondents' organizations, which 15 of them involve the accountants and the remaining involve IT managers. The duality role seems to involve top management but cannot be verified because top management may involve directors or managers. Organizations should avoid duality role because it may provide the opportunities for fraud and misconduct. It should be noted also that there are 3 cases where the organization has neither the database administrator nor database ownership. Detailed analysis on the questionnaires returned reveals that these responses came from the same organization that failed to indicate the employment of database in their organizations.

Table 9: Database Administrator and Database Ownership

Database administrator	Database Ownership					Total
	IT manager	Accountant	Top management	Others	None	
Accountant	3	15*	7	1		26
IT manager	6*	11	2	2		21
Top management		2	10	1		13
Others			2	1		3
None					3	3
Total	9	28	21	5	3	66

* Bold number shows duality of role.

CONCLUSION

Management can use accounting information system to monitor cash outflows and inflows and also help them in the control of the cost and expenses associated with the flows. Many advantages can be derived from it. Besides maintaining, the company also should have adequate controls of the system. Controls are important to safeguard assets of the company. Information is one of the valuable assets to the company. A lot of decision-making is based on the information produced by the Accounts information System. Management can rely on this information because the information is almost accurate and always updated.

The survey shows that the most preferred accounting software is Microsoft Excel with the main reason are cost and its simplicity. Microsoft Access is the most popular database used regardless of the organization size. This can be explained by the fact that it is among the cheapest database and usually included in the acquisition package of computers. PC base type of hardware is the most preferred by the respondents regardless of their annual turnover. It was also found that cost and effectiveness, either individually or in combination of both, are fundamental for most of the respondents in the selection of hardware. Finally, the study found that accountant plays the major role as database administrator and also database ownership

It is hoped that this survey is the beginning for a full-scale nationwide research on this topic. It would be better reflect the overall picture on the application of accounting information system in organization in Malaysia. This survey considered as a pilot study for the researchers to get a glimpse on what is current trend like. Obviously, the small size of sample limits the ability to generalize the result of this study to Malaysian Companies as a whole. Obviously the sample of 66 respondents captured for this study is far from adequate and is certainly not comparable to the whole population. The use of randomized response (RR) survey technique has been suggested for minimizing response and non-response biases regarding sensitive issues. However, in this study the RR technique was not used (Nachmias C.F. and Nachmias D., 1994) [4].

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