COMPUTERIZATION IN THE ACCOUNTING OFFICE OF BATELEC I: BASIS OF ENHANCEMENT

MARIA CRISTINA P. MALIGAYA – CATENA
Master in Business Administration

Abstract

For many years, the Accounting Department of BATELEC I was using manual-based accounting system wherein the transactions are entered manually onto source document. Until such time, the Computerized Accounting System (CAS) was introduced to BATELEC I on 2003 by Sun System (service provider). Thereafter, all documents and reports can be generated automatically. This study generally aimed to assess the effectiveness of computerized accounting system in BATELEC I. More specifically, it intended to describe the profile of the respondents, determine the level of effectiveness of computerization, and propose measure to enhance it. Descriptive method was used in the conduct of the study.

Findings revealed that the computerized accounting system users of BATELEC I are females, graduate of Bachelors degree, married and regular employees. Computerization in BATELEC I is effective, with respect to software utilization, work productivity, ease of use and security of data. However, BATELEC I may utilize standards and best practices as guides in their decision-making regarding the software and system development.

Keywords - Computerization, Accounting office, BATELEC, software utilization, work productivity

INTRODUCTION

Computerized accounting helps simplify, integrate, and streamline all the business processes, cost-effectively and easily. In this generation, computers are being used by industries, companies, schools and cooperatives. Particularly, cooperatives use computers in making their task easier and convenient and to produce more reliable outputs. The usage of Computerized Accounting System (CAS) in business like cooperative is prevalent. Computerized Accounting System is designed to automate and integrate all business operations such as sales, finance, purchases, inventory and manufacturing. It has the ability to handle huge volumes and transaction without compromising the speed or efficiency.

System software controls how the various technology tools work together along with the application software. System software includes both operating system software and utility software. Application software is used for specific information processing needs, including payroll, customer relationship management, project management, training, and many others. Application software is used to solve specific problems or perform specific task (Baltzan, 2008).

Vitez (2010) reviewed that paper ledgers, manual spreadsheets and hand-written financial statements have all been translated into computer systems that can quickly present individual transactions into financial reports. Computerized Accounting Systems follow the same logic of journal, ledgers, reports and statements in a manual system. Computerized systems simply consolidate posting functions and other basic tasks into a "behind the scenes" system. Companies can also generate reports and financial statements easier, allowing for better performance management reviews.

Computerized Accounting System is important to businesses in various ways. The use of computers is time-saving for businesses and all financial information for the business is well-organized (Baren, 2010).

A computer is a programmable device that can automatically perform a sequence of calculations or other operations on data without human aid. It can store, retrieve, and process data according to internal instructions. A computer may be either digital, analog, or hybrid, although most in operation today are digital. Digital computers express variables as numbers, usually in the binary system. They are used for general purposes, whereas analog computers are built for specific tasks, typically scientific or technical. The term "computer" is usually synonymous with digital computer, and computers for business are exclusively digital (Codkind, A. 2005).

The biggest advantage of accounting software for businesses is that most software available has an automated system that checks for mathematical errors. Errors in accounting can occur easily when done by hand. Reports empower executives to make informed decisions, and having instant access to them can only make success more likely (Rashid, 2011).

In a CAS, all the multiple steps of a manual system are collapsed into one entry. For example, when you create a check, there is an automatic and simultaneous posting to a register and to the general ledger accounts. Financial statements can be created at any time and as often as needed (Elmaleh, 2007).

The advancements in information technology have eventually led to the introduction of Computerized Accounting Systems in corporate reporting to help produce relevant and faithful representative financial reports for both management and external users for decision making (Greuning, 2006). The many advantages from the use of these systems have led many to conclude that Computerized Accounting Systems in Corporate Reporting is the 'engine of growth' in business organizations (Frenzel, 2006).

Morly and Parker (2009), stated that computers were originally used as productivity tool for office workers. It is the ability of the companies to provide these machines and the know-how to the employees that would reveal how effective the technology is. Analytical research about computerization has helped identify the configuration of their computerized accounting system.

Moreover, Sioco and Narvacan (2006) examined how technology has helped worker's productivity. Although the firms/businesses selected were different in concepts, they were similar as to the kind of instrument that was used to effect the desired changed. Some attributes were identified to find out the influence of using computerized accounting system by the users and their perception about this. The users believed that using CAS would help him or her better attain significant rewards and they feel comfortable in using CAS. Social influence was one of the most important factors that affected users' to use CAS to improve their workability and performance could be better every time by using CAS (Nasrin, 2010).

Whether introducing a new computer system or making changes to an existing system, businesses inevitably change the ways in which their employees work, and this factor must be taken into consideration (Hensley, 2008).

Self-efficacy and computer anxiety do influence the people perception about the ease of use. Computerization would be easy to use, navigate, explore, it should further be visually appealing, readable and provide links to more detailed information about the subject at hand (Argawal et al., 2000, Hall, 2001 & Wexler, 2001).

Computerized Accounting System is therefore a computer based system which combines accounting principles and concepts as well as the concept of information system to record, process, analyze and produce financial information to its users for making economic decisions. (Gelinas et al, 2005).

The Rural Electric Cooperatives (REC) Accounting provides stan-

dardized policies and procedures in accounting in terms of: improving the quality of REC financial reporting, improving the validity and comparability of financial information, permitting meaningful analysis and comparison of performance of the REC's and providing National Electrification Administration (NEA) and the REC's facility and basis for better management of their businesses.

To ensure the proper implementation of uniform policy in procedural guidelines for accounting, all REC's are requested to follow strict adherence to the policies and guidelines outlined in the manuals. Implementation of the improved accounting system has to take effect immediately.

Based on the interviews from the employees, the computerization has increased the level of effectiveness. This study aimed to know what the CAS needed to enhance more in terms of proper keeping of accounting records using one (1) system that will link all sections or divisions that for easy preparation of accurate report and how a computerized accounting system works.

Hence, as the head of the accounting department, the researcher perceives the need to discover the most appropriate process. Therefore, this study aimed to know what the CAS needed to enhance more in terms of proper keeping of accounting records and how a computerized accounting system works. The result of this study will be highly applicable to all users of CAS in Batelec I, Calaca, Batangas.

OBJECTIVES OF THE STUDY
The study generally aimed to assess the effectiveness of computerized accounting system of BATELEC I. More specifically, it intended to describe the profile of the respondents in terms of age, sex, civil status, type of employment, highest educational attainment, department/work unit, and length of service; determine the level of effectiveness of computerization in the workplace in terms of software utilization, work productivity, and security of data; and propose measures to enhance the effectiveness of the computerization in the accounting office of Batelec I.

METHOD

Research Design
The descriptive design was utilized in the study. A total of 8 current users of CAS in Batelec I Calaca have been the respondents of the study. They are the Accounting Section Head, Senior Bookkeeper, Junior Bookkeeper, Work Order Officer, Accounting Clerk II, Accounting

Clerk I, Budget Officer and Warehouse Clerk. The researcher used a self made questionnaire as the major gathering instrument. In constructing the questionnaire, interview with the users of CAS was conducted. The questionnaire has 3 parts; the first part of the questionnaire is on the profile of Batelec I Personnel; the second part is about the level of effectiveness of computerization patterned from Okoukuni, (2011) while the third part contains self made, modified questions, about the problems encountered in using the computerized accounting. A scale of 1-4 was used wherein 1 is the lowest and 4 is the highest.

A letter of request was formally submitted to the Officer-in-Charge of the cooperative. Upon the approval of the OIC, the researcher personally distributed the questionnaires to the concerned employees of Batelec I and immediately retrieved the accomplished questionnaires. After the retrieval of the questionnaires, the researcher started organizing the data.

All data were gathered, tallied, encoded and statistically analyzed and interpreted using descriptive statistics which includes frequency distribution and ranking to identify the profile of the respondents and weighted mean to assess the Batelec I CAS. The data were supported using SPSS version to further analyze the result.

RESULTS AND DISCUSSION

Profile of the Respondents

In terms of age, most of the respondents belong to 20 - 25 years old and 36 - 40 years old which comprise of 37.50 percent. It was followed by 26 - 30 years old and 31 - 35 years old which comprise 12.50 percent of the respondents. The civil status of the respondents is equally divided.

With regards to sex, the respondents are all females which obtained a frequency of 8 or 100.00 percent. It shows that all office personnel use the system.

In terms of type of employment, most of the respondents are regular which comprise 5 or 62.50 percent followed by probationary, 2 or 25.00 percent. The least among employment group was contractual which comprises 1 or 12.50 percent of the respondents.

Majority of the employees are bachelor's degree graduate consisting of 7 or 87.50 percent of the respondents and a college degree, 1 or 12.50 percent of the respondent.

The distribution of respondents according to their length of service reveals that 3 or 37.50 percent of the respondents stayed in the company for 5 years and below. There is only one employee or 12.50 percent of the respondents who stayed in the company for 6 to 10 years, another employee or 12.50 percent of the respondent who worked in the company for 15 years and below, one employee or 12.50 percent of the respondent who stayed in the company for 16 to 20 years. Meanwhile, there are 2 employees or 25.00 percent who have service record of 21 to 30 years. This could be interpreted that majority of employees are relatively new.

Table 1 shows the Level of Effectiveness of Computerization in terms of Software Utilization. Based from the result, the over-all assessment of the respondents on overall assessment on the software was effective with a composite mean of 3.19. The software is easy to use and navigate which got the highest weighted mean score of 3.50 and verbally interpreted as very effective.

Table 1. Effectiveness of Computerization in Terms of Software Utilization

Software Utilization	WM	VI	Rank
1. The software is available is easy to use and navigate	3.50	VE	1
2. The software is genuine and updated, such that when used, the results are free from error	2.75	E	4
3. The software enhances my production of high quality results	3.38	E	2
4. The software has the ability to execute a job without failure under any condition	3.13	E	3
Composite Mean	**3.19**	**E**	

Legend: 3.50 – 4.00 = Very Effective (VE); 2.50 – 3.49 = Effective(E); 1.50 – 2.49 = Less Effective (LE); 1.00 – 1.49 = Not Effective(NE)

This also shows that computerization in terms of software utilization has a very user-friendly to access. The users find the system very easy to operate. The software provides accuracy along with a pleasant interface. The transaction reports of the system can be retrieved when needed.

However, the software's ability to execute job without failure under any condition, enhancing production of high quality results and being genuine and updated, such that when used the results are free from error all rated effective got the lowest mean value of 3.13, 3.38 and 2.75 respectively.

The use of computerization reduces human intervention, some

process have completely automated. The benefits of computerization is that its saves labor, however, it is also used to save materials to improve quality, accuracy and precision.

In terms of software utilization, the operation of CAS in Batelec I is user-friendly and through the use of computer it can save more time rather than doing it manually. CAS has real time and continuously updates information on account balances and status of accounts. The transaction report can be retrieved when needed.

The biggest advantage of accounting software for businesses is that most software available has an automated system that checks for mathematical errors. Errors in accounting can occur easily when done by hand. When errors do happen, they can create chain reactions that cost a company untold amounts of money and time as they must determine how the error occurred, what other areas of the business's finance it affects and how to prevent similar errors in the future. Having a system that is fully automated reduces the possibility for human errors.

Table 2 presents the Level of Effectiveness of Computerization in terms of Work Productivity. The over-all rating work productivity was effective with a composite mean of 3.44.

Table 2. Effectiveness of Computerization in Terms of Work Productivity

Work Productivity	WM	VI	Rank
1. Through the use of computer in my workplace, I have been able to finish my assigned task	3.38	E	3
2. Through the use of computer in my workplace, my work has been faster, more accurate, effective, efficient and reliable	3.25	E	4
3. The use of computer has enhanced and increased the quality and quantity of my work	3.63	VE	1
4. Computerization is of utmost importance to my job	3.50	VE	2
Composite Mean	**3.44**	**E**	

Legend: 3.50 – 4.00 = Very Effective (VE); 2.50 – 3.49 = Effective(E); 1.50 – 2.49 = Less Effective (LE); 1.00 – 1.49 = Not Effective(NE)

The use of computer has very effectively enhanced and increased the quality and quantity of work got the highest weighted mean score of 3.63. This ranked 1 on the assessment of effectiveness of computerization in terms of work productivity. Respondents agreed that through the use of computerization, this will increase the quality and quantity of work. Proper use of the system improves the productivity of the employee in a workplace. Rank 2 shown by the weighted mean of 3.50 verbally

interpreted as Very Effective indicates that computerization is of utmost importance to a job. For instance, computerization has touched more people, more visibly in their work than any other kind of setting-home, schools, churches, banking, and so on.

The table also displays that the two lowest items were verbally interpreted as Effective with the weighted mean of 3.38 and 3.25 respectively. Through the use of computer in a workplace workers have been able to finish the assigned task, work has been faster, more accurate, effective, efficient and reliable.

It may interest us to know that the social design of computerized system with computing does not necessarily improve the quality of peoples' work lives. For example, some managers have computerized relatively routine clerical work by fragmenting jobs and tightening supervisors' abilities to monitor the quality, pace, and speed of people's work. The same managers may develop good systematic training for the clerks whose work is now more regimented. It encourages participants in a computerization project to review the practices and policies related to computing which can otherwise be anticipated.

Table 3 illustrates the Level of Effectiveness of Computerization in terms of Ease of Use. The over-all assessment of the respondents' on the level of effectiveness of computerization in terms of ease of use was Effective with a composite mean of 3.38.

Table 3. Effectiveness of Computerization in Terms of Ease of Use

Ease of Use	WM	VI	Rank
1. It takes less time to learn the various computer processes	3.25	E	3
2. It is simple to learn the various computer processes	3.38	E	2
3. Computerization makes my job easy and simple	3.50	VE	1
Composite Mean	**3.38**	**E**	

Legend: 3.50 – 4.00 = Very Effective (VE); 2.50 – 3.49 = Effective(E); 1.50 – 2.49 = Less Effective (LE); 1.00 – 1.49 = Not Effective(NE)

Computerization is very effective in making job easy and simple, which got the highest mean score of 3.50. Computerization involves the process of taking activities or tasks not previously done on the computer and shifting them to being done on the computer. Through the use of computer one can enter, process or store (information) data.

However, other items rated effective include being simple to learn the various computer processes and taking time to learn various computers processes got the lowest mean value of 3.38 and 3.25 respectively. The respondents agreed that it is simple to learn computer processes. It contains the program code and its current activity. The various computer processes can still be learned in an easy way through training, seminars or self study. Computer processing is the explanation of how information gets from the user to the computer, input the information into the computer via the output device (keyboard) the information is stored in a memory.

Base from the result in Table 4, the over-all assessment of the respondents' on the Computerization in terms of Security was Effective with a composite mean of 3.19.

Table 4. Effectiveness of Computerization in Terms of Security

Security	WM	VI	Rank
1. Computerization enables me to back up my files so as to protect my data	3.50	VE	1
2. Computerized system helps me with the tracking of my unfinished work	3.13	E	2.5
3. Through computerization, I have limited access or manipulation of data from outside the system	3.00	E	4
4. Through computerization, I make use of system locks for hardware, software and database	3.13	E	2.5
Composite Mean	**3.19**	**E**	

Legend: 3.50 – 4.00 = Very Effective (VE); 2.50 – 3.49 = Effective(E); 1.50 – 2.49 = Less Effective (LE); 1.00 – 1.49 = Not Effective(NE)

Computerization enables to back up files to protect data, with the highest weighted mean score of 3.50 and verbally interpreted as Very Effective. It is important to back up files daily, weekly, monthly or yearly. The most important files to back up are probably the documents and other user file. To back up files is to make a spare copies of files and store them separately to the originals, because computers have a tendency to go wrong. All information are stored in the system. Most companies have done back up to the system regularly to avoid losing any information.

However, other items were rated effective only through computerization. It may use system locks for hardware, software and database, helps the tracking of unfinished work and limited access or manipulation of data from outside the system with the lowest mean value of 3.13 and 3.00 respectively. Using a proper accounting system will ensure all transactions are recorded correctly and accurately on the company's ledger. Accounting records represent high information to the business. Secur-

ing them should be a high priority for every business. Security includes distinct and complex usernames and passwords to both the computer system and than also to the package.

By and large, data is the form of information stored as columns and rows in our databases, network servers and personal computers. It could be anything of interest that can be read or otherwise interpreted in human form. However, some of this information is intended to leave the system. The unauthorized access of this data could lead to numerous problems at large or even the personal computer. Therefore, to prevent this from happening, data security should be applied. Data security is simply the act of assuring the complete privacy and secrecy of confidential data.

Business owners and managers can use computerized accounting systems to create a more secure environment for their financial information. Computerized accounting systems allow owners and managers to restrict employee access to certain financial information. This ensures that employees cannot manipulate information or use it for their personal advantage. Passwords, encryption codes and other features help managers keep information secure from inappropriate use. Larger organizations can also use computerized accounting systems to improve their internal controls.

Table 5. Summary Table on Effectiveness of Computerization

Key Result Area	Composite Mean	Verbal Interpretation	Rank
1. Software utilization	3.19	Effective	3.5
2. Work productivity	3.44	Effective	1
3. Ease of use	3.38	Effective	2
4. Security	3.19	Effective	3.5
Composite Mean	**3.30**	**Effective**	

Table 5 shows the Effectiveness of Computerization. The over-all assessment of the respondents on computerization was Effective with a grand mean score of 3.30. Work Productivity is effective which got the highest mean score of 3.44.

Ease of use got the mean score of 3.38 and verbally interpreted as Effective. Computerized accounting tends to be more accurate, is faster to use, and less subject to error than its manual counterpart.

The table indicates that the two lowest items were verbally interpreted as Effective with the composite mean of 3.19 respectively, the benefits of computerization is that its saves labor, however, it is also used

to save materials to improve quality, accuracy and precision. Most companies perform back up to the system regularly to avoid losing any information.

Effective means productive of or capable of producing a result. It also means having an intended or expected effect.

The result further implies that computerization of accounting system simplify the use of double entry system greatly. In manual accounting system, as well as creating an audit trail to record all transactions, a trial balance, profit and loss account and a balance sheet would have to be manually drawn up. Computerized accounting system has the ability to do all this from just having the coop's transactions entered into the relevant spreadsheet. A great benefit of these systems is that, as the business grows-the cost of using software will remain constant, unlike manual system where the cost will increase in proportion to business transactions. CAS tracks down clerical errors much faster than manual systems, and respond immediately to request for accounting information instead of having to go and find the correct ledger. So, overall accounting system save extra clerical work, time and expense. But it must be remembered, that if a mistaken entry is made and is not picked up by the computers controls, then all relevant accounts will have the wrong data transferred to them by the system.

Almost every company and organization uses CAS in some way. Companies can choose from among several options in accounting programs. Some are easy to use, while others are more complicated. A computerized accounting system records all accounts payable and receivables. At any time, the user can view amounts owed to people and amounts owed to company.

Accounting system simplifies capturing and posting accounting transaction. Although basic accounting procedures remains the same. Accounting software eliminates tedious process such as typing documents, manually calculating transactions and documenting the audit trail.

CAS minimizes posting errors; thus, protecting the validity of data. After correctly capturing an entry the software coordinates posting and reporting. In addition, the user can easily monitor transactions and analyze financial performance.

Naturally, it needs computer hardware and operating software to use CAS. Computer hardware encompasses physical components such as keyboard, screen, hard drive CD-ROM, mouse, memory and printers. Operating software is system software that translates user instruction to hardware components and application software. Microsoft, Windows

XP, Windows 2000, and Vista as well as Linux and UNIX are example of operating software.

Accounting system applications automates manual accounting procedures. This software is normally organized into modules with each module representing specific activities in accounting such as customer activities or vendor activities.

Table 6. Proposed Measures to Enhance the Effectiveness of the Computerization in the Accounting Office of BATELEC I

Key Results Area	Objectives	Measures	Persons Involved
Software Utilization	• To provide a simple interface for an application to connect to and perform queries/updates on a database	• Adopt new approach to software development • Seminar on the new interface application	• Finance Services Dept/ • Internal Audit Dept./ • Warehouse Personnel/ • CORPLAN
Work Productivity	• To continue adopting high standards of working technique	• Create a program that secures, records and tract every transaction • Have a centralized flow of all transaction form the start to the end	• All Department
Ease of Use	• To acquire advance working area facilities	• Hold intensive seminars for software application to learn various	• Warehouse • Institutional Services Department
Security	• To protect the system form serious threats of viruses and safety	• Evaluate serious security threats that may arise from the weakness of • Monitor unautorized access, misuse, modification of denial of a	• CORPLAN Department

CONCLUSIONS

The computerized accounting system users of BATELEC I are females, graduate of Bachelors degree, married and regular employees. The computerization in BATELEC I is effective with respect to software utilization, work productivity, ease of use and security of data. The proposed measures to enhance level of effectiveness of the computerization at the Accounting office in BATELEC I may be tabled for discussion and implementation.

RECOMMENDATION

The management of BATELEC I may conduct seminars/trainings on the utilization of Computerized Accounting System among potential rank and file accounting employees for future succession. The system provider (J-Marru System) may upgrade the computerization of accounting system in BATELEC I in areas of software utilization, work productivity, ease of use and security to improve higher level of effectiveness among its users. Management can also consider the option of using a networked system linking all the   system in the billing and accounting department. In this way, errors are minimized, thus improving the quality of financial reports. The proposed measures may be implemented by the management.

REFERENCES

Baltzan, Philips (2008). Business Driven Information Systems. New York: McGraw-Hill/Irwin Companies Inc.

Baren, V., (2010). The Importance of a Computerized Accounting System.

Codkind, A. (2005). "Automating The Business Process." CMA—The Management Accounting Magazine

Elmaleh, M. (2007) Cost Saving from Computerized Accounting are Not What They Should Be

Frenzel, C. W., (2006), Management of Information Technology

Gelinas, U., Sutton S., and Hunton, J., (2005). Acquiring, Developing and Implementing Accounting Information System, 6th Ed.: Thomson South-Western Education College, Cincinnati

Greuning, H., V. (2006): International Financial Reporting Standards; A practical guide, 4thed. The World Bank

Hall; M. (2001). Access to Higher Education Race, Resources & Social Exclusion. The Journal of South African & American comparative Studies 5.

Hensley, R. (2008). "Owner Quandary: How Much to Spend on New Technology?" Cincinnati Business Courier.

Morley; D. & Parker; C.S. (2009), Understanding computers today and tomorrow, 12th Edition.

Nasrin, M. (2010). Users Perception towards Using Computerized Accounting Software in Leasing Companies in Bangladesh'. Journal of Socioeconomic Research and Development. Vol. 7, Iss.6,December.

Okoukoni; T. (2011). Computerization in the workplace and work efficiency of non-teaching employees of Lyceum of the Philippines University,Unpublished Thesis, Lyceum of the Philippnies University, Batangas

Rashid, J. (2011). What Are the Benefits of Computerized Accounting Systems? March 16, 2011 <http://www.computerizedaccounting.webs.com

Sioco; B.N & Narvacan; J.C.P. (2006). The impact of Technology to Worker's Productivity between a Service Oriented firm and a manufacturing firm, Unpublished Thesis, AMA Computer College, Lipa City, Batangas

Vitez O., (2010). The rationale of computerized accounting information systems;

Wexler; J, (2000). Why computer users accept new systems, Sloan Management Review