THE EFFECT OF USING AIS ON MINIMIZING THE ORDER LIFE TIME CYCLE: COST AND TIME IN WASTE HUMAN RESOURCES

Muhannad Akram Ahmad
Department of Accounting Information Systems
Irbid National University
Irbid-Jordan

Abstract – **As a business uses to collect, store, manage, process, retrieve and report its financial data, the accounting information system (AIS) could be developed for accountants, consultants, business analysts, managers, chief financial officers (CFOs), auditors and regulatory and tax agencies to minimize the life time cycle of the order and time to market/finish or use. In particular, specially trained accountants work with AIS to ensure the highest level of accuracy in a company's financial transactions and recordkeeping and to make financial data easily available to those who legitimately need access to it, all while keeping data intact and secure. This paper studies the viewpoints and the ability of adapting an AIS system in order to minimize the life time cycle, by studying the fields of view of industrial organizations in high verity and low scale market like Jordan market**

Keywords – AIS; Expert Systems; Just-In-Time; Product Cost Optimization

I. INTRODUCTION

The accounting Information Systems (AIS) tool is an adaptation of the field of Information and Computer Technology systems to help in the management and control of processes that are related to firms' economic-financial area. AIS concept doesn't related to specific application area, it is anywhere financial, accounting, and managerial issues have to be controlled [1][4].

The advance in technology has opened up the possibility of generating and using accounting information from a strategic viewpoint. Since this is important for all firms, it is more important even for medium-sized and small organizations that need a rigid, fast, and adaptive information handling. AIS are dealing with higher degree of uncertainty in the competitive market. Many companies seemed to be welling to improve their systems and data processing capacity to match the modern specifications of different market, financial and technology issues with respect to the advanced performance criteria [2].

In the other hand, the AIS solve many problems related to investing in staff training, improving the quality of products and internal processes and increasing the scale of investment. Such goals are being leverage for achieving a stronger, more flexible corporate culture to face continual changes in the environment. Innovation is the incentive with which a virtuous circle will be put in place, leading to better firm performance and a reduction in the financial and organizational obstacles, while making it possible to access capital markets.

On the other hand, the modern performance criteria and needs extents the investment in many fields to share specific technology for the economic-financial areas. The concatenation between such fields and information technology is directly affecting the performance and productivity indicators. But the actual effect that could be happen when merges the advanced computer techniques (i.e. expert systems) are not clearly studied for all processes and scales. The study of AIS adaptation in different organizations have been made by many authors/researchers regarding the potential IT contribution (i.e. generally, to increasing SME productivity). The latter, even in moments of crisis such as the present time, opt for the need to continue investing in this type of technology to achieve continuous company improvement [7] [10].

As information and computer technologies cover a wide range of areas that the firm acts, this research is focusing on a specific part of or manufacturing process that is related to accounting and financial management of product born. The AIS is showing that, the computerized accounting tools are directly related to the economic and financial results more improvement in productivity in small and medium-sized business organizations. Hence, the AIS are systems used to record the financial transactions of a business or organization, this paper combines the methodologies, controls and accounting techniques with the technology of the IT industry: user interface, computers and expert systems to achieve such the required improvement in high verity low scale manufacturing processes. By the rule of

thumb, the smaller scale organization faces more complications (including cost issues) in using software's to track transactions provides internal reporting data, external reporting data, financial statements, and trend analysis capabilities [1] [3] [9].

An optimal implementation of AIS means that adapting more successful computer based system in order to change the environment and shows a higher degree of competitiveness. That improvement should lead to enhance the dynamic character of a company (even when a company is small, it must assimilate the use of AIS). In other words, there are improvements in administrative management regarding accountancy and finance. By using AIS, it is possible to gauge the risk of some operations or predict future earnings with sophisticated statistical software applications.

It has also been pointed out that the challenges of successful development in the information society lay not so much in the availability of good technological infrastructure as in improving business disposition toward AIS use. Several researches in this field states that the measured variable in studying of AIS effect on any organizational process could be either Return on Assets (ROA) or Return on Equity (ROE) in addition to other help full productivity and performance factors.

In recent years, the value and evolution of productivity has been lower than that in the rest of the main economies and according to the OECD (OECD, 2000) countries which invest the most in these technologies are also leads to growing in productivity

II. PROBLEM

The orders and inquiries are main issues that slow down the process and thus affecting the financial cost issues. The handling of process lifetime cycle could be easy to be optimized by AIS in large scale organizations that continuously perform repetitive process. The repetitive or standard processes has the stability that makes the use of any automatic system costly effective [10].

On the other hand, the highly variant processes comprise many complexities in using of AIS. The complexities include the cost and continuous reconfiguration, programming and adaptation that required for any change in the process. Also, the varity of process cost much more the process that is stable from the view point of expert system, ERP, or any AIS software.

In many organizations, orders and inquiries represent the main, most consuming task, regarding time, man power, and other resources. General, there is a certain process that any order or inquiry goes through before the product is delivered to the customer. The product process is described in Figure 1.

This process starts from the sales department, where the process is being ordered. The professional sales staff adds to the cost (man-power-wise) beside they need time to get their job done. Then, the order is being created and passed to the counting department.

Once the order is out from the sales department, and entered the accounting process, the management of financial attributes should be completed in addition to registering the order and every financial related term. This process consumes a noticeable amount of time.

Then the order had to be delivered to the specialized department(s), in order to prepare the product specifications, details, and solve any technical issue that is related. In fact, this part in many times consumes the most needed time of the process. Add to that, specialized professionals in specific fields can be highly paid which is mostly an unavoidable cost.

After that the order goes to the production phase, which requires workers, production supervisors, quality control, and quality assurance staff. The production process should be supervised by specialized professionals. So, this is considered to be also an unavoidable cost in time and man power.

Once the product is being completed and tested, it is ready to be packed and shipped to the customer. The packing could be done by the organization itself or by contracting with sub organization to manage the packing and shipping issues.

The sum of time that spent on the mentioned processes (or the order lifetime cycle) can cause huge problems, including that losing clients in many cases.

III. RELATED WORK

Actually, most of researches that concern this field of product cost optimization concentrate on large scale companies. The large scale companies have stability and standardization in production processes. That stability and standardization simplifies the use of AIS in such processes and optimize the cost of reconfiguration and adaptation.

As a firm productivity research that is related to cost optimization and control, the author in [6] supports the theory of AIS proper use to increase the firms' productivity. Thus, he had a decisive influence upon wealth and growth in a country. For sure, the verity of production process is not a concern of this research.

In [8], the author posits an indirect relationship between AIS and firms' performance via the varying strategies that may be adopted by companies.

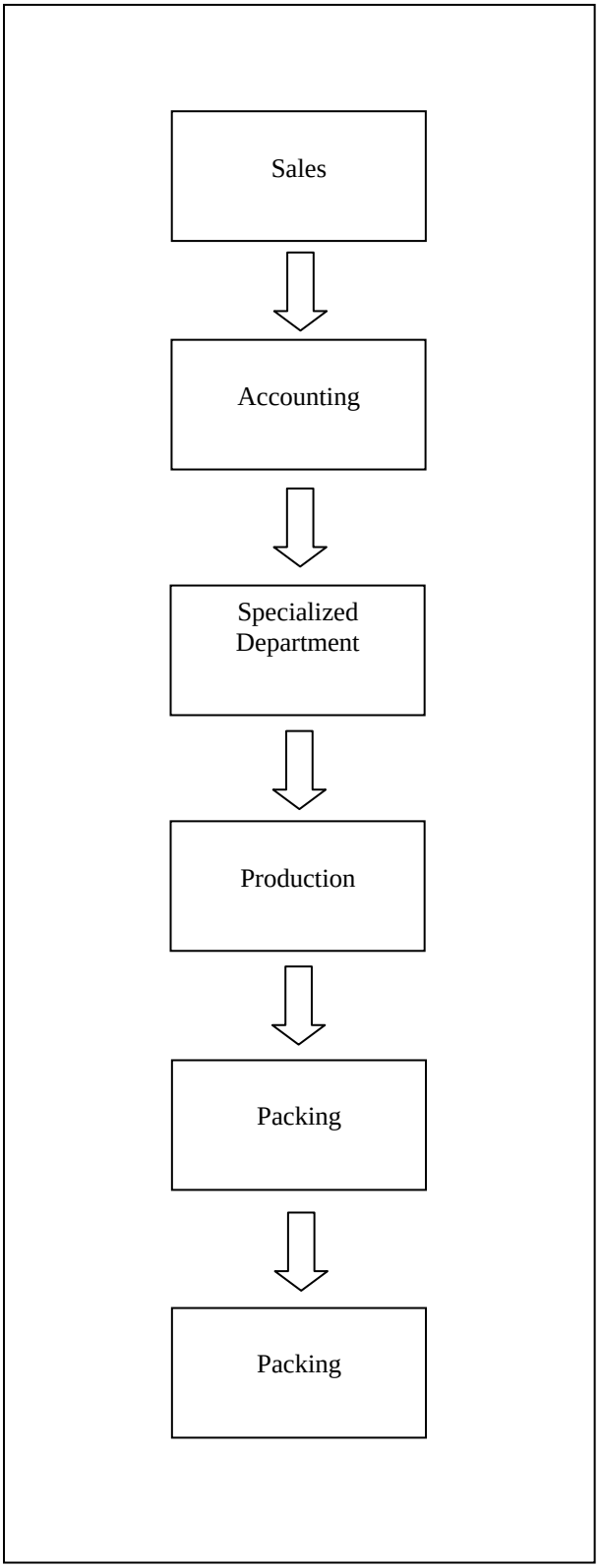
It is necessary to highlight that three indicators have been chosen to study the effects of the degree that the computerized accounting systems have been set up. This has been introduced in [10] by the means of performance driver optimization.

Hence, this research concentrate on the variety of product processes, it studies small scale organizations and specially the organizations those has no standard product.

IV. METHODOLOGY

This paper considers some hypothesis related to the effect of using AIS on the order lifetime-cycle. This paper based in real questionnaire in local Jordan Company considering 50% of mid-scale and small-scale organizations. This questionnaire takes one month in data collecting including statistics. Table-1 shows a sample of the questionnaire that this paper based on. The hypothesis those introduced in this paper are:

1. Using AIS provide a better adaptation to a changing environment regardless weather it is expensive or not.
2. Using AIS provide a better management of arm's length transactions and a high degree of competitiveness.
3. Using AIS Gives a boost to the dynamic nature of firms with a greater flow of information between different staff levels
4. Gives the possibility of new business on the network and improved external relationships for the firm, mainly with foreign customers accessed through the firm's web.
5. Excessive use of these tools may decouple the quality of interaction between workers and customers with a consequent reduction in productivity



In this paper, the flow the following procedure is followed for research:

- Problem definition and formulation, including stating the objectives.
- Lateral survey to get up to date in the researches that concerns in that field. Including the small business application of ERP and expert systems.
- Stating the hypothesis
- Building the questionnaire and questionnaire application plan in Jordan field
- Analyzing the data and generating results.

TABLE I. SAMPLE OF QUESTIONNAIRE THAT PERFORMED FOR THIS HEYPOTHESIS

NNO	Question	Interested in AIS		Answer			
		Yes	No	Sure	Yes	May be	No
1	Heypo1						
2	Hepo2						
3	Hepo3						
4	Hepo4						
5	Hepo5						
6	Hepo6						
7	Hepo7						
8	Additions						

V. RESULTS

This paper studies the effect of using AIS on minimizing the order lifetime cycle (which minimizes the cost). The survey is Jordan organizations hence the countries like Jordan implies Organizational companies that work in very dynamic product and process order. The process or organizations in Jordan can be considered to be of supply and demand nature mostly.

The study sample was taken as 50% of the companies in Jordan, 40% of them were trying to use information technology solutions in accounting or tries to study the use of accounting information systems in there process. 40% percent of the study samples were actually uses AIS in their accounting process. And only 20% of that sample didn't try to use or even didn't study the use of such information system to enhance their processes.

The survey of the questionnaire takes one month of telephone filling of the questionnaire form. The good point that limits the time of that survey is that, the exact and bounded design of the questionnaire itself and the good stating of the hypothesis. Other else, it could take several months.

Most of study sample was helpful but there have no experience with such researches. So, a problem was faced in dealing with the study sample regarding to his first experience in survey and researches.

TABLE II. *RESULTS OF THE QUESTIONNAIRE*

Hypothesis	Answer			
	Sure	Yes	May be	No
Hypo-1	33%	41%	14%	12%
Hypo-2	26%	38%	16%	20%
Hypo-3	64%	24%	6%	6%
Hypo-4	16%	34%	42%	8%
Hypo-5	5%	5%	37%	53%

The questionnaire contains a point of feedback from the company representative if they are interested in using AIS. The questionnaire feedbacks that 77% of the study sample said that using AIS has a positive role in minimizing the waste in cost (time and man power) in noticeable rate. But the real problem is the small amount of researches that interest in small scale organizations.

The trend of survey results a total percent of 83% of the survey sample decided that, the use of an AIS help reducing the cost and improves communication between different departments in the firm. Just if a rigid AIS expert system were developed to meet the small scale and variant order organizations.

VI. CONCLUTION

As noticed in previous sections, accounting information systems could be used in all organizational scales; large, medium, and small to help improve productivity and minimize cost. This paper concerns on solving the problem of order's life time cycle. It considers the Jordan market to be the study area.

Accounting information system is an effective in simplifying communication between different departments, thus simplifying their job and minimizing the time an order takes.

REFERENCES

[1] P. M. Asaro, (2000): "Transforming society by transforming technology: the science and politics of participatory design", *Accounting Management and Information Technologies*, vol. 10: 257-290.

[2] A. Barua,; Kriebel, C.H.; Mukhopadhyay. (1995): "Information technology and business value: An analytical and empirical investigation", *Information System Research*, vol. 6, n. 1: 3-23.

[3] A.S. Bharadwaj, (2000): "A resource-based perspective on Information Technology Capability and Firm Performance: An empirical Investigation", *MIS Quarterly*, vol. 24: 169-196.

[4] A.S. Bharadwaj; S.G. Bharadwaj; B.R. Konsynki (1999): "Information Technology effects on Firm Performance as measured by Tobin´s q", *Management Science*, vol. 45, n. 7: 1008-1024.

[5] S.E. Black; L.M. Lynch (2001): "How to compete: the impact of workplace practices and information technology on productivity", *Review of Economics and Statistics*, vol. 83, n. 3: 434-445.

[6] E. Brynjolfsson; L. Hitt (1996): "Paradox lost? Firm level evidence on the returns to information systems spending, *Management Science*, vol. 42, n. 4: 541-558.

[7] E. Brynjolfsson; L. Hitt (2003): "Computing productivity: Firm-level evidence", *The Review of Economics and Statistics*, vol. 85, n. 4: 793-808.

[8] D. Naranjo-Gil (2004): "The Role of Sophisticated Accounting System in Strategy Management", *the International Journal of Digital Accounting Research*, vol. 4, n. 8: 125-144.

[9] M. Li, L.R. Ye (1999): "Information technology and firm performance: Linking with environmental, strategic and managerial contexts", *Information and Management*, vol. 35, n. 1: 43-51. PII: S-0378-7206(98)00075-5

[10] K. Dozier, D. Chang (2006): "The effect of company size on the productivity impact of Information Technology Investments", *Journal of Information Technology Theory and Application*, vol. 8, n. 1: 33-47.

[11] M. EL Louadi (1998): "The relationship among organization structure, information technology and information processing in small Canadian firms", *Canadian Journal of Administrative Science*, vol. 15, n. 2: 99-180.

[12] M. Gallivan; M. Srite (2005), "Information Technology and culture: Identifying fragmentary and holistic perspectives of culture", *Information and Organization*, vol. 15: 295-338.

[13] L. Hitt; E. Brynjolfsson (1996): "Productivity, business profitability, and consumer surplus: three different measures of information technology value", *MIS Quarterly*, vol. 20, n. 2: 12-142.