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Studying the Factors Which Delay Management Accounting Changes (Case Study of Iranian Manufacturing Firms)

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Abstract

Firms competing in competitive markets face some technological changes and more demands of customers as the competition grows based on market globalization. All these changes affect firms' management accounting systems. This leads firms to change their management accounting system in which some factors make delay in the process of management accounting changes. We have considered seven factors which make delay in management accounting changes. This research tries to study these factors. Research method in this study is descriptive-survey in which researcher has been benefited from questionnaire and interview techniques. In questionnaire testing, Friedman test has been used to exam the uniformity of variables and then kruskal-wallis test to evaluate the effect of firm size on research independent variables. Research findings show a broad uniformity of the effects of research seven independent variables and then the results of Kruskal –Wallis test indicate the effects of all variables on management related Problems except for the variable No, 4.

Keywords: Factors Which Delay, Management Accounting Changes, Manufacturing Firms

1. Introduction

Fundamental changes in economy and manufacturing technology specially IT have caused tremendous innovation in management methods of the firms. Firms manufacturing managers try to find ways for cost minimization and quality improvement and then this put pressure on them. In developed countries, firms which have not been able to conquer these challenges have canceled their performance or been purchased by other firms. An obvious example for this situation is an event occurred for one of hundred large firms in Australia between 1982 -1993. (Adler and ET, 2000)

Approaches and new philosophies in management, especially total quality management and just in time manufacturing system have been developed in many developed countries and in some of developing countries, also changes in Information Technology area, economy and trade have caused tremendous effects in product manufacturing method and costing systems of organization and meanwhile some new techniques such as Activity Based Costing (ABC), Objective costing, Life cycle costing, Quality cost report, and Strategic management accounting have been innovated and utilized.

Therefore, in spite of the fact that firms have performed new manufacturing methods, to improve their competitive advantages, which need change in manufacturing methods and in manufacturing tools but costing system yet face serious criticism. In this paper we try to examine the factors which cause delay management accounting changes process in which researcher's main variables are as follow:

1. Lack of accounting employees

2. Lack of competition resources

3. Management stability

4. Problems in management

5. Lack of accounting power

6. Being assured of meeting legal requirements

7. Lack of independence from parent company

1.1. Management Accounting Change

Management accounting change is not a uniform phenomenon. Consequently one might expect the causal factors of change to be varied and this has indeed been confirmed by management accounting researchers. It is evident that both the external factors (environmental) and internal factors (relating to the organisation concerned) have influenced the recent development of new management accounting systems and techniques. According to Shields (1997), the potential change drivers are competition, technologies, organizational design and strategies. These drivers of change also indicate the differing roles which causal factors can have in the process of change. Change in environment also implies uncertainty and risk which create a demand for further management accounting change in the form of

'non-financial' measures (Vaivio, 1999).

Many researchers have shown an interest in understanding management accounting change (Baines &Langfield-Smith, 2003; Chenhall&Langfield-Smith, 1998b; Innes & Mitchell, 1990; Libby & Waterhouse, 1996). For example Chenhall and Langfield-Smith (1998b) have explored the benefit of management accounting change, but less is known about the forces that induce this change (Laitinen, 2006). The reasons for management accounting change are termed "motivational factors" (Laitinen, 2006), and many researchers have suggested a substantial list of motivational factors (Baines &Langfield- Smith, 2003; Laitinen, 2001; Libby & Waterhouse, 1996). For example, Innes and Mitchell (1990) found a different set of circumstances linked with management accounting change, which they termed as follows:

- Motivators (e.g., competitive market, organisational structure, and product technology)
- Catalysts (e.g., poor financial performance, loss of market share, organisational change)
- Facilitators (e.g., accounting staff resources, degree of autonomy, accounting requirements)

The interaction between these variables promotes change not only in management accounting but also other related disciplines2 (Innes & Mitchell, 1990; Laitinen, 2006). Laitinen (2001) classified these factors in six groups: information needs; changes in technology and environment; willingness to change; resources for change; objectives for change; and external requirements. Laitinen (2006), on the other hand, used four categories of factors to explain management accounting change: organisational factors; financial factors; motivational factors, and management tools.

While, various factors have been associated with management accounting change, this study considers three factors, i.e., motivational factors, organisational factors and financial factors. Changes in environment and technology are used as motivational factors in explaining management accounting change and changes in organisational factors (i.e., structure and strategy). Besides that, organisational structure and strategy (organisational factors) are considered as contextual factors inside the firm that may have a connection to changes in management accounting (Moores& Yuen, 2001). Financial factors are used as outcomes of management accounting and organisational change. Grandlund (2001) suggested that low financial performance may put economic pressure on the firm to change its MAS to increase performance. Baines and Langfield-Smith (2003) suggested that if management accounting change is accompanied by a greater reliance on accounting information, it may result in improved performance. Thus, financial performance may be an antecedent or an outcome factor of management accounting change.

1.2. Factors Shaping Management Accounting Change

However, before describing our observations on the changing nature of management accounting and the changing roles of an accountant, we should briefly outline some of the

external factors which seem to be shaping such change. No attempt was made to assess the extent of the impact of each of these external factors ñ they are simply the factors which managers and accountants claim to be having an impact on their management accounting.

Various factors were mentioned by different people, but probably the most frequently cited was the competitive economic situation of the 1990s, and especially global competition. The extent to which the claims of increased competition are rhetorical, rather than actual economic effects, does not really matter. It is the perception of managers and accountants which is important, and how they perceive the economic climate in which they operate. If there is a perception of greater competition, then an increased focus is likely to be given to markets and the customer. And, though much of this customer focus may simply be rhetoric, in the companies we studied there did appear to be a greater emphasis on the service given to customers, and to providing that service in a market-orientated way.

Another fundamental change, and far more than rhetoric, is the advance in information technology which has taken place in recent years. The speed of technological change over the last 30 years or so, and especially the advent of the PC, has had a profound affect on organisational life. Particularly significant over the last 5-10 years has been the extent of the dispersion of computers and computing capacity around the organisation. The increased use of the computer has had major effects on the nature of work, especially clerical work, and on information flows around the organisation.

In addition, there have been other substantial changes in organisational structure ñ although again whether they are generated by rhetorical or real economic factors is not clear. For example, whereas in the UK in the 1970s, there was a wave of acquisitions and mergers, with the creation of conglomerates, by the 1990s organisations were moving in the opposite direction. The trend was then for de-mergers, with companies focusing on core competencies, and outsourcing non-core activities.

These various changes - in competition, technology and organisational structure - all have important implications for the nature of management accounting - particularly the manner in which traditional accounting techniques are now being used. In the next section we discuss such implications.

1.3. The Changing Nature of Management Accounting

As described above, there have been considerable advances in information technology in recent years. One of the most important, apart from the speed and capacity of modern systems, has been the development of data-base technologies which provide the ability to store vast amounts of information in easily accessible ways. These technologies permit various users simultaneously to access the information stored on the database and to use it in different ways.

When Johnson and Kaplan were proclaiming their relevance lost thesis, one of the reasons they advanced was that management accounting is dominated by financial reporting. They argued that as financial reporting is a legal requirement, it has to be done. So if a company has only one information system, it is the needs of financial reporting which will take

precedence. Thus, information for other purposes has to be accommodated within that system, so far as it is practical. In this sense, management accounting is second place to financial reporting.

1.4. The Changing Role of Management Accountants

Having briefly outlined the changing nature of the use of management accounting, we will now explore possible implications for accountants and the professional accounting bodies. As a starting point, it can be said that there are both opportunities and threats. In one case study, a UK-based manufacturer of healthcare products, the number of people in the accounting function declined in the period 1990-97 from 120 to 60. Similar high-percentage reductions were observed elsewhere. Such reductions are largely a result of advances in information technology, particularly the computerisation of recording and processing transactions.
But during the same period in this company, there was also an emergence of "hybrid" accountants - as they were called by some managers. The company had changed from a functionally organised business (with separate business units and service functions to support them) to a process-based form of organisation. Whereby, each unit, and if possible each site, was responsible for all its activities from the receipt of an order to delivery of the final product. Under this new structure there is now a process leader who is responsible for all these activities, together with the associated support functions which are an integral part of the process. In this particular case, the only functions which are now separate are finance, IT and quality. But even the finance function, although notionally separate, became increasingly integrated into the individual processes.

Supporting each individual process is a small group of accountants - the hybrids. A hybrid accountant is someone who has both accounting knowledge and an in depth understanding of the operating functions or commercial processes of the business. Throughout most of the company, hybrids are physically located in the process steams, where they work alongside the process managers. They have offices next to the process leaders, where they work at least three days a week. They then spend the other day or two in the accounting function, where they have an additional desk and are able liaise with their accounting colleagues. But, in most instances, it appeared that the hybrids regarded the process as being their "home", and that they regard themselves as part of the process management team.

There is clearly an opportunity to extend the role of management accountants within such process teams. Although, if accountants are to be involved in the management process in this way, they need to understand the complexities of the business and to have the capability of interacting with people in all parts of the organisation.

3. Research objectives

This paper examines the effect of the factors which cause delay in management accounting change to get comprehensive understanding of firms management accounting systems lacks specially of hardware and software lacks.

4. Research Methodology

To satisfy research goal a questionnaire with Likret five (5) options scale has been provided and sent to 150 manufacturing items (small, middle, large, and very large) in which 112 questionnaires were answered and then utilized by researcher to draw conclusion from. Researcher has utilized descriptive-deductive statistics to analyze collected information in which descriptive statistics section the number of studied firms and their sizes are examined. In deductive statistics section, Friedman test to measure the uniformity of the importance of preventive factors in management accounting change process and Kruskal-Wallis test to estimate the effect of firm size on research independent variables have been utilize by researcher.

4.1 Friedman Test

This test used to compare group based on their mean degrees and determine that F these groups are obtained from one society or not? The scale in this test must, at least, be in grade. This test is the non parametric corresponding type of Friedman test and typically is used instead of F in grade scales and replaces it. There is some homomorphism of variances which is considered less in the grade scales.

4.2 Kruskal-Wallis Test

In statistics, the Kruskal–Wallis one-way analysis of variance by ranks (named after William Kruskal and W. Allen Wallis) is a non-parametric method for testing equality of population medians among groups. It is identical to a one-way analysis of variance with the data replaced by their ranks. It is an extension of the Mann–Whitney U test to 3 or more groups. Since it is a non-parametric method, the Kruskal–Wallis test does not assume a normal population, unlike the analogous one-way analysis of variance. However, the test does assume an identically-shaped and scaled distribution for each group, except for any difference in medians.

5. Analysis

5.1 Research validity and reliability

A good test must contain some suitable features such as Objectivity, Execution simplicity, Practicability, comment simplicity, Validity and Reliability.

Considering above mentioned features, we focus more on Validity and Reliability here.

Dealing with research Reliability, researcher has utilized "Cronbach's Alpha" and based on table 1 the measured value of "Cronbach's Alpha" done by Spss software is equal to 0.75 which is more than 0.7, therefore the test is considerably valid in view of its Reliability. In Validity examination 10 questionnaires were sent to subjects and after a week the same questionnaires were sent again to be answered. This research shows the uniformity of the answers during a week which indicate the questionnaires Validity.

Table No.1 Reliability Statistics	
No of Items	Cronbach's Alpha
22	0.755

5.2 Firm size

In this research the size of studied firms is defined based on firms' human resources numbers, meanwhile Table 2 shows firms classification, frequency and their Frequency Percents.

Table No.2 Frequency of Firms Size			
Firm size		Frequency	Percent
Small	>10	4	3.6
Middle	10 to 50	56	50
Large	50 to 150	28	25
Very Large	More than 150	24	21.4
Total		112	100

5.3 Research independent variables Uniformity Testing

In order to prioritize and define the importance rate of each research independent variables (factor preventing management accounting change) Friedman test has been utilized in this research. This test states that if there is a factor more important than others among Preventive Factors or all of them are uniform in importance. Researcher has utilized following hypothesis (rejection-validation) in his testing as follow:

H0: Research independent variables (factor preventive from management accounting change) have uniform importance in view of their effectiveness.

H1: Research independent variables (factor preventing from management accounting change) have not uniform importance in view of their effectiveness.

Considering the value in Table 3, P-value = 0.001 and Df=6 and statistic value of chi-square=23.353 we can conclude that the assumption of H0 is valid in meaningful level of %5, while H1 is rejected, in other words research independent variables (factor preventing

from management accounting change) have uniform importance in view of their effectiveness and classification order of independent variables is shown in Table 4.

Table No.3 Friedman test statistics

N	112
Chi-Square	23.353
Df	6
P-value	.001

Table No.4 Mean Ranking of Variables

Descriptive / Independent Variable	Mean Rank
Lack of accounting employees	4.19
Lack of independence from parent company	4.3
Lack of competition resources	4.12
Problems in management	4.08
Being assured of meeting legal requirements	4.05
Management stability	3.78
Lack of accounting power	3.47

5.4 Firm size and research independent variables

In this paper, in order to examine the effect of firm size on research independent variables (factors preventing management accounting changes) Kruskal-Wallis test have been utilized by researcher. Table 5 shows the number and also the mean of each independent variable ranks based on firms size.

Table No.5

Descriptive / **Independent Variables**	Firm Size	N	Mean Rank
Lack of accounting employees	Small	4	66.50
	Middle	56	58.71
	Large	28	64.71
	Very large	24	40.08
Lack of competition resources	Small	4	6.50
	Middle	56	57.50
	Large	28	67.64
	Very large	24	49.50
Management stability	Small	4	72.50
	Middle	56	43.64
	Large	28	77.64
	Very large	24	59.17
Problems in management	Small	4	70.50
	Middle	56	57.36
	Large	28	55.64
	Very large	24	53.17
Lack of accounting power	Small	4	78.50
	Middle	56	48.50

Table No.5

Descriptive / **Independent Variables**	Firm Size	N	Mean Rank
	Large	28	67.64
	Very large	24	58.50
Being assured of meeting legal requirements	Small	4	12.50
	Middle	56	48.50
	Large	28	68.50
	Very large	24	63.50
Lack of independence from parent company	Small	4	69.50
	Middle	56	44.50
	Large	28	70.50
	Very large	24	57.50

Table No.6 states the results of Kruskal-Wallis test

Independent Variables / Descriptive	Var* 1	Var 2	Var 3	Var 4	Var 5	Var 6	Var 7
Chi-Square	12.560	19.181	27.210	1.550	9.862	22.268	12.163
Df	3	3	3	3	3	3	3
P-value	0.006	0.000	0.000	0.671	0.020	0.000	0.007

Asymp.sig	Difference is meaningful	Difference is meaningful	Difference is meaningful	Difference is not meaningful	Difference is meaningful	Difference is meaningful	Difference is meaningful

*Var= Variable

Considering the values in Table No,6 we can conclude that the firm size affects all variables except to N.4 variable (Management Problems).

6. Research Results and Findings

Base on the results of Friedman test and from the viewpoints of industrial experts all the research seven independence variables have the same importance in the process of delaying in management accounting change. In table No, 4 we have classified these variables in which the lock of accounting employees, lock of independence from parent company and the lock of calculationresources have great importance. Considering the results of Friedman test we can conclude that the lock of accounting employees based on poor training and failure in developing their technical knowledge, the lock of independence from parent company which leads to decision making failure and the lock of calculation resources cause delay in management accounting change.

In general, we can conclude that the competition among firms has become more complex and developed than past in world markets and customers have many options to select their desired productions.

Nowadays, the acceleration in technology development area has brought forward dominant Production similar services and purchase options for costumers in comparison with the past. In this situation firms can survive in competition area and continue their activity to product goods which not only have quality, efficiency and competitive characteristics but have less firm price to maintain and increase their market share and make profit. In such situation firms must utilize tools, satisfying these features, such as Activity Based Costing (ABC) and store-manufacturing systems promotion. All obstacles which prevent from the system promotion must be removed taking good policies. Whenever the promotion of any system faces some obstacles which cause delay in the process of system change, it is necessary to remove them by taking good policies and try to maintain competitive advantages. Competitive condition obligate the firms to benefit from new manufacturing, store and costing systems such as just in time manufacturing system, BSC, ABC and etc.

7. Conclusion

Regarding the subject matter importance and the results obtained from research data, some recommendations can be presented as follow:

1- Firms must provide their accounting employees with new method of information

technology and management accounting and try to train them.

2- Management must encourage information technology in accordance with accountants' duty and try to support them.

3- Firms must promote the system of information receiving and processing.

4- Firms must consider not replacing managers who have high flexibility at time in which information systems have to change, because they have complete knowledge of firms' characteristics and its structure.

5- Firms compiling accounting standards must update these standards based on technological development to increase their accounting power and authorities.

6- Government must make some legislation which encourages the firms to change their management accounting policies such as Tax-exempt.

7- Parent firms must allow their subsidiaries to apply some changes to their systems independently based on their needs and requirements.

8- Considering the Society of Iranian value engineering (SIVE) it is recommended to the firms to benefit from the guidelines of this society, value engineering, to improve their performance by referring to web site of Iranian value engineering Society (www.sive.org)

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