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AN EXPLORATORY STUDY ON THE FACTORS INFLUEN- CING THE ADOPTION OF MAPs IN THE JORDANIAN FI- NANCIAL SECTOR

Key Words

**MAPs; IFAC model;
Contingency Theory;
Financial Sector;
Jordan.**

Abstract

The research aims to provide a view of the present role of management accounting, to identify the extent of usage of MAPs and finally to determine the sophistication level of MAPs by employing International Federation of Accountants model (IFAC) in the Jordanian financial sector, and finally to investigate the effect of the contingent variables upon both the extent of usage and the sophistication level of MAPs. The research reveals that traditional practices are still widespread and highly used, and that there is a diversity of practices used in the financial sector context. The research indicates that the majority of the Jordanian financial sector companies are located in the first stage by 64.1% and 29.7% of companies in the second stage based on the IFAC model, thus indicating the simplicity of information that they require. This, in turn, reflects the simplicity of practices that are used in the Jordanian financial sector.

1. Introduction

A lot of studies have been conducted to determine why there are differences between organizations in terms of using management accounting systems and the adoption of Management Accounting Practices (MAPs). (Waweru *et al.*, 2005; Silvola,

2005; Chenhall, 2003; Anderson and Lanen, 1999), and others.

According to Haldma and Laats (2002), the contingency approach used in management accounting studies is based on the premise that there is no universally appropriate account-

ing system applying equally to all organizations in all circumstances. Which means the particular features of an appropriate accounting system will depend upon the specific circumstances in which an organization finds itself. The study classified the contingent factors into external circumstances and internal factors.

Thus, the contingency theory must identify specific aspects of an accounting system which are associated with certain defined circumstances and demonstrates appropriate matching (Otley, 1980).

For instance, Anderson and Lanen (1999) attempted to explore the evolution of a broad range of MAPs by using the contingency theory framework, the study considered two contingencies that have been related to MAPs, competitive strategies and international orientation, which have most influenced the evolution of management accounting.

Another study revealed that the intensity of market competition and the application of computer aided manufacturing processes have great associations with multiple performance measures by using the contingency approach. (Hoque, Mia, 2001).

In the same perspective Waweru *et al.* (2005) explored the process of management accounting change by using the contingency theory to ex-

plain the predictors of management accounting change by examining five variables (competition, decentralization, technology, size, and capacity to learn). The most noteworthy finding of the study was that there was a high correlation between management accounting change and decentralization, size and organizational capacity to learn. The study revealed that the main factors which hinder a change in management accounting were fear of change and lack of competing resource.

According to Hoque and Mia (2001) the most convenient theory that has been applied, to identify the effect of elements upon the adoption MAPs and using management accounting systems was the contingency theory.

According to the preceding literature, the current research concludes that most of the studies which examined contingency theory on the management accounting discipline were devoted to common contingency factors (e.g., technology, size, structure, strategy and national culture, organizational capacity to learn, external environment and competitors) and utilized it in order to examine the effect of these contingent variables upon the usage of MAPs, (Waweru *et al.*, 2005; Chenhall, 2003; Haldma and Laats, 2002; Hoque, Mia, 2001; and Anderson and Lanen, 1999)

The majority of developed countries have studied management accounting practices in order to aid their understanding of management accounting and demonstrating research in management accounting practices within those countries. For example, (Wu and Drury, 2007; Abdel-Kader and Luther, 2006; Hyvonen, 2005; Szychta, 2002; Lamminmaki, Drury, 2001 Hopper, 1999).

There are a limited number of studies focusing on management accounting practices in developing countries, (Kattan, Pike *et al.*, 2007; Triest and Elshahat, 2007; Ismail, 2007; Waweru *et al.*, 2005; Sulaiman *et al.*, 2004; Billings, Capie, 2004; Lin; Yu, 2002; Adelegan, 2000). Therefore, its worthwhile to investigate management accounting practices in Jordan in order to fill this shortage of studies. In Jordan particularly, as a field study by filling the gap of empirical studies in management accounting practices and to add value to the literature of management accounting in general by investigating the influence of the six contingent variables into both usage and sophisticated level management accounting practices in the Jordanian context.

Therefore, the current research concentrates on the modern and the most convenient contingency variables to the Jordanian environment,

in order to examine the effect of these variables upon both the extent of usage and the level of sophistication of MAPs in the Jordanian financial sector, namely: company size, sophistication level of operations, professional competence, technology, life cycle stages, and finally business type.

2. Literature Review and Develop Research Hypotheses.

2.1 Organization Size

Organization size is considered to be one of the variables that have been examined as a contingent variable in many disciplines, and in terms of the management accounting field particularly, it is considered to be one of the most vital variables which influence management accounting information and practices in many terms. According to Chenhall (2003) one of the main elements which were indicated as a contingent variable and has a major effect on management accounting is organization size. Waweru *et al.* (2005) concluded that organization size was one of the major variables which influence management accounting change, as well as decentralization, and the organizational capacity to learn variables in a study which aimed to investigate predictors of management accounting change in South Africa.

In terms of the adoption, benefits, and the future emphasis of the application of MAPs, Joshi (2001) in his study supported the view that size has a major influence in determining the adoption of newly developed MAPs and the other reasons for low adoption are the conservative attitude of Indian management and long term orientation.

Cinquini and Tenucci (2006) applied the contingency theory by using an internet survey on Italian companies in order to appraise the frequency of strategic MAPs adoption. The study found that organization size and competitive strategy as contingency variables influenced the adoption of strategic MAPs.

According to Abdel-Kader and Luther (2008) in a study which examined the impact of firm characteristics upon the sophistication level of management accounting, the study revealed that organization size is one of the main contingent variables which influence the sophistication level of MAPs in the UK.

In order to find out the main factors which influence the sophistication level of costing systems, a study carried out by Al-Omiri and Drury (2007) in UK organizations from different sectors using a postal questionnaire, indicated that organization size, intensity of the competitive environment, extent of the use of production

technologies and the type of business sector are positively associated with levels of cost system sophistication.

Based on the above discussions and the literature, the organization size is a worthwhile variable to be examined, particularly in terms of the adoption of sophisticated MAPs, in addition, this variable is applicable in the Jordanian business environment due to the variety of size among companies in the financial sector. Consequently, the current research will examine the organization size variable in order to find out the effect of this variable upon both the extent of usage and the sophistication level of MAPs in the Jordanian financial sector.

In this context the study addresses the research question in terms of organization size as:

What is the effect of organization size on adoption of more sophisticated MAPs?

2.2 Sophistication Level of Operations

Many researchers have examined the effect of diversity of productions that companies produced upon the company performance, the employees productivity, and other variables. However, in terms of the management accounting discipline there are not many researchers who examine the diversity of productions and associate it with management accounting research.

The concept of the sophisticated level of operations which is used in the current study refers to the number of products or services that the company produces or provides to their customers, whereas the more products produced, the higher the need for a sophisticated operation.

Fry *et al.* (1995) indicated that production volume, product variety, and/or cost structure are vital elements with which the management accounting systems have to be concerned and respond to any change in these variables; otherwise the management accounting information will not be valuable nor reliable.

According to Ittner *et al.* (1997) in his study which examined the performance of activity based costing, the study pointed out that the increase in costing usage due to the increased unit and product-sustaining activities had a tendency to be offset by revenue increases from higher sales volumes and greater product variety. Chenhall (2003) in his study asserted the significant role of complexity of production in determining the type of MAPs, as he argued that the complexity of the production function and production process have an effect on determining which type of costing system has been used. Similar findings were provided by a study which was carried out by (Haldma and Laats, 2002) which

placed emphasis on the important impact of production complexity on MAPs since the study indicated that each production requires different procedures, as this in turn influences the type of costing to be used.

According to the above studies, the sophistication level of operations is a significant variable to be examined in terms of both the extent of usage and the adoption of sophisticated MAPs. As a result the current research will examine the sophistication level of operations variable in order to find out the impact of this variable upon both the extent of usage and the sophistication level of MAPs in the Jordanian financial sector.

In this context the study addresses the research question in terms of sophistication level of operations as:

What is the effect of the sophistication level of operations on the adoption of more sophisticated MAPs?

2.3 Professional Competence

A lot of studies have indicated the momentous role that professional competence plays as a fundamental basis to deal with practical life and to support the practitioners capability to adequately deal with real life, and to change it. The professional competence in the current research referred to the education, training courses, and professional skills.

The last decade has had a lot of technological changes which have accrued; as a result there has been a significant change in most of the disciplines, with management accounting being one of them. (Burns *et al.*, 2004). Therefore to accommodate these challenges, the role of education and learning in management accounting appear to be significant to pursue its role in assisting management to achieve its goals in the environment, and information is a vital resource (Woodbine, 2007).

Rezaee *et al.* (1995) indicated the significant role of management accounting education to lead the change from traditional to new MAPs.

Burns, *et al.* (2004) in a study which discussed the changes that occurred in management accounting in the UK, claimed that the industry must look at greater sustained involvement in higher education and they suggested reforms of topics covered in syllabuses and quality systems in education. Cooper (2006) stressed the changes in the purpose of the management accountant reflected and raised the breadth and diversity of knowledge needs for management accounting. Another reason indicated by (Maher, 2000) highlighted that the approach of teaching management accounting can increase the value of our students and alleviate possible declines in enrolment.

Ahmed (2003) in a study which examined the level of information technology skills that the accounting curriculum included, suggested that the emphasis should be on the application of IT rather than on traditional computer science. Yeung and Armstrong (2001) examined the effect of the level of education on the adoption of Total Quality Management (TQM). The study pointed out the importance of managers educational attainment on the learning and adoption processes of TQM, and added that in order to achieve better levels of adoption, companies are required to promote staff development and at the same time, there must be training and coaching on the sharing and utilization of information. Haldma and Laats (2002) indicated that the legal accounting environment and the shortage of qualified accountants have influenced the status of MAPs. Sulaiman, *et al.* (2004) pointed out that the lack of awareness of new techniques, and the lack of expertise and a shortage of qualifications in management accounting affected the lack of adoption of the new techniques.

To sum up, there is a strong argument in terms of the effect of professional competence on MAPs, particularly in terms of the adoption of sophisticated MAPs. Therefore, the current research will examine this critical

element and apply it to explain and to investigate its effect on both the extent of usage and the adoption sophistication of MAPs in the Jordanian financial sector.

In this context the study addresses the research question in terms of professional competence as:

What is the effect of professional competence on the adoption of more sophisticated MAPs?

2.4 Organization Life Cycle

The earlier researchers indicated the different characteristics of firms across the life cycle, (Miller, Friesen, 1984) with a longitudinal study of the corporate life cycle, They tested a sample of 161 periods of history from 36 firms, and classified them into five life cycle stages by using four attributes (strategy, situation, structure, and decision making). The study indicated that the corporate life cycle disclosed that there were five common stages: birth, growth, maturity, revival and decline. Each stage would manifest integral complementarities among variables of environment strategy, situation, structure, and decision making.

Therefore, the current research concludes from this study the distinct features of each phase of the life cycle on organizations and the difference between them by how they go through these phases. Thus this conclusion will

aid the research to obtain a clear guide to examine this vital element to trace the performance of the companies across life cycle phases and other issues, such as those that adopt sophisticated MAPs, and those which have an association recently made between management accounting studies and the corporate life cycle concept. (Silvola, 2005).

Previous studies in the life cycle had the same consensus that each stage across the life cycle has different characteristics and attitudes, therefore the challenge for management accounting is to ensure that information is relevant, accurate and timely, by being adaptable to the varying management needs across life cycle stages (Moore and Yuen, 2001) and they indicated that the life cycle perspective has rarely been applied in management accounting research, which we can assert with this fact by the limited studies which examine the relationship between life cycle element and management accounting studies.

Moore and Yuen (2001) attempted to explore whether management accounting systems (MAS) differ across stages of the organizational life cycle, by using Miller and Friesen's five stage life cycle model. The study revealed that MAS attributes differed as a firm transitioned from one stage to the next. In particular,

growth dominates other stages in creating a need for formal MAS design, the selection of management accounting tools is far more important than presentation of information in varying levels of MAS formality at each life cycle stage, the result also implied that MAS were able to facilitate firms pursuing their respective strategies, and the study provided evidence of how firms adapted to their growth and development, and revealed that firms tended to formalize their MAS as they changed their competitive advantages or when their activities and structures became more complex. Another aspect of the study indicated the sensitive reaction of the management accounting system to the changes which occurred in the firms and its development and adapting the system to be convenient and adequate to the features of each phase and support of each phase by useful and relevant information to aid the company to achieve its strategies.

Another study has been conducted by Auzair and Langfield-Smith (2005) to investigate the influence of several contingent variables on the design of management accounting control (MCS) in service organizations by applying the life cycle perspective. The survey was administered to 1000 financial controllers of service organizations operating in Australia. The most notable findings of the study

indicated that firms in the mature stage of their life cycle place a greater emphasis on a more bureaucratic MCS than firms in the growth stage. It added a strong argument about the use of the corporate life cycle by revealing that this particular operation environment provides a fruitful context for studying accounting changes issues and that corporate life cycle models played an important role in the explanation of management accounting systems evolution.

As a result of the new interest of the life cycle perspective in management accounting discipline, a study was carried out by Silvola (2005) to investigate MAPs of Finnish firms from the contingency perspective, focusing on the organizational life cycle by using the Miller and Friesen model (1984), and also venture capital investors and the education of CEO (Chief Executive Officer). The survey was conducted through distributing a questionnaire to 500 Finnish firms in Finland. The survey indicated that growth firms dominate other stages when adapting new MAPs and those practices become more common when the firms move on along the life cycle. In particular, the need for MAPs is emphasized in growth firms which have venture capital investors. In addition, the results indicated that CEO education is an important factor for driving the adoption of new MAPs.

In the same context Cassia *et al.* (2005) investigated whether organization configurations and management accounting systems change simultaneously by using the original application of the fuzzy logic methodology. The study analyzed the level of development and implementation of management accounting systems and the organizational configuration on a sample of 501 Italian firms. The study was consistent with previous studies which existed in the literature and pointed out a correlation between the complexity of organizational configurations and management accounting systems relevance. In particular, the study indicated those companies with somewhat evolved management accounting systems, and a simple organizational structure, might be in the middle of a transition to more complex organizational solutions.

A study carried out by Kallunki and Silvola (2007) to examine the effect of the organizational life cycle stage on the use of activity-based costing, investigated if the use of activity based costing varies among firms in different life cycle stages. The study used a self-categorization variable to measure the life cycle stage of the firm, and revealed that the characteristics of the firm affecting the use of advanced cost-accounting systems, differ across life cycle phases as reported in the life cycle, and firms in

the maturity and revival phases have a greater organizational size, lower profitability, a more diversified product/service range and have more often achieved a stock market listing as opposed to firms in the growth phase. Furthermore, the study indicated the use of activity-based costing is more common among firms in maturity and revival phases than it is among firms in a growth phase, even after isolating for the effects of firm size and other relevant control variables.

According to the literature review of the life cycle and its adoption in the management accounting discipline, research reveals that a firms life cycle stage is a contingency to which organizational responses have to be matched (Miller, Friesen 1984). This implies that the use of management accounting systems differs across the stages of the organizational life cycle as different systems are needed in different stages. In other words, organizational life cycle theories suggest that the characteristics of an organization changes according to the life cycle stages (Silvola, 2005; Moores and Yuen, 2001; and Miller and Friesen, 1984).

To this end, and according to the literature review above, the study will attempt to address this question in terms of the organization life cycle

perspective and its association with the degree of sophistication of MAPs:

Do the developments of the Jordanian companies through the life cycle stages influence the adoption of more sophisticated MAPs?

2.5 Business Type

The Jordanian financial sector consists of four sub-sectors, each of them carrying out different activities namely; banking, insurance, diversified financial services and real estate (Ministry of Industry and Trade, 2007), therefore, it would be worthwhile to examine if there is any significant difference between them in terms of the status of MAPs, and the sophistication level of MAPs. Moreover, major attention has been given to the manufacturing sector compared with the financial service sector; for that reason it is a sector worth investigating, (Davila and Wouters, 2006; Sulaiman, *et al.*, 2004; Moores and Yuen, 2001; Moores and Yuen, 2001 and Adelegan, 2000).

A few studies have examined the business type on the management accounting field. However, almost all research has examined management accounting in one sector, thus the current research will utilize the business type as a contingent variable. Drury and Pettifer (1993) attempted to describe the scope of implementing MAPs in building societies. The study

claimed that most of the researchers concentrated their researches to the manufacturing sector with respect to MAPs, compared with the financial service sector.

A study carried out by Ismail (2007) attempted to examine the performance measures within private sector companies in Egypt. The study examined 150 companies from several sectors namely; service, industrial, real state, and others by using questionnaires. The study revealed no significant difference across sectors in the use of performance evaluation measures

The extent of activity-based cost management practices adoption in the service sector has not been found significantly different from that in the manufacturing sector. This was based on a conclusion from a study carried by Anand, *et al.* (2004) in order to examine the adoption of activity-based cost management practices in the Indian industry. The study's hypotheses were built on the assumption that there is a different rate of adoption among differing sectors.

Al-Omiri and Drury (2007) in their study indicated that the sophistication level of cost systems are positively associated with several factors, mainly; the type of business or sector, the importance of cost information, extent of use of other innovative management accounting techniques,

intensity of the competitive environment, size, and finally the extent of the use of JIT/lean production techniques. In addition, the study highlighted that the financial sector is the most sophisticated sector in terms of using costing systems.

According to the literature review of business type, the current research concludes that the type of business is one of the significant factors which might influence the sophistication level of MAPs, particularly in the Jordanian financial sector as this sector contains four different sub-sectors; each of them having distinct features from the other. Therefore, the current research will examine the effect of business type upon MAPs, particularly adopting sophisticated practices in the Jordanian financial sector.

In this respect the research will address the question as:

What is the effect of business type in adopting more sophisticated MAPs?

3. Research Design

3.1 Measurement of MAPs for both extent of usage and sophistication level

MAPs will be classified through the current research in five categories; the costing system, budgeting, performance evaluation, decision making and strategic analysis, (Abdel-Kader and Luther, 2006). This includes (38)

practices which the current research will cover, including MAPs both traditional and contemporary, which will provide a significant contribution and be more objective and convenient when applying the (IFAC) model which is based on classifying the evolution of management accounting and the characteristics of each stage of its evolution (International Federation of Accountants (IFAC) 1998).

In consistency with the objectives of the research and according to the previous studies which have been carried out to examine MAPs (Abdel-Kader and Luther, 2006; Forde *et al.*, 2005; Alkizza and Akbar, 2005; Adelman, 2000; and Chenhall and Langfield-Smith, 1998), the current research asks the respondents to answer the following questions: firstly; the degree of usage of each of the practices, and the categories of the practices to ensure an understanding of the practices, and to which categories they belong, based on a five-point Likert scale. Secondly; the importance of each practice to discover the tendency to adopt each of them and how important it is for the planning of the future in terms of adopting the practices based on a three-point Likert scale.

In terms of applying the IFAC model, it does not provide illustrations of precise MAPs which are asso-

ciated with the particular stages of the evolution of management accounting. The IFAC model was recently adopted by (Abdel-Kader and Luther, 2006) who attempted to implement the IFAC model and associated the (38) MAPs to each stage of the evolution of management accounting according to the IFAC. Accordingly, the current research has implemented the IFAC model to investigate the level of sophistication of management accounting and follow the (Abdel-Kader and Luther, 2006) classification of MAPs through the IFAC model for the reason that it is based on reasonable criteria to determine each stage of the evolution of management accounting.

3.2 Research Hypotheses and Contingency Variables Measurement

3.2.1 Organization Size

The organization size was measured by asking the respondents three questions to determine; age of the company since establishment, net sale growth, and number of employees in the respondent companies, (Al-Omiri and Drury, 2007; Waweru *et al.*, 2005; Chenhall, 2003; Joshi, 2001).

H1: There is a positive association between the age of the company and both the extent of usage and the sophistication level of MAPs in the Jordanian financial sector.

H2: There is a positive association between the net sale growth and both the extent of usage and the sophistication level of MAPs in the Jordanian financial sector.

H3: There is a positive association between the number of employees of the company and both the extent of usage and the sophistication level of MAPs in the Jordanian financial sector.

3.2.2 Sophistication of Operations

The sophistication of operations was measured by asking the respondents to determine the number of products or services which the company produces, (Kallunki and Silvola, 2007;; Chenhall, 2003; Haldma and Laats, 2002; and Ittner, Larcker *et al.*, 1997).

H4: There is a positive association between the sophistication level of operations and both the extent of usage and the sophistication level of MAPs in the Jordanian financial sector.

3.2.3 Professional Competence

The research measured the effect of professional competence upon the level of sophistication of MAPs in the Jordanian financial sector by asking questions to determine the acquisition of academic qualifications and professional certificates by listing the num-

ber of academic quantifications and professional certificates and asked the respondents to determine the number of employees including himself having possession of quantifications and certificates. Finally, the respondents were asked to determine the number of training courses that the staff attended per year.

H5: There is a positive association between the training courses attendance and both the extent of usage and the sophistication level of MAPs in the Jordanian financial sector.

H6: There is a positive association between the number of academic degrees and both the extent of usage and the sophistication level of MAPs in the Jordanian financial sector.

H7: There is a positive association between the number of professional certificates and both the extent of usage and the sophistication level of MAPs in the Jordanian financial sector.

3.2.4 Organization Life Cycle

The research asked questions in terms of each of these configurations to determine in which stage each of the respondent firms is located by utilizing the following instruments:

- Using the self categorization measure as some of the studies did, in order to identify in which stage the respondent company is located (Kallunki and Silvola, 2007 and Auzair and Langfield-Smith, 2005), by asking the respondents to identify their current life cycle stage.
- Using the age of the company (determined through number of years since establishment) and size of the company (determined through number of employees) (Moores and Yuen, 2001 and Miller and Friesen, 1984), in order to validate and ascertain that the self categorisation which each of respondents answered, match and are consistent with the classification that Miller and Friesen employed.

The research appended at the beginning of each stage a brief of the main distinct configuration of each stage (form of the structure, strategy, decision making style and leadership style), in order to assist the respondent to identify the correct stage in which they are located.

H8: There is a positive association between the development of organization life cycle and both the extent of usage and the sophistication level of MAPs in the Jordanian financial sector.

3.2.5 Business Type

According to the literature review, each of these sub-sectors differs from the other in many terms such as net sale growth, age, contribution of the domestic economy, and the type of products and services that they produce, which gives more motivation to examine the difference between these sub-sectors in terms of the level of sophistication of management accounting. Therefore, the current research measured the business type by asking the respondents to determine which of the four sub-sectors their companies belong to in order to identify each respondent companies' type to facilitate comparing the different level of MAPs adoption among the sub-sectors.

H9: There is a positive association between the business type and both the extent of usage and the sophistication level of MAPs in the Jordanian financial sector.

4. Research Methodology

The research utilized a self administration questionnaire in order to identify the current status of MAPs in the Jordanian financial sector, however, the questionnaire method has been used in many management accounting studies, for instance; (Cinquini and Tenucci, 2006; Silvola, 2005; Hutaibat, 2005; Chenhall, 2003; Hald-

ma and Laats, 2002; Moores and Yuen, 2001; Chenhall and Langfield-Smith, 1998; Clarke, 1992).

The questionnaire was utilized in order to discover the characteristics of the Jordanian financial sector. The questionnaire contains two parts; the first part was designed to obtain information regarding the companies characteristics. This section is a customary practice in most questionnaire surveys (for instance, (Davila and Wouters, 2006; Hutaibat, 2005 and Cassia *et al.*, 2005). The second part focused on MAPs particularly in the Jordanian financial sector; therefore this part consisted of five sections mainly: costing system, budgeting, performance evaluation, decision making, and finally strategic analysis, in this part the questions were adopted from previous empirical studies, for instance (Abdel-Kader and Luther, 2008; Kowalak, 2007; Adelegan, 2000; Chan *et al.*, 1997;) and others.

The questionnaire was piloted on a sample containing (8) companies and in consultation with academic specialists in MAPs. (95) Questionnaires were distributed to the head of financial accounting of each company. (64) Questionnaires were accredited and valid to analyse which gave a (67.3%) response rate. The table below illustrates the response rate configuration according to the sub-sectors.

Table 1
Response Rate Configuration According to the Sub-sectors

Sectors	Banking	Insurance	Diversified Financial Serv.	Real Estate	Total
Total number of companies	15	29	27	33	104
Refused to participate	(0)	(3)	(2)	(4)	(9)
Distributed questionnaires	15	26	25	29	95
Returned questionnaires	14	17	17	16	64
Response rate for each sector	93.3 %	65.4 %	68 %	55.2 %	67.3%

The Cronbach Alpha test was used in order to test reliability and internal consistency of the questionnaire. Accordingly, the internal consistent of the whole questionnaire was examined and revealed (0.6496) which is considered as an acceptable internal consistent.

5. Research Findings

5.1 Demographic Data

The respondents were classified according to their business type into four main types giving the following

percentages as shown in the figure below.

The results indicate that 46.9% of respondent companies were less than 10 years old. Moreover, 64.1% of the respondent companies were no older than 15 years.

The results indicate that almost half of the companies in the sample produce/provide less than 10 products/services by 40.6% and 84.4% from the respondent companies produce/provide less than 20 products/services. These figures give an obvious

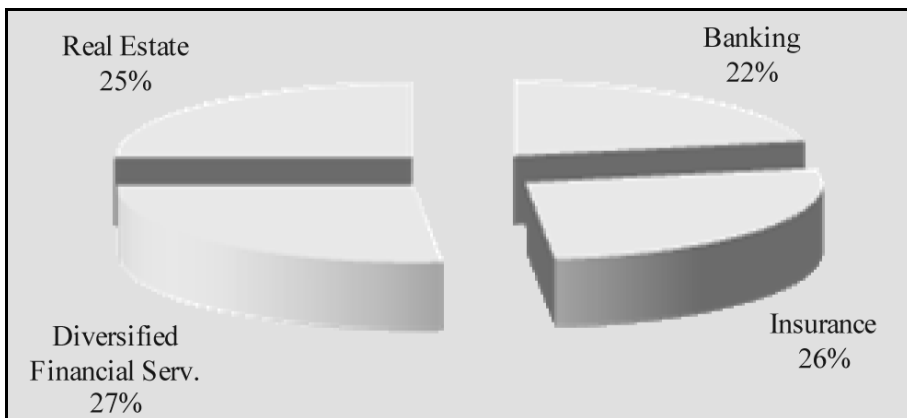


Figure 1: Business type classification

indicator to the simplicity of operations which the Jordanian financial sector has produced /provided to their customers.

The number of employees question shows that 54.7% of the respondents answered that they had less than 50 employees, and almost three-quarters of the respondent companies (78.2%) had less than 300 employees, which is considered as small or medium type of businesses compared with developed countries.

In terms of life cycle stages, the result shows that 26.6% are located in the first stage and 40.6% in the second stage. This shows that 67.2% of the respondent companies are located in the first two stages, which supports the interpretation of the previous questions which revealed that the Jordanian financial sector is a youth sector and the results of this question confirm this conclusion. For more illustration see the figure below.

In addition, the research classified the sub-sectors according to the life cycle stages model, thus, the result shows that the banking sub-sector is the oldest sector in terms of the life cycle stage as 64.3% are located in the maturity stage and 14.3 % in the revival stage. The insurance companies come second in terms of the life cycle stages, as 35.3% are located in the last two stages and most of the diversity financial services companies are located in the second and third stage with 76.5%, and 11.8% respectively. Finally, almost all of the real estate companies have been located in the first stage with 75%.

To sum up, the results from these questions gave an indicator to the newly formed companies which have operated in the Jordanian financial sector in terms of their age since 64.1% of the respondent companies were no older than 15 years and to the simplicity of operations which the

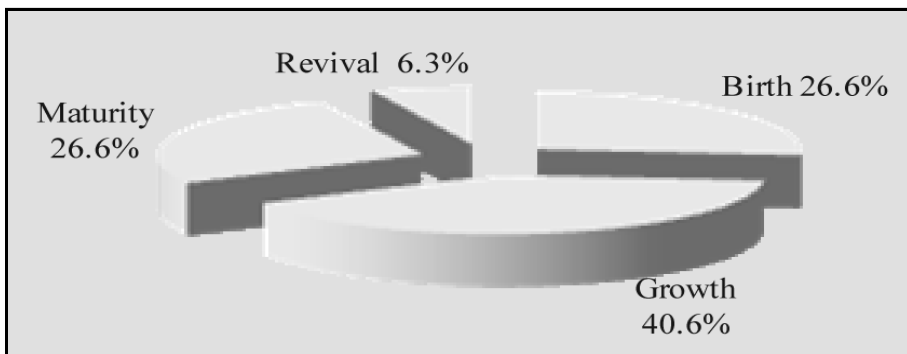


Figure 2: Classification of companies cross life cycle stages

Jordanian financial sector has produced /provided to their customers since 84.4% from the respondent companies produce/provide less than 20 products/services.

The results of the life cycle stages revealed that the Jordanian financial sector is a youth sector since 67.2% of the respondent companies have been located in the first two stages; moreover the banking sub-sector is the oldest sector in terms of the life cycle stages, the insurance sector came second in terms of the life cycle stages, then the diversity financial services sector, finally the real estate sector.

5.2 Sophistication level of MAPs in the Jordanian financial sector

In order to identify the sophistication level of management accounting according to the IFAC model, the research followed (Abdel-Kader and Luther, 2006), whereas the identification aim was carried out through several steps, starting with determining the characteristics of each of the IFAC model stages, the next step is to find out the mean of each of these stages to all respondent companies in order to find out in which of the IFAC stage each company is placed, based on the practices which are used in each of these companies. Followed by labelling each respondent company according to the IFAC characteristics, where the companies matched the practices which belong to the first

stage, they were labelled to the first stage and measured with this criterion against all of the companies.

For instance, the company which gives 2 mean score in the first stage, 3.25 mean score in the second stage, 1.29 mean score in the third stage and 2.07 mean score in the fourth stage, is labelled in the second stage and all the others are labelled using the same method.

Accordingly, the research found that almost all of the sample population are located in the first stage with 64.1%, the second stage is revealed to be 29.7% from the whole sample population, and finally, the last two stages which are considered as the more sophisticated stages found a very low number of companies located in this stage with 3.1% for each.

According to these figures, the research concluded that the Jordanian financial sector is dependent on the traditional MAPs and almost all of the whole sample population are implementing MAPs which provided information for cost determination and financial control and information for management planning and control. In other words, the traditional MAPs are still widespread and highly used in the Jordanian financial sector and are rarely using the more sophisticated or advanced MAPs, for more information see the table and figure below.

Table 2**Classification of the Jordanian Financial Sector Based on the IFAC Model**

Stage	IFAC model stages	Frequency	Percentage
One	Cost determination and financial control	41	64.1%
Two	Information for management planning and control	19	29.7%
Three	Reduction of resource waste in business processes	2	3.1%
Four	Creation of value through effective resource use	2	3.1%
Total		64	100%

Based on the information regarding the importance of each of the MAPs, the research repeated the same steps to find the location of MAPs in the Jordanian financial sector according to the IFAC model stages. Therefore, as shown in the table below, there is a slight movement from stage one to stage two as in the last analysis the proportion in stage one is revealed to be 64.1% but according to this analysis it is revealed to be 39% and stage two in the previous analysis was found to be 29.7% but in this analysis was found to be 28%.

Interestingly, stage three and stage four according to the previous analysis were indicated to be a very low

number of companies, but according to the current analysis there is a remarkable increase in the number of companies now located in the third and fourth stage which, once again they considered as more sophisticated levels by 17.4% and 15.6%.

To sum up, this analysis indicated that in the future phase there would be an improvement in terms of the adoption of more sophisticated or advance MAPs in the Jordanian financial sector which provide information regarding reduction of resource waste in business processes and for the creation of value through effective resource use. See the table below for more illustration.

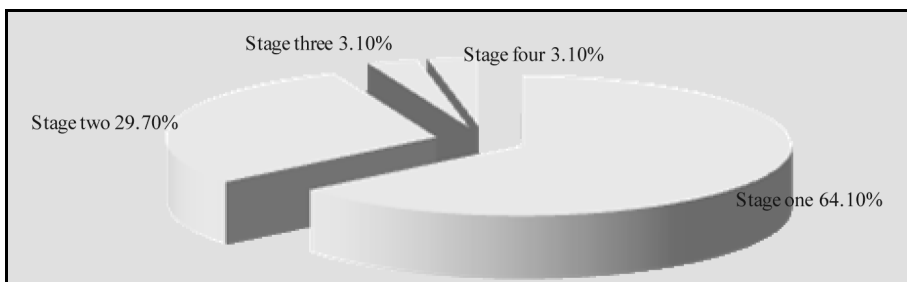
**Figure 3: The Jordanian financial sector based on the IFAC Model**

Table 3
The IFAC Model and the Importance of MAPs

Stage	IFAC stages	Frequency	percentage
One	Cost determination and financial control	25	39%
Two	Information for management planning and control	18	28%
Three	Reduction of resource waste in business processes	11	17.4%
Four	Creation of value through effective resource use	10	15.6%
Total		64	100%

It is worthwhile examining the classification of the IFAC model stages across the life cycle stages, as shown in the analysis of section two, that the 64 companies are divided into four life cycle stages, and according to the tables below the research revealed several results. First, the birth life cycle stage companies are almost located in stage one and two, based on the IFAC model by 94% which is a reasonable conclusion as the birth life cycle stage is characterized to be less sophisticated in terms of operation and less information is needed, and the emphasis is placed on cost determination and financial control and information for management planning and control.

Secondly, the growth life cycle stage was found to have moved a little to adoption practices with emphasis on reduction of resource waste in business processes (stage three of IFAC) by 4%.

Thirdly, the maturity life cycle stage was found to move from the first

of the IFAC stage into the second stage with a small move into the third stage since stage one occurred 47%, stage two reported with 47%, and finally stage three with 6%.

Finally, the revival life cycle stage, reported an adoption of practices from stage four of the IFAC model by 25%. In general the research revealed that the adoption of MAPs move from stage one of the IFAC model into the following stages during the respondents' companies move from the life cycle stage to another, which gives an initial conclusion that the sophistication of MAPs in the Jordanian financial sector associated positively with the life cycle stages variable.

Similarly, the research attempts to find out the classification of the IFAC model stages according to the classification of the Jordanian financial sector which includes four main sub-sectors; banking, insurance, financial diversified services, and real estate.

Table 4
The IFAC Model and Life Cycle Stage Stages

Stages	IFAC stages	Life cycle stages			
		Birth	Growth	Maturity	Revival
Stage 1	Cost determination and financial control	65	77	47	50
Stage 2	Information for management planning and control	29	19	47	25
Stage 3	Reduction of resource waste in business processes	0	4	6	0
Stage 4	Creation of value through effective re-sources use	6	0	0	25

According to the tables below the research found that the banking sub-sector is the more sophisticated in terms of the adoption of MAPs since the banking respondents reported 7% located in stage four of the IFAC stages and 50% in stage two of the IFAC model. The financial diversified services sub-sector comes after the banking sector in terms the sophistication level of MAPs based on the IFAC model, since 6% are located in stage four of the IFAC, 6% in stage

three, 18% in stage two, and finally the rest are located in stage one of the IFAC model. Followed by the insurance sub-sector in terms of the sophistication with 31% located in stage two of the IFAC and the rest located in stage one of the IFAC model.

Finally, the real estate sub-sector is revealed to be the lowest sub-sector in terms of the sophistication level of MAPs, where almost all of the respondent companies are located in stage one and two of the IFAC model by 94%.

Table 5
The IFAC Model and Business Type

Stages	IFAC stages	Jordanian financial sector			
		Banking	Insurance	Financial serv.	Real estate
Stage 1	Cost determination and financial control	43	69	71	71
Stage 2	Information for management planning and control	50	31	18	23
Stage 3	Reduction of resource waste in business processes	0	0	6	6
Stage 4	Creation of value through effective re-sources use	7	0	6	0

5.2 The association between the extent of usage of MAPs and contingency variables

Starting with organization size, the results of testing the first three hypotheses which were related to the organization size, namely; the companies age which is represented by the number of years, the net sale growth which is represented by the percentage of sale growth, and the number of employees, revealed a significant positive association between each of these hypotheses and the extent of usage of MAPs at the 1% level of significance by using Kendall's tau correlation test. According to the result above, there is a positive association between the size and the use of MAPs consistent with the previous researches, which asserted that there is a positive association between the size and the use of MAPs, for instance (Waweru *et al.*, 2004; Haldma and Laats, 2002; Joshi, 2001; and Hoque and Mia, 2001).

In terms of the sophistication of operations, based on Kendall's tau correlation test, the research revealed that there is a significant positive association between the sophistication of operations and the extent of use of MAPs. The result is consistent with previous researches which revealed that for instance, there is a positive association between the sophistication of operations and the use

of MAPs. (Al-Omiri and Drury, 2007; Chenhall 2003; Ittner *et al.*, 1997; and Fry *et al.*, 1995).

The professional competence variable was measured through three variables mainly; the attendance of training courses, number of academic degrees, and number of professional certificates. Starting with the attendance of training courses, the research reveals that there is a weak and insignificant association between training courses and the extent of the use of MAPs, in addition, compared with the previous researches which examined the effect of the training courses upon the use of MAPs. It revealed a contrast result compared with the result of the current research, which indicated that for instance, there is a significant and positive association between training courses and the use of MAPs (Islam and Kantor, 2005; Burns, *et al.*, 2004; Hassall and Joyce, 2001 and Yeung and Armstrong, 2001). A possible explanation of the contrast result, that there is no association between the training courses and the use of MAPs, is that it might be that the training courses which the staff attended were not considered relevant to the contemporary MAPs.

Regarding the association with academic degrees, the result indicated that the effect of academic degrees upon the use of MAPs is very weak,

which means that there is an absence of the role of education in adopting MAPs. The result is consistent with the previous researches which revealed for instance that there is a gap between management accounting education and practice and the significant role that management accounting education could play in order to adopt MAPs. (Woodbine, 2007; Silvola, 2005; Burns *et al.*, 2004; Fowler, *et al.*, 2002; Yeung and Armstrong, 2001; and Hassall and Joyce, 2001).

The utilization of Kendall's tau correlation test indicated that there is a strong and significant positive association between professional certificates and the use of MAPs. This result indicated the important role which professional certificates such as CIMA play in order to facilitate and spread the awareness of MAPs which influence the usage of MAPs. Moreover, the result is consistent with previous researches which emphasize the major role that professional certificates play. (Burns *et al.*, 2004; Hassall and Joyce, 2001; and Forsaith *et al.*, 2001).

On the subject of organization life cycle, the research revealed that there is a strong and significant positive association between the life cycle stages variable and the use of MAPs. The result indicated that the life cycle stage where the company is located is

associated with the extent of usage of MAPs. In turn this result is consistent with the previous studies which examined the influence of life cycle stages on the extent of use of MAPs. These studies revealed that each stage of the life cycle required specific MAPs and reported, for instance, that as a consequence of companies moving forward across the life cycle stages, advances in MAPs tend to be adopted, (Kallunki and Silvola, 2007; Auzair and Langfield-Smith, 2005; Silvola, 2005; Moores and Yuen, 2001 and Miller, Friesen 1984). Finally, in terms of business type, the result revealed that there is a moderate and significant positive association between business type and the extent of use of MAPs. The expected result from this test was made, as the Jordanian financial sector is comprised of four main sub-sectors; banking, insurance, diversified financial services, and real estate, and each sub-sector has a different requirement of information, and a different type of complexity, as banking is the most contemporary and advanced sub-sector followed by insurance, then diversified services, and lastly the real estate sub sector. Therefore, this variable might influence and explain the changes of the level of adoption of MAPs.

Table 6
Summary of the Results from the Kendall's tau Test

Contingency variables		MAPs					
		Costing system	Budgeting system	Performance evaluation	Decision making	Strategic analysis	All MAPs
	Age	*		**	*	**	**
Size	Net sale growth	*	*	**	*	**	*
	Number of employees	*	*	**	**	**	**
Sophistication of operations		*	*	**	**	**	**
Professional competence	Attendance of training courses						
	Academic degrees			**		*	
	Professional certificates	**	*	**		**	**
Life cycle stages		**		**	*	**	**
Business type		*	*	**	*	*	**

*. Correlation is significant at the 0.05 level (1-tailed).

**. Correlation is significant at the 0.01 level (1-tailed).

5.3 The association between the sophistication level of MAPs and the contingency variables.

The results of the test revealed that there is a significant difference among companies in the four stages in association with the age of the company which are represented by the number of years since establishment with P-value (0.042). The result could be explained as companies moving from less sophisticated MAPs for instance stage 1 or stage 2, to more sophisticated stage 3 or stage 4 when considering the age variable. The result is consistent with the previous studies which indicated that age as a contingency variable influences the adoption of more advance MAPs and influences the level of sophistication, (Waweru,

et al., 2005 and Joshi, 2001). The results of the Kruskal-Wallis test reveal that there is no significant difference among companies in the four stages in association to net sale growth whereas the P-value is (0.211).

In terms of the sophistication level of operations, the research revealed that the sophistication level of operations influence the sophistication level of management accounting in the Jordanian financial sector; therefore, the result could interpret companies moving from traditional MAPs to more sophisticated practices when considering the sophistication of operations variable, moreover this result is inconsistent with (Abdel-Kader, Luther, 2008) which indicated that the complexity of processing systems

did not influence the sophistication level of MAPs. However, it is consistent with (Al-Omiri and Drury, 2007 and Fry *et al.*, 1995).

Based on the Kruskal-Wallis test, the research reported that there is significant difference among companies in the four stages in association to training courses as the P-value is (0.046). The result is consistent with the previous studies in terms of the significant role which the training course variable could play in adopting sophisticated MAPs, (Islam and Kantor, 2005; Burns *et al.*, 2004; Hassall and Joyce, 2001 and Yeung and Armstrong, 2001). The research indicated that there is no significant difference among companies in the four stages in association to the academic degrees variable as the P-value is (0.361). Once again, this result is consistent with the previous studies which indicated that there is an existing gap between management accounting education and practice, (Woodbine, 2007; Silvola, 2005; Burns *et al.*, 2004; Fowler *et al.*, 2002; and Yeung and Armstrong, 2001). Therefore, academic degrees did not influence the sophistication level of MAPs.

The research report is based on the results of the Kruskal-Wallis test, which showed that there is significant difference among companies in the four stages in association to the pro-

fessional certificates variable as the P-value is (0.059). This result shed light on the important role of the professional certificates in adopting more sophisticated MAPs, particularly the CIMA certificate, and this result is consistent with previous researches, (Burns *et al.*, 2004; Hassall and Joyce, 2001; and Forsaith *et al.*, 2001).

Concerning organization life cycle, the results of the Kruskal-Wallis test reveal that there is significant difference among companies in the four stages in association to life cycle stages where the P-value is (0.051). The result is consistent with the previous studies which examined the influence of life cycle stages upon the sophistication level and the extent of use of MAPs. These studies revealed that each stage of the life cycle required specific MAPs and reported, for instance, that as a consequence of companies moving forward across the life cycle stages, more sophisticated and advanced MAPs tend to be adopted (Kallunki and Silvola, 2007; Auzair and Langfield-Smith, 2005; Silvola, 2005; Moores and Yuen, 2001; Miller, Friesen, 1984).

Regarding the business type, the research revealed that there is significant difference among companies in the four stages in association to the business type as the P-value is (0.043). The result indicates the significant

Table 7
Summary of the Results from the Kruskal-Wallis Test

Contingency variables		Significant	Not significant
Size	Age	*	
	Net sale growth		*
	Number of employees		*
Sophistication of operations		*	
Professional competence	Attendance of training courses	*	
	Academic degrees		*
	Professional certificates	*	
Life cycle stages		*	
Business type		*	

effect of the business type on the sophistication level of MAPs. It is worth noting that the Jordanian financial sector is comprised of four main sub-sectors; banking, insurance, diversified financial services, and real estate, where the banking sub-sector is the most contemporary and advanced sub-sector followed by insurance, then diversified services, and lastly the real estate sub sector. Therefore, from the results the research revealed that the banking sub-sector is the first sub-sector in terms of adopting more sophisticated MAPs in the Jordanian financial sector.

6. Conclusion

The findings of the research are based on 64 respondents who completed the questionnaire, which gave a

(67.3%) response rate which is considered a high response rate. Concerning investigating the sophistication level of MAPs in the Jordanian financial sector based on the IFAC model, the research revealed that 64.1% of the companies are located in the first stage, 29.7% in the second stage, 3.1% in the third stage, and finally 3.1% of the Jordanian financial sector are located in the fourth stage.

The research revealed that the adoption of MAPs move from stage one of the IFAC model into the following stages during the respondents companies move from the life cycle stage to another, whereas, the birth life cycle stage companies are almost all located in stage one and two based on the IFAC model by 94%, the growth life cycle stage was found to

have moved a little to adoption practices with emphasis on reduction of resource waste in business processes (stage three of IFAC model) by 4%. Thirdly, the maturity life cycle stage was found to move from the IFAC model first stage into the second stage with a small move into the third stage since stage one occurred 47%, stage two was reported to be 47%, and finally stage three was 6%. Finally, the revival life cycle stage, reported an adoption of practices from stage four of the IFAC model with 25%.

In terms of testing the hypotheses which are related to the association between each contingency variables and the extent of usage of management accounting practice in the Jordanian financial sector, the research confirmed and supported seven hypotheses, which included the following variables: age of the company (number of years since establishment), net sale growth, number of employees, sophistication of operations, professional certificates, life cycle stages, and business type. In addition, the research revealed that; attendance of training courses, and number of academic degrees, are insignificant variables with regard to their impact upon the extent of usage of MAPs in the Jordanian financial sector.

The research confirmed six hypotheses which were revealed to influence the

sophistication level of MAPs, namely: age of the company (number of years since establishment), sophistication of operations, attendance of training courses, professional certificates, life cycle stages, and business type.

Regarding the result related to the level of sophistication operations, this was considered as a reasonable result, whereas more companies have a high level of sophisticated operations that will lead to them adopting more sophisticated MAPs and will influence the usage of MAPs as well. However, the research indicated that the simplicity of operations which the Jordanian financial sector had produced /provided to their customers, as 84.4% of the respondent companies produce/ provide less than 20 products/services.

In terms of the professional certificates variable, the research revealed that the possession of those certificates will influence both the usage and the sophistication level of MAPs, which could be explained by the reliance of these certificates on the practical aspects, case studies, and tackling contemporary issues.

Finally, the life cycle stages variables which were considered as a significant variable in terms of both usage and sophistication level of MAPs, is a vital element which could explain the current status of sophistication level of MAPs in the Jordanian financial sector since al-

most all of the Jordanian financial companies are located in the first and second stages of the life cycle stages, which gives an indication that when a company moves forward in the life cycle stage it would adopt more sophisticated MAPs.

As a conclusion, the research provides a broad overview of MAPs in the Jordanian financial sector and reveals that the Jordanian financial sector is using traditional MAPs highly, while rarely using the more sophisticated or advanced MAPs. In terms of IFAC model the research indicates that almost all of the Jordanian financial sector companies are located in the first two stages of IFAC model that in turn reflects the simplicity of MAPs that are used in the Jordanian financial sector. In respect of the influence of contingency variables upon the

extent usage of MAPS the research indicates that age of the company, net sale growth, number of employees, sophistication of operations, professional certificates, information technologies, life cycle stages, and business type are the most variables influence the usages of MAPS. Finally in terms of investigating the effect of the contingent variables upon the sophistication level of MAPs in the Jordanian financial sector the research reveals that age of the company, sophistication of operations, attendance of training courses, professional certificates, department computerisation, network connections, information technologies, life cycle stages, and business type are the variables which influence the sophistication of MAPs in the Jordanian financial sector

References

- Abdel-Kader, M. and Luther, R.,2006. MAPs in the British food and drinks industry. *British Food Journal*, 108(5): 336-357.
- Abdel-Kader, M. and Luther, R.,2008. The impact of firm characteristics on management accounting practices: A UK-based empirical analysis. *British Accounting Review*, 40(1): 2-27.
- Adelegan, O.J.,2000. MAPs in Nigerian companies. Working paper, University of Ibaden, Nigeria.
- Ahmed, A.,2003. The level of IT/IS skills in accounting programmes in British universities. *Management Research News*, 26(12): 20-58.
- Alkizza, A. and Akbar, S.,2005. The impact of business environment on MAPs: Libyan evidence, working paper, University of Liverpool, Liverpool.
- Al-Omiri, M. and Drury, C.,2007. A survey of factors influencing the choice of product costing systems in UK organizations. *Management Accounting Research*, 18(4):399-424.

- Anand, M., Sahay, B.S. and Saha, S.,2004. Activity-based cost management practices in India: An empirical study decision. *International Management & Business*, 32(1):123-152.
- Anderson, S.W. and Lanen, W.N.,1999. Economic transition, strategy and the evolution of MAPs: the case of India. *Accounting Organisations and Society*, 24(56):379-412.
- Auzair, S.M. and Langfield-Smith, K.,2005. The effect of service process type, business strategy and life cycle stage on bureaucratic MCS in service organizations. *Management Accounting Research*, 16(4):399-421.
- Billings S, M. and Capie, F.,2004. The development of management accounting in UK clearing banks, 1920-70. *Accounting Business and Financial History*, 14(3):317-338.
- Burns, J., Hopper, T. and Yazdifar, H.,2004. Management accounting education and training: putting management in and taking accounting out. *Qualitative Research in Accounting & Management*, 1(1): 1-29.
- Cassia, L., Paleari, S. and Redondi, R.,2005. Management accounting systems and organisational structure. *Small Business Economics*, 25(4): 373-391.
- Chan, A.M.Y., Chan, N.P.M. and Lui, K.K.,1997. MAPs and market performance of the Chinese listed companies". *Asian-Pacific Conference on International Accounting Issues*, 9: 171-173.
- Chenhall, R.H.,2003. Management control systems design within its organizational context: findings from contingency-based research and directions for the future. *Accounting Organisations and Society*, 28(2-3):127-168.
- Chenhall, R.H. and Langfield-Smith, K.,1998. Adoption and benefits of MAPs: an Australian study". *Management Accounting Research*, 9(1):1-20.
- Cinquini, L. and Tenucci, A.,2006. Strategic management accounting: Exploring distinctive features and links with strategy, available at: <http://mpra.ub.uni-muenchen.de/212/> edn. Munich Personal RePEc Archive, (accessed 15 May 2008).
- Clarke, P.J.,1992. MAPs in Irish manufacturing businesses: A pilot study. *Proceedings of the Annual Conference- Irish Accounting and Finance Association*, (5th): 17-34.
- Cooper, P.,2006. Adapting management accounting knowledge needs to functional and economic change. *Accounting Education*, 15(3):287-300.
- Davila, T. and Wouters, M.,2006. Management accounting in the manufacturing sector: Managing costs at the design and production stages. In: Chapman, S. et al, eds, *Handbooks of Management Accounting Research*, London: Elsevier: 831-858.
- Drury, C. and Pettifer, D. 1993., MAPs in building societies. *Management Accounting -London-*, 71(3): 36.
- Forde, E.D., Burnett, J. and Devonish, D.,2005. A pilot study on MAPs by Caribbean business. University of the West Indies. Jamaica.
- Forsaith, D., Tilt, C. and Xydias-lobo, M. 2001. The future of management

- accounting: a South Australian perspective. Working Paper, School of Commerce: 1-20.
- Fowler, M., Tan, L.M. and Hawkes, L.,2002. Management accounting education: Is there a gap between teaching and practice?. *Chartered Accountants Journal of New Zealand*, 181(10):58.
- Fry, T.D., STEele, D.C. and Saladin, B.A.,1995. The role of management accounting in the development of a manufacturing strategy. *International Journal of Operations and Production Management*, 15(12):21-31.
- Haldma, T. and Laats, K.,2002. Contingencies influencing the MAPs of Estonian manufacturing companies. *Management Accounting Research*, 13(4): 379-400.
- Hassall, T. and Joyce, J.,. 2001. Approaches to learning of management accounting students. *Education and Training*, 43 (2/3): 145-152.
- HOPPER, T.,1999. Postcard from Japan: a management accounting view. *Accounting Auditing and Accountability Journal*, 12(1): 58-68.
- Hoque, Z. and Mia, L.,2001. Market competition, computer-aided manufacturing and use of multiple performance measures: an empirical study. *British Accounting Review*, 33(1),: 23-46.
- Hutaibat, K.A.,2005. MAPs in Jordan - a contingency approach. PhD. University of Bristol, Bristol.
- Hyvonen, J., 2005. Adoption and benefits of management accounting systems: Evidence from Finland and Australia. *Advances in International Accounting*, 18: 97-120.
- International Federation of Accountants,,1998., *International Management Accounting Practice Statement: management Accounting Concepts*, New York, NY.
- Islam, M. and Kantor, J.,2005. The development of quality MAPs in China. *Managerial Auditing Journal*, 20(7): 707-724.
- Ismail, T.H.,2007., Performance evaluation measures in the private sector: Egyptian practice. *Managerial Auditing Journal*, 22 (5): 503-513.
- Ittner, C.D., Larcker, D.F. and Randall, T.,1997., The Activity-Based Cost Hierarchy, Production Policies and Firm Profitability. *Journal of Management Accounting Research*, 9: 143-162.
- Joshi, P.L.,2001. The international diffusion of new MAPs: the case of India. *Journal of International Accounting Auditing and Taxation*, 10 (1): 85-109.
- Kallunki, J. and Silvola, H.,2007. The effect of organizational life cycle stage on the use of activity-based costing. <http://www.science-direct.com/science/article/B6WMY-4R172T7-1/2/417f94eb2d8279b700-b7edfdb0f81286> edn. Elsevier.
- Kattan, F., Pike, R. and Tayles, M.,2007. Reliance on management accounting under environmental uncertainty: The case of Palestine. *Journal of Accounting and Organizational Change*, 3(3): 227-249.
- Kowalak, R.,2007. Implementation of best practices in management accounting, working paper, Prace

- Naukowe- Akademii Ekonomicznej Imienia Oskara Langego we Wrocławiu, (1178): 63-69.
- Lamminmaki, D. and Drury, C.,2001. A comparison of New Zealand and British product-costing practices. *International Journal of Accounting*, 36(3): 329-347.
- Lin, Z.J. and Yu, Z.,2002. Responsibility cost control system in China: the Han Dan experience. *Asia Pacific Business Review*, 9(1): 59-78.
- Maher, M.W.,2000. Management accounting education at the millennium. *Issues in Accounting Education*, 15(2): 335-346.
- Miller, D. and Friesen, P.,1984. A longitudinal study of the corporate life cycle. *Management Science*, 30(10): 1161-1183.
- Ministry of Industry and Trade,2007., Jordan. Available: <http://mit.gov.jo> [1/4, 2007].
- Moore, K. and Yuen, S.,2001. Management accounting systems and organizational configuration: a life-cycle perspective. *Accounting Organizations and Society*, 26(4-5): 351-389.
- Otley, D.T.,1980. The contingency theory of management accounting: achievement and prognosis. *Accounting Organizations and Society*, (4): 413-428.
- Rezaee, Z., Szendi, J.S., Shum, C. and Elmore, C.J.,1995. Trends in management accounting in the Asian Pacific region. *International Advances in Economic Research*, 1(2): 149-155.
- Silvola, H.,2005. MAPs. (A contingency perspective based on the organizational life cycle, venture capital investors and the education of CEO), research paper. University of Oulu, Oulu- Finland.
- Sulaiman, M.B., Ahmad, N.N. and Alwi, N.,2004. MAPs in selected Asian countries: A review of the literature. *Managerial Auditing Journal*, 19(4): 493-508.
- SZYCHTA, A.,2002. The scope of application of management accounting methods in Polish enterprises. *Management Accounting Research*, 13(4): 401-418.
- TRIENT, S.V. and ELSHAHAT, M.F.,2007. The use of costing information in Egypt: a research note. *Journal of Accounting and Organizational Change*, 3(3): 329-343.
- Waweru, N.M., Hoque, Z. and Uliana, E.,2005. Management accounting change in South Africa: Case studies from retail services. *Accounting, Auditing & Accountability Journal*, Vol17(5): 675-704.
- Woodbine, G.F.,2007. Accounting education in modern China: an analysis of conditions and observations. *Asian Review of Accounting*, 15(1):62-71.
- Wu, J. and Drury, C.,2007. An exploratory study on the environmental factors influencing the adoption of MAPs in Chinese SOEs and JVs. *Journal of Technology Management in China*, 2(1): 54-70.
- Yeung, V.W.S. and Armstrong, R.W.,2001. The effect of education level on the adoption of total quality management principles and practices among Hong Kong managers. *International Journal of Management*, 18(2): 213-221.

الملخص

العوامل المؤثرة على استخدام تطبيقات المحاسبة الإدارية في المنشآت المالية الأردنية: دراسة استكشافية

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تهدف هذه الدراسة إلى الاطلاع على الدور الحالي للمحاسبة الإدارية، عن طريق تحديد تطبيقات المحاسبة الإدارية التي تستخدمها المنشآت المالية الأردنية، وتحديد مستوى تطور تبني هذه التطبيقات عن طريق استخدام نموذج الاتحاد الدولي للمحاسبين. ولتحقيق هذه الأهداف تم استخدام أسلوب الاستبانة لجمع البيانات؛ حيث تم استعادة ٦٤ استمارة صالحة للتحليل، بمعدل استجابة ٦٧,٣٪. وقد استخدم كثير من التحليلات الإحصائية مثل تحليل الارتباط والاختبارات الإحصائية متعدد المتغيرات. وقد توصل الباحثان إلى أن تطبيقات المحاسبة الإدارية التقليدية لا تزال تستخدم إلى حد كبير، ونادراً ما يتم استخدام التطبيقات الأكثر تطوراً، حيث تبين أن ٦٤٪ من عينة الدراسة تقع في المرحلة الأولى و ٢٩,٧٪ من الشركات تقع في المرحلة الثانية استناداً إلى نموذج الاتحاد الدولي للمحاسبين، وهو ما يدل على بساطة المعلومات التي يحتاجون إليها. وهذا، بدوره، يعكس بساطة التطبيقات المحاسبية الإدارية التي تستخدم في القطاع المالي الأردني.

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أكاديمية - فصلية - محكمة تصدر عن مجلس النشر العلمي - جامعة الكويت

بحوث باللغة العربية

بحوث باللغة الإنجليزية

مناقشات وندوات

عروض الكتب الجديدة

تقارير ومؤتمرات

مجلس
النشر
العلمي

رئيسة التحرير

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