

**The Mediating Role of Performance Measurement Systems
in the Relationship between Contingent Variables and
Organizational Performance in Jordanian Financial
Companies: A Contingency Perspective**

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Received: 29/11/2016

Accepted: 26/02/2017

Abstract

This study draws on the contingency theory to examine the mediating role of performance measurement systems (PMS) in the relationship between Contingent Variables and Organizational Performance in Jordanian Financial Companies. The responses of 88 heads of accounting departments were drawn from Jordanian financial companies; the study used a Partial Least Square (PLS) to analyze and test the hypotheses of this study. The results of the analysis showed that the perceived environment uncertainty, competition, information technology have a significant positive relationship with organizational performance. The study also confirmed that there is a role of (PMS) on the Relationship between both the (perceived environment uncertainty and information technology) and organizational performance, on the other hand, there is no role of (PMS) on the Relationship between competition and organizational performance. This study recommends that the managers of Jordanian financial companies to develop performance measurement systems in their companies continuously, in order to implement, apply and control their strategies as well as improve their organizational performance.

Key Words: *Contingency theory, Performance Measurement Systems, Organizational Performance, Jordanian Financial Companies.*

المخلص

اعتمدت هذه الدراسة على النظرية الشرطية بشكل أساسي، حيث كان الهدف منها التعرف على دور نظم قياس الأداء كمتغير وسيط في العلاقة بين المتغيرات الشرطية والأداء التنظيمي في الشركات المالية الأردنية. تكون مجتمع الدراسة من جميع الشركات المالية الأردنية والبالغ عددها (١٠٤) شركات، ولأغراض تحقيق أهداف هذه الدراسة تم تطوير استبانة لقياس متغيرات هذه الدراسة بناء على دراسات سابقة ذات صلة بموضوع الدراسة، حيث تم توزيعها على رؤساء أقسام المحاسبة في

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هذه الشركات. تم استرداد (٩٣) استبانة كان منها (٨٨) استبانة صالحة للتحليل، ولغايات تحليل واختبار فرضيات الدراسة تم استخدام برنامج (PLS)، حيث اظهرت نتائج التحليل ان هنالك علاقة ايجابية بين المتغيرات الشرطية (عدم التأكد البيئي، المنافسة، تكنولوجيا المعلومات) والأداء التنظيمي للشركات المالية الأردنية كذلك أكدت النتائج أن هنالك دور لنظم قياس الأداء كمتغير وسيط في العلاقة بين كل من (عدم التأكد البيئي، تكنولوجيا المعلومات) والأداء التنظيمي، كما بينت انه لا يوجد دور لنظم قياس الأداء كمتغير وسيط في العلاقة بين المنافسة والأداء التنظيمي في هذه الشركات. توصي هذه الدراسة مدراء الشركات المالية الأردنية بتطوير أنظمة قياس الأداء في شركاتهم باستمرار وذلك بهدف تنفيذ وتطبيق والرقابة على استراتيجياتها وكذلك تحسين ادائها التنظيمي الذي تسعى له.

الكلمات المفتاحية: النظرية الشرطية، المتغيرات الشرطية، نظم قياس الأداء، الأداء التنظيمي، الشركات المالية الأردنية.

1. Introduction :

Scholars have recently indicated that organizations today could benefit from the modern management accounting systems to enable their adaption towards the organizational and social environment that changes rapidly (Cavalluzzo & Ittner, 2004; Emsley et al., 2006; Watts et al., 2014). According to Watts et al. (2014) and Hammad et al. (2013), the provision and type of modern management accounting system is a crucial decision for many companies. The selection of an inappropriate system may lead to a negative effect on the strategic or operational performance (Burns & Vaivio, 2001; Coad, 1999; MacDonald & Richardson, 2002), and to huge financial problems of the company (Fagbemi et al., 2016). The measures of balanced scorecard-type performance are perceived by some to generate applicable information that generates unremitting signals to senior executives and other personnel on what is the most crucial in their day-to-day organizational decision-making and operational activities (Drake & Haka, 2008; Moers, 2006; Pais, 2014).

A system of performance measurement allows decisions of information to be made and the actions to quantify the past actions in terms of efficiency and effectiveness by way of selection, merger, separation, analysis, interpretation as well as the distribution of data that are deemed as appropriate (Neely, 1998). Moreover, it is used to examine the functionality of the system as per the requirements as well as the overall effectiveness of the system (Haas & Yorio, 2016).

However, the subjects of PMS and strategies, including the requirement for alignment of what and the way it is being attained by the company, are still insufficiently explored (Chenhall, 2005; Chenhall et al., 2003; Haas & Yorio, 2016; Ittner et al., 2003; Malina & Selto, 2004).

The factors impacting the relative weights of the non-financial and financial approaches used to examine the compensation benefits of Chief Executive Officer (CEO) were examined by Ittner et al. (1997). The authors concluded that companies that employ the non-financial measures combined with the strategic decisions experience a change and growth. However, Kennerley and Neely (2002) stated that albeit the importance of Performance measurement systems in the efficient and effective organization management, there are still criticisms and debates on the issue. Further, Govindarajan (1984) indicated environmental uncertainty as a key element impacting the adoption of style contingent performance assessment. Simply put, within the high environmental uncertainty setting, information, including performance benchmarks, is grounded on more wide-ranging external and future oriented, non-financial aspects while uncertainty will be managed by the qualitative nature.

The environment today is marked by aggressive competition. As such, organizations could benefit from a system encompassing a multidimensional performance measurement that could offer consistent signals to these organizations on what is most crucial in their daily activities and where their efforts must be concentrated on (Hoque et al., 2001). In fact, there is a positive relationship between the usefulness of management accounting information and market competition intensity (Mia & Clarke, 1999).

Via the information technology, firms could establish their systems of management accounting. As argued by Olsen and Cooney (2000), firms have to deal with the challenge in the integration information technology into their practices of accounting. Granlund and Mouritsen (2003) indicated that information technology usually encompasses the financial ledgers and reporting systems of firms. There has also been a widespread suggestion that information technology and management accounting systems exhibit crucial linkages (Ittner & Larcker, 2001; Chenhall, 2003; Chapman and Chua, 2000). As indicated by Burns and Vaivio (2001), advances in information technology have led to innovation and transformation of information in terms of its collection, measurement, analysis and communication inside organization and between organizations. Also, there

have been implementations of innovations of information technology including the internet, interchange of electronic data, e-commerce, enterprise resource planning systems, supply chain management and customer relationship management and for management accounting systems, these offer a rich source of information (Burns & Vaivio, 2001). However, empirical evidence on the linkage between management accounting systems and information technology is still lacking. Meanwhile, the impacts of integrated, enterprise-wide information systems on management accounting have been examined by Granlund and Malmi (2002) and it was deduced that enterprise resource planning projects caused fairly minimal changes within management accounting and control procedures.

There are a lot of studies that has been done on PMS in the manufacturing sector in developed countries. Due to the lack of research on management accounting in the service sector (Chenhall, 2003; Hussain, 2000; Modell, 1996; Rasid et al., 2011; Sharma, 2002), particularly the financial services sector in developing countries , except study by Rasid et al. (2011) who's examine the MAS as a mediating role between contingent variables (perceived intensity of market competition, innovativeness and technological advancement) on organizational performance in Malaysian financial sector, and study by Upadhaya et al. (2014) who's examine the associations between PMS and organizational effectiveness in Nepal financial institutions. As well study by Al-fadel and Chlaihawi (2014) who's examine the impact of the Contingent factors on performance measures diversity, and the purposes for the use of performance measures, in addition to clarify the concepts of the contingency theory and their role in the design of management accounting systems in Iraqi market for securities , Similarly, study by Al-Mawali (2015) who examine the perceived environmental uncertainty as a moderated the relationship between strategic management accounting usage and organizational performance in Jordanian listed companies.

The primary aim of the current paper is to examine the mediating role of PMS in the relationship between perceived environment uncertainty, competition and information technology on organizational performance in financial institutions in Jordan.

The rest of the paper is organized as follows: The problem statement, importance of this study and the literature review section which provides a detailed discussion on the previous literature which is then followed by the hypotheses development and explanation of research methodology used.

Subsequent section presents the results and discussion and the last section concludes the study.

1.2 Problem of the Study:

The contingency theories advocate that a higher degree of fitness between the PMS and the environment lead to higher performance. However, Ittner (2008) suggested that the organization's resources and the environment in which PMS operates for competitive advantage are determinable. Therefore, it is of immense importance to the impact of PMS on high-quality decisions making which enhances the firm performance (Chenhall, 2003).

In addition, the previous studies have indicated that the Performance Measurement System (PMS) imparts positive and significant impact on organizational performance (Al-Mawali 2015; Upadhaya et al. 2014; Rasid et al. 2011; Henri, 2006; Ittner et al., 2003).

On other hand, the structure and content of the PMS are influenced by the environment factors in which it operates (Bourne et al, 2005). Moreover, these factors are categorized as internal factors which are related to the organization context and external factors those are related to environment and industry characteristics (Franco-Santos & Bourne, 2005).where many studies indicated that the Contingent factors affecting the design and effectiveness of the Performance Measurement System (Al-Fadel and Chlaihawi 2014; Wang and Huynh, 2013 ; Schulz, et. al , 2010; Abdel-Kader and Luther , 2008; Chenhall, 2007; Hoque , 2005; Hussain and Gunasekaran, 2002; Hoque et al, 2001).

There is a lack of studies has been done on performance measures systems and organizational performance in developing countries compared with developed countries particularly in the financial services sector. On other hand, there are still debates about the role of PMS on organizational performance, where the selection of an inappropriate system may lead to a negative effect on the strategic or operational performance and to huge financial problems of the company (Hammad et al., 2013; Watts et al., 2014; Fagbemi et al., 2016). Add to this, studies on the factors which lead to effective of PMS and increase of organizational performance are still lacking and unclear.

From the above and adopting on contingency theory which state that contingent variables as a important factors that have impact on PMS and OP. We can summarize the problem of this study through focus on answering the following question: What is the Role of Performance Measurement System on the

Relationship between Contingent Variables and Organizational Performance in Jordanian Financial Companies?

1.3 Importance of the Study

The importance of this study reflected the importance of performance (financial and non financial) as fundamental and important dimension for many organizations in general, and the financial sector in particular, as well as the importance of this study also reflected the role played by Performance Measurement System on high-quality decisions making which enhances the financial and non financial performance in organizations. In addition to the importance of the Contingent variables that affect the design and effectiveness of Systems in financial companies to improve the overall performance. Moreover, the financial sector exhibits a key position within the Jordanian stock market; this sector is the most developed as well as the largest services sector in the economy. The sector is also attracting noticeable private investments from within the country and overseas as a result of a great deal of deregulation (Darwish et al., 2015). Further, it contributes to the total GDP more than any other sector, thus, it is considered the largest sector of the Jordanian economy (Bahous, 2006). Finally, According to the knowledge of researcher, this study is considered the first in Jordan, which discussed the Role of Performance Measurement System on the Relationship between Contingent Variables and Organizational Performance in Jordanian Financial Companies.

2. Theoretical Framework and Prior Studies:

2.1 Contingency Theory Perspective:

The contingency theory offers a convenient theoretical framework for countless studies in the domains of behavior, risk management and organizational structure (Chenhall, 2003, 2006; Miner, 2015; Taylor & Taylor, 2014). This theory works based on the principle that the appropriateness of managerial techniques or systems is contingent upon the setting of that organization (Ismail et al., 2015). “The continuous stream of empirical articles signals the importance and vitality of this research area” (Gerdin & Greve, 2004, p. 303). As indicated by (Chapman, 1997), the comprehensive research generated a series of article reviews which offer a general outlook on the contribution made by the contingency theory in the domain of accounting in general, and particularly in MA. A review by Gerdin and Greve (2004) results in a classificatory framework for drawing contingency fit in diverse forms. As argued by the authors, it is important that researchers link their studies that are empirical contingency-based to studies that employ the same sets of

contingencies. It should be noted that in their study, Gerdin and Greve (2004) were mainly concentrating on the interaction of MA with the strategy that can similarly be employed to other styles of contingent studies. The empirical contingency-based research as far back as the 1980s was reviewed by Chenhall (2003) and he came to a conclusion that scholars have to concentrate on contemporary dimensions of management control systems (MCS), context and organizational and social outcomes so that they could sustain the applicability of MCS contingency-based research.

2.2 The Relationship between Performance Measurement System, Contingent Variables, Organizational Performance:

2.2.1 Perceived Environment Uncertainty (PEU) and Organizational Performance (OP):

There are three characteristics of environmental uncertainty (Lester & Parnell, 2007). The simple to complex continuum is the first characteristic in which complex refers to numerous while simple refers to limited external influencing factors. Second feature refers to as the change perceived to take place slowly or quickly i.e. stable-unstable. Last, it can be considered as a function of availability of quality information to the decision makers (Starbuck, 1976).

The perceived environmental uncertainty, according to Wang and Huynh (2013), Duncan (1972) and Lawrence and Lorsch (1986) is recognized to be a key contextual variable. Duncan (1972) concludes that the variable i.e. customers, competitors, suppliers, technologies and the social-political issues are also known as the external environmental uncertainty. From the viewpoint of Miles et al. (1978), the perceptions of the managers pertaining to the environmental uncertainty are recognized by the predictability of business conditions in the environment of an organization. Jusoh (2010) explains it as the capability of an organization to predict the future external environmental situations.

According to Isabella & Waddock (1994), top management assurance against strategic environmental assessment and decision and organizational performance exhibit a positive association. Further, the contingency theory proposes that the firms when successfully achieve a balance between environmental uncertainty and organizational structure display higher results in terms of their organizational performance (Ellis et al., 2002; Huynh & Yaling, 2013; Schlevogt & Donaldson, 1999; Sila, 2007).

2.2.2 Performance Measurement Systems (PMS) and Perceived Environment Uncertainty (PEU):

The complexity of an environment is considered as the range of environment and the heterogeneity of the organizational activities. The decision markers fail to make right choices and are uncertain regarding the consequences of their decisions because they lack true information as a result of environmental uncertainty confronted by the organization. The organizations facing tough competition are generally dependent more on information and hence, they incur more costs (Davenport & Prusak, 1998). This is the reason that the higher level management is found to be under pressure while making right decisions regarding the performance of the manager in terms of quality, delivery and budget targets, which ultimately enhance their demand for the more extensive controls such as PMS (Kruis & Widener, 2014). In addition, Masrek et al. (2009) highlights the association between the importance of utilization of information system and the environmental uncertainty. Later, Ashill and Jobber (2010) supported that the use of marketing information systems is influenced by the environmental uncertainty perceptions. Likewise, Ibadin and Imoisili (2010) and Ajibolade et al. (2010) confirmed the association between the accounting system design and perceived environmental uncertainty.

2.2.3 Intensity of Competition (IC) and Organizational Performance (OP):

The market share and the profits of the companies increase with an increase in competitive intensity. The companies are found to be under pressure as a result of intensive competition and an unprecedented pace of technological change (Bettis & Hitt, 1995). Therefore, they are always looking and/or discovering new competitive opportunities to gain superior performance (Kirzner, 2015). Companies that recurrently succeed to identify the new ways of delivering superior value are better positioned in terms of the competitive advantage. By the time the actions taken by their rivals, they are able to explore new opportunities and temporary advantages and hence they stay ahead of their competitors (D'Aveni & Gunther, 2007). Therefore, Smith et al. (2001) and Andrevskiet al. (2014) conclude that the performance of a company is dependent on a number of consecutive competitive actions taken over time. Because, each new competitive action taken by the company erodes the market position of the rivals by providing a temporal advantage (Young et al., 1996), therefore, it keeps the companies ahead than their

competitors. This suggests that the organizational performance improves with an increase in competition (Mia & Clarke, 1999).

2.2.4 Intensity of Competition (IC) and Performance Measurement Systems (PMS):

Prior researches claim that the performance measures and business strategy exhibit some kind of relationship (Teeratansirikool et al., 2013) because it plays a vital role in translating a strategy into an action (Kaplan and Norton, 1996). Likewise, McAdam and Bailie (2002) argues that the performance measures coupled with strategy are more effective. Maltz et al. (2003) find that the firm's strategy highly influence the set of performance measures. Moreover, studies for example, Tapinos et al., (2005) have confirmed the supporting role of performance measurement in strategic planning. Hill (2000) documented that an increased competition in the hospital sector and the adoption of a costing system exhibit a positive relationship. Likewise, Lee and Yang (2011) stated a positive association between the PMS and performance of the highly competitive firms i.e. firms with a strong competition would have stronger motivation for the usage of PMS containing causal models to obtain such clearer causal relationships.

2.2.5 Information Technology (IT) and Organizational Performance (OP):

The capability of a firm in terms of information technology (IT) is to possess IT infrastructure, IT enabled intangibles (customer orientation, knowledge assets, and synergy) and human IT resources consisting of managerial and technical IT skills (Bharadwaj, 2000). Business performance of the companies can be enhanced with an adoption of IT to reduce costs, increase revenues, or both (Porter, 2001). First of all, the adoption of IT can help in reduction of marketing costs by increasing customer loyalty and switching costs (Chae et al., 2014). Secondly, the product differentiation can be increased through information technology i.e. using web technologies which ultimately increases the profits or revenues (Hitt & Brynjolfsson, 1996). Some financial institutions such as banks, for example, have designed financial and information services to make a web site that helps the institutions to differentiate their products and services (Tan & Teo, 2000). This is how they can earn more profits through referrals, advertising and commissions from their web partners. Moreover, the companies can obtain valuable resources i.e. patents which in turn can increase their revenues (Fahy & Hooley, 2002). Based on above arguments, information technology have ability in improving performance (Granlund & Malmi, 2002).

2.2.6 Information Technology (IT) and Performance Measurement Systems (PMS):

The third factor having an effect on PMS in this study is information technology. The power of information technology is undoubtedly is the performance measurement revolution driver (Neely, 1999). The use of information technology has not only made the collection and analysis of data easier, but also offer various ways to review the data and then take actions. Undoubtedly, it not only helps in collection but also in analysis and presentation of data. During recent years, the demand for executive information systems and management information systems has grown rapidly. Certainly, the numerous vendors who sell such software packages now design and link the features of their products offerings to balanced measurement frameworks, for example, the balanced scorecard of Kaplan and Norton (Neely, 1999).

Additionally, Garengo et al. (2005) argues that the organizations in order to meet the market needs, are now improving their technological and technical abilities. However, they still adopt low formalized managerial practices and PMS is especially crucial for supporting the needed managerial development to deal with the enhancing complexity. Further, information technology and performance management systems exhibit crucial associations (Chenhall 2003; Ittner & Larcker, 2001; Chapman & Chua, 2000). The impacts of integrated, enterprise wide information systems on management accounting have been examined by Granlund and Malmi (2002) and they found that management accounting is impacted by enterprise resource planning systems.

2.2.7 Performance Measurement Systems (PMS) and Organizational Performance (OP):

Performance measurement derives from the competitive strategy and is considered a key factor (across a range of crucial success factors) to the survival of a business (Teeratansirikool et al., 2013). According to Dixon (1990), a set of mutually reinforcing signals (provided by the performance measures) helps in drawing the attention of the managers towards the significant strategic areas that translate to organizational performance outcomes.

They also help in directing the behavior of the managers to attain the important objectives of the organizations. The organizational processes can also be improved through performance measures by concentrating on business

processes that deliver value to customers (Neely & Adams, 2001; Bititci et al., 1997) and eventually exhibit a significant positive association with the firm performance (Teeratansirikool et al., 2013; Joiner et al., 2009; Fleming et al., 2009), organizational excellence (Moullin, 2007) and competitive advantage (Mohamed, 2016). Keeping in view the all types of performance measures, a firm's long-term performance can be better predicted using nonfinancial measures (Kaplan & Norton, 2001; Hoque, 2004). On the other hand, Perera et al. (1997) concluded that in firms that follow a "customer-focused" manufacturing strategy, the perceived firm performance and the use of non-financial performance measures exhibit no relation. The argument was also supported by the studies of Teeratansirikool et al., (2013) and Neely's (2008) who report no association between performance and non-financial measures. Jusoh et al. (2008) in their study find that the firm performance is not significantly affected by the use of customer, and financial measures. Nevertheless, the use of financial measures is still there, particularly in unstable environments (Teeratansirikool et al., 2013; Radnor et al., 2005).

2.2.8 Perceived Environment Uncertainty, Intensity of Competition, Information Technology and Organizational Performance (OP) through the use of (PMS):

The contingency theories advocate that a higher degree of fitness between the PMS and the environment lead to higher performance (Chenhall, 2003). However, Ittner (2008) suggested that the organization's resources and the environment in which PMS operates for competitive advantage are determinable. Therefore, it is of immense importance to study the impact of PMS on high-quality decisions making system which enhances the firm performance (Chenhall, 2003). Where, the structure and content of the PMS are influenced by the environment in which it operates (Bourne et al., 2005). Moreover, these factors are categorized as internal factors which are related to the organization context and external factors those are related to environment and industry characteristics (Franco-Santos & Bourne, 2005).

3. Research Model :

Notwithstanding the direct relationships outlined above (PEU and PMS/OP, IC and PMS/OP, IT and PMS/OP, PMS and OP), this study attempts to contribute to a stream of literature use a contingency framework to investigates of predictors and consequences of PMS. In general, it investigates the role of PMS on the relationship between (a) perceived environmental uncertainty and organizational performance (b) intensity of competition and organizational performance (c) information technology and organizational performance. Based on the prior discussion, the conceptual model is shown in figure (1) below:

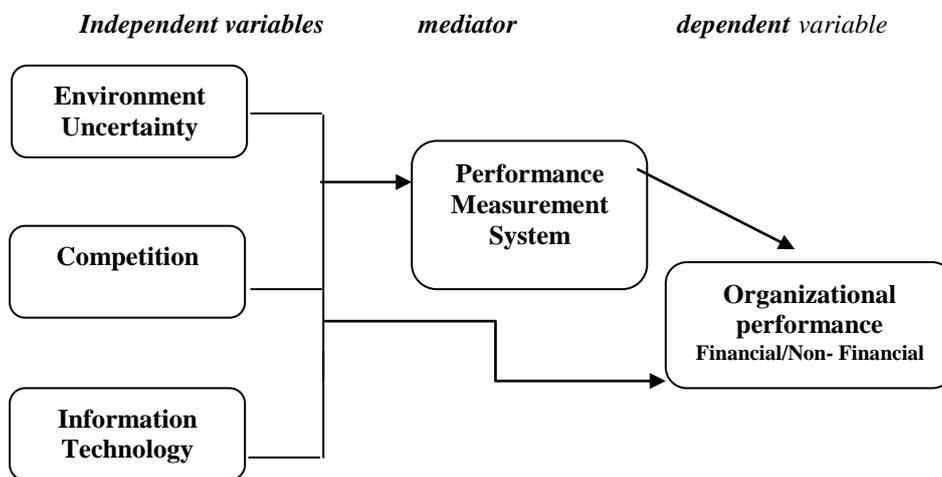


FIGURE (1): Research framework model

4. Hypotheses Development :

Based on the earlier discussion and results from prior studies, the hypotheses can be formulated as below:

Hypothesis 1: Perceived environment uncertainty (PEU) will have a positive relationship with organizational performance (OP).

Hypothesis 2: Perceived environment uncertainty (PEU) will have a positive relationship with performance measurement systems (PMS).

Hypothesis 3: Intensity of competition (IC) will have a positive relationship with organizational Performance (OP).

Hypothesis 4: Intensity of competition (IC) will have a positive relationship with performance measurement systems (PMS).

Hypothesis 5: There Information technology (IT) will have a positive relationship with organizational Performance (OP).

Hypothesis 6: Information technology (IT) will have a positive relationship with performance measurement systems (PMS).

Hypothesis 7: Performance measurement systems (PMS) will have a positive relationship with organizational performance (OP).

Hypothesis 8: There is a positive relationship between perceived environment uncertainty and organizational performance through the use of (PMS).

Hypothesis 9: There is a positive relationship between intensity of competition (IC) and organizational performance (OP) through the use of (PMS).

Hypothesis 10: There is a positive relationship between information technology and organizational performance through the use of (PMS).

5. Methodology :

In this section we discuss the sources of our data, the data collection procedures and the method of analysis

5.1 Population of the Study :

In order to ascertain the mediating role of performance measurement system on the linkage between contingent variables and organizational performance in the financial sector in Jordan, self-administered questionnaire is used in this study. The financial sector in Jordan has been selected as the population under study. Within this sector, there are (104) ASE listed firms operating in banking, insurance, brokerage, real estate as well as other financial services (Darwish et al., 2015). Moreover, the selection of the financial sector has been made by considering

various aspects i.e. increasing importance in many national settings and pioneer in innovation that ultimately impact the performance as well as the working of the other firms across the country (Froud et al., 2006; Erturk et al., 2008; Darwish et al., 2015).

5.2 Procedure :

This study has been carried out through a questionnaire based survey including direct interviews, emails, and couriers during 2016. We administrated the survey while contacting directly to accounts department of the targeted companies. After selecting the companies we then identified the key personnel's from the each organization to fill the given questionnaire. However, few respondents respond through emails and couriers as well. Our research design enabled us to target potential respondents those possess specific knowledge as well as the substantive organizational level knowledge that pertains to PM systems. Most of the targeted managers belong to middle-level management and their appropriate information was given by their respective head of the departments. The respondent selection criteria assured the appropriateness of the target population to answer the required questions.

Moreover, in order to achieve the maximum respond rate we informed the target respondents by phone and emails before the date of interviews / questionnaire meeting to assure their availability. Our specific approach i.e., to seek more involvement and commitment of the responded is coincides with the reported literature such as (Baldauf et al., 1999). The survey questionnaire was preceded by a short and precise introductory letter which clarifies the objective of the research and responded privacy. Following this, 104 Questionnaires were circulated to each selected company's head of accounting department. Out of the 104 questionnaires, 88 were valid for analysis (84% response rate). The demographic information and data for each subject has been collected through specific research question which then assessed to satisfy the research objective. This provides

significant insights to evaluate an object from the given data and to interpret the result. These demographic variables are; gender, age, experience and type of company. The majority of returned questionnaires were from Brokerage companies as seen in [Appendix A](#). The descriptive statistics (means and standard deviations) of responses to each question is presented in [Appendix B](#).

5.3 Pilot Study :

A pilot study was conducted where the questionnaire was distributed among (25) companies in the numerous Jordan governorates. Then, the questionnaire was modified to assure appropriateness and validity based on the outcomes of the pilot study.

5.4 Measures :

All measures used in the study had been widely adopted in previous studies.

Environment Uncertainty: Environmental uncertainty was assessed using nine items based on Abdel-Kader and Luther (2008) , Govindarajan, (1984), and Al –Mawali (2015) on seven-point Likert-type scale.

Competition: Competition was assessed using six items, on seven-point Likert-type scale. The questions was developed based on Hoque, Mia, and Alam (2001).

Information Technology: Information technology was assessed using six items also based on Hyvönen (2007), Al-Shbiel and Al-Olimat, (2016) on seven-point Likert-type scale.

Performance Measurement System: 9 items measured financial and non-financial performance measures. These items were developed from Joshi (2001), Gomes, Yasin, and Lisboa (2004) and Abdel-Maksoud, Asada, and Nakagawa (2008), on seven-point Likert-type scale.

Organizational Performance: In order to empirically assess the performance construct, we included two different dimensions. financial and non-financial, where measured using eight items on seven-point Likert-type scale. The questions was developed based on Hoque (2004), Hoque (2005) , Jusoh and Parnell (2008) AL-khazaeleh and Al-Shbiel (2017).

5.5 Analytic Approach :

In order to test the ten hypotheses simultaneously, the study used the structural equation model (SEM). Contrarily to previous studies, factors are not the average of the items of each area, but instead, each item is assigned a weight through factor analysis (see Table 1). Both the reliability and validity of the dimensions are assessed using the Cronbach's α , which represents the internal consistency of an item for the given sample. Kolmogorov-Sminov test for testing the variables' normality (see Table 2). As a second step the same factor analysis procedure has been used to assess if the variables of Environment Uncertainty, Competition and Information Technology are eligible to sufficiently explain the latent constructs of PMS and OP (see Table 3,4,5). The next step has consisted on assessing the goodness of fit of the measurement model (see Table 6), and finally the structural equation model has been conducted using the maximum likelihood method (see Tables 7 and 8).

6. Result and Discussion :

Convergent validity was evaluated using the exploratory factor analysis. This study employed the KMO index and the Bartlett test. KMO demonstrates sampling adequacy. The KMO and Bartlett's test out comes indicate that the values of both indicators are at an appropriate level where the KMO value for each variable is higher than 0.5 while the Bartlett's test significance is lower than 0.05. Following the affirmation of the suitability of sample size, items' homogeneity was evaluated. Here, items with value of less than 0.3 were omitted from the study. Details for these items are presented in Table (2).

**Table No.(1):
Results of Exploratory Factor analysis of Questionnaire Items**

Variable	Items	Factor load	Significance of Bartlett's test	Degree of Freedom	Approximate 2%	KMO
Environment Uncertainty	EN 1	0.567	0.000	6	98.182	0.739
	EN2	0.645				
	EN3	0.622				
	EN4	0.788				
	EN5	0.521				
	EN6	0.532				
	EN7	0.656				
	EN8	0.777				
	EN9	0.677				
Competition	CO1	0.541	0.000	6	78.642	0.722
	CO2	0.551				
	CO3	0.655				
	CO4	0.790				
	CO5	0.723				
	CO6	0.577				
Information Technology	IT1	0.621	0.000	3	15.916	0.524
	IT2	0.688				
	IT3	0.572				
	IT4	0.555				
	IT5	0.660				
	IT6	0.761				
Performance Measurement system	PMS1	0.571	0.000	6	23.930	0.611
	PMS2	0.522				
	PMS3	0.542				
	PMS4	0.771				
	PMS5	0.674				
	PMS6	0.576				
	PMS7	0.790				
	PMS8	0.705				
	PMS9	0.560				
Organizational performance	OP1	0.546	0.000	6	131.089	0.766
	OP2	0.630				
	OP3	0.570				
	OP4	0.652				
	OP5	0.543				
	OP6	0.586				
	OP7	0.680				
	OP8	0.710				

This study employed the Kolmogorov-Sminov test for testing the variables' normality (see Table 3 for results). The significance level of greater than 0.05 indicates the affirmation of data normality assumption.

Table No. (2) :
The Normality Test Outcomes based on Kolmogorov-Smirnov test
PLS Method:

Variable	Significance level
Environment Uncertainty	0.580
Competition	0.232
Information technology	0.255
Performance measurement system	0.468
Organizational performance	0.219

This study used partial least squares structural equation modeling PLS-SEM to analyze the research model in Fig 1. This technique is preferable to a covariance-based approach for the following reasons. First, the sample contains 88 observations, which can be considered small, which PLS is particularly suitable for this study (Camisón & Villar-López, 2014). Second, PLS is particularly suitable for analyzing complex path models (Ringle et al., 2012). Third, this study focuses on predicting organizational performance by performance measurement system and the contextual variables., which calls for the use of PLS (Rigdon, 2012).

On other hand, construct reliability looks into the internal consistency of indices that quantify a concept which means that it demonstrates the accuracy with which the variables or indicators observed gauge the latent variable. In gauging this reliability, the index of composite reliability was shown in the PLS model. The computation of the index is in accordance to Alpha coefficient. As stipulated by Nunnally (1978), the index's value must be higher than or equivalent to 0.6.

Table 4 presents the results. As can be seen, the value of composite reliability for each construct is greater than the proposed value of 0.7. Meanwhile, the AVE values are all greater than 0.5. As such, the measurement model possesses sufficient convergent validity level.

**Table No.(3)
Cronbach's Alpha and Composite Reliabilities of Constructs**

Variable	Items	Loadings	Cronbach's Alpha	CR ^a	AVE ^b
Environment Uncertainty	EN 1	0.731	0.878	0.839	0.566
	EN2	0.875			
	EN3	0.860			
	EN4	0.855			
	EN5	0.792			
	EN6	0.851			
	EN7	0.739			
	EN8	0.823			
	EN9	0.798			
Competition	CO1	0.863	0.784	0.911	0.672
	CO2	0.856			
	CO3	0.707			
	CO4	0.731			
	CO5	0.875			
	CO6	0.860			
Information technology	IT1	0.726	0.772	0.849	0.587
	IT2	0.763			
	IT3	0.803			
	IT4	0.732			
	IT5	0.820			
	IT6	0.727			
Performance measurement system	PMS1	0.867	0.800	0.819	0.532
	PMS2	0.790			
	PMS3	0.740			
	PMS4	0.793			
	PMS5	0.806			
	PMS6	0.830			
	PMS7	0.726			
	PMS8	0.763			
	PMS9	0.803			
Organizational performance	OP1	0.775	0.890	0.860	0.607
	OP2	0.839			
	OP3	0.771			
	OP4	0.873			
	OP5	0.898			
	OP6	0.747			
	OP7	0.788			
	OP8	0.866			

The Discriminate Validity :

The discriminate validity is about how far a set of items can discriminate a construct from other constructs. In other words, as explained by Compeau et al. (1999), the variance shared among the items of every construct should be higher than the variance shared with other constructs. A criterion for examining the discriminate validity was proposed by Fornell and Larcker (1981). Referring to Table 4, diagonal elements encompass the square roots of the extracted average variance while located below the diagonal element is the correlation among the variables. It is possible to make comparison and assume discriminate validity if the diagonal elements are greater than other off diagonal elements in their corresponding rows and columns. In relation to this, the outcomes in the correlation matrix presented by Table 5 assure the affirmation of discriminate validity.

Table No.(4): Correlations and Discriminate Validity

Constructs	EU	CO	IT	PMS	OP
Environment Uncertainty	0.832				
Competition	0.642	0.742			
Information technology	0.516	0.566	0.818		
Performance measurement system	0.410	0.492	0.645	0.789	
Organizational performance	0.453	0.356	0.517	0.570	0.815

Predictive Relevance of the Model :

As shown in Table 6, R square demonstrates that 63.1% of the Performance was elucidated by the PMS, Environment Uncertainty, Competition and Information technology. Further, 56.2% of the PMS was illuminated by the

Environment Uncertainty, Competition and Information technology. As proposed by Cohen (1988), the value of 0.26 is substantial, 0.13 is moderate while 0.02 is weak. Based on Table 6, both R2 values are deemed substantial. In other words, the power of variables in the model in describes the Performance.

The model quality can also be evaluated using the Cross-Validated Redundancy values which are attained via the procedures of Blindfolding in Smart PLS , As shown in Table 6, the cross validated redundancy obtained for the perceived benefits and satisfaction was 0.5 and 0.678 correspondingly. Such values indicate the sufficient prediction quality possessed by the model.

Table No.(5): Prediction of Relevance of the Model

Endogenous	R Square	Cross-Validated Redundancy	Cross-Validated Commuality
PMS	0.562	0.412	0.678
Performance	0.631	0.240	0.500

Goodness of Fit the Model:

Dislike CB-SEM, PLS-SEM only has one goodness of fit measure, In specific, this model’s GoF value is at 0.608 and based on Wetzels et al. (2009), this value which is regarded as large. Wetzels et al. (2009) proposed the baseline values as the following: 0.1 = small, 0.25 = medium and 0.36 = large.

Table No. (6): model fit

	Saturated Model	Estimated Model
SRMR	0.0726	0.0726
d_ ULS	8.1202	8.1202
d_ G	7.4844	7.4844
Chi-Square	5,141.4505	5,141.4505
NFI	0.608	0.608

The Structural Model and Hypothesis Testing:

In exploring the impacts of contingent variables (Environment Uncertainty, Competition and Information technology), on PMS and organizational performance, and impact of PMS on organizational performance. This study estimated the path coefficient of (0.256, 0.710, 0.334, 0.113, 0.322, 0.579 and 0.496). It should be noted that the probability (p-value) that is higher than significant level of 0.05 means that the path coefficient is significant at error level of 0.05. Based on the outcomes, only Competition does not possess a significant positive effect on PMS ($\beta=0.113$, $t= 1.504$, $p<0.254$).

Table No.(7): The Results of the Hypothesis Testing

Hyp. No	Hypothesis	path coefficients	T Value	Result
H1	PEU-----OP	0.256***	1.969	Supported
H2	PEU-----PMS	0.710***	16.812	Supported
H3	CO-----OP	0.334***	4.526	Supported
H4	CO-----PMS	0.113	1.504	Not Supported
H5	IT-----OP	0.322***	2.487	Supported
H6	IT-----PMS	0.579***	12.809	Supported
H7	PMS-----OP	0.496***	6.595	Supported

***: $p<0.001$; **: $p<0.01$.

The outcomes from Table (8) show that PMS demonstrate a positive and significant impact on organization’s performance at the 0.001 level of significance ($\beta=0.496$, $t=6.595$, $p<0.001$). Further, the factor of Environment Uncertainty, Competition and Information Technology imparts a positive and significant impact on organization’s performance at the 0.001 level of significance ($t= 1.969$, 4.526 , 2.487 respectively). Meanwhile, the factors of Environment Uncertainty and Information Technology imparts a positive and significant impact on PMS at the 0.001 level of significance ($t= 16.812$, 12.809 respectively). Whereas, no significant relation between Competition and PMS ($\beta=0.113$, $t= 1.504$). Based on these results, hypotheses H1,H2, H3, H5, H6, and H7 are supported.

Testing the Mediating Role of Perceived Benefits :

The PLS bootstrapping algorithm was run in this study in order to approximate the indirect effect among the variables. This would ascertain the mediating effect of the Performance Measurement System. As shown by the outcomes presented in Table 8, the Performance Measurement System directly and indirectly impacts the organizational performance significantly at the 0.001 level of significance with indicators ($\beta=0.710, 16.812, p<0.001$). Also, as a variable, Performance Measurement System appears to be mediating the Environment Uncertainty and organizational performance. It carries out a 32% as a Variance Accounted for (VAF), of the influence of Environment Uncertainty with organizational performance.

Based on this outcome, H8 (mediating effect of the Performance Measurement System) was supported. Likewise, as a variable, Performance Measurement System, plays a role of a mediator between Information technology and organizational performance ($\beta=0.496, 6.595, p<0.001$). It carries out a 36% as a Variance Accounted for (VAF), of the effect of Information technology with organizational performance. Based on this outcome, H10 (the mediating effect of the Performance Measurement System) was supported. Lastly, H9 (the relationship between Competition→ Performance Measurement System→ organizational performance) was not supported by the outcomes ($\beta=0.022, t = 1.023, p< 0.153$) owing to the fact that the factor of Competition had no indirect impact on Performance Measurement System. In other words, Performance Measurement System does not mediate Competition and Organizational Performance.

Table No. (8): Mediation Analysis Results

Hyp. No	Hypothesis	Path coefficients	T Value	Result
H8	PEU----PMS---OP	0.710***	16.812	mediation
H9	CO---PMS----OP	0.022	1.023	No mediation
H10	IT---PMS-----OP	0.496***	6.595	mediation

***:p<0.001; **:p<0.01.

7. Conclusion

As expected, the results suggest direct relationships between PEU, IC, IT and organizational performance. In addition, a significant and positive association PEU, IT has been found. Also, in this research, emphasis has been placed on the mediating role of performance measurement system on the relationship between contingent variables and organizational performance. Therefore, based on the hypotheses testing we noted that a full mediating effect for performance measurement system on organizational performance except for the linkage between competition and organizational performance.

It can be deduced that this study is in agreement with studies conducted in the past in developed countries that indicated that companies must take into account the role of PMS as a important factor to predict of an organizational performance. This study differ of previous studies to the adoption of contingent variables to try to improve of the financial sector in Jordan and increase the performance this sector, particularly with adoption of PMS as a mediator factor between contingent variables and organizational performance.

The multiple performance dimensions are appropriate to describe the mixed findings as stated in early literature. In addition to that, it helps to address the need to obtain a holistic understanding of the association between contingent variables. For instance, in case of PEU, IC, IT and response alternatives such as different dimensions of PMS and multiple performance criteria (Sousa and Voss, 2008).

8. Limitations and Future Studies:

Even though this study adds to the comprehension of the applicability of contingency theory across the levels of Contingent Variables and its relationship with organizational performance, and also the mediating effect of PMS on the

abovementioned relationship, these results must be interpreted with caution because of certain limitations. First, the sample size for this study is relatively small (n=88). The second limitation is regarding the nature of data collection where data are collected from the head of accounting department only. While long-term techniques strategies that need time and its adopt on the top management to be implemented to reflect that ultimately on organizational performance. Moreover, the future studies should be focused on the long term studies which may provide more accurate results compared with this study.

However, this research framework did not include control variables. Future research could consider such contexts as environmental uncertainty, competition and information technology as control variables. The present study has used the survey data to explore a relatively new topic in Jordan on the knowledge of the researcher. This suggests that future research on (contingent variables) impact and benefits could further benefit from contingency theory in this area. We believe it will be a fruitful endeavor to extend this line of research using a first-hand dataset completely designed for this increasingly important subject, especially in financial context.

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Appendix A;

Respondents' Demographic Information (n = 88)

Gender		Frequency	Percent
Valid	Male	87	98.8
	female	1	1.2
	Total	88	100.0
Age		Frequency	Percent
Valid	25 -34	12	13.6
	35-44	33	37.5
	45 and above	43	48.8
	Total	88	100.0
Experience		Frequency	Percent
Valid	1-10 years	14	15.9
	11-20 years	56	63.6
	21 and above	18	20.4
	Total	88	100.0
Type of company		Frequency	Percent
Valid	Bank	13	14.7
	Insurance	22	25.0
	Brokerage	37	42.0
	Real Estate	9	10.2
	Others Financial Services	7	0.79
	Total	88	100.0

Appendix B;

Descriptive Statistics

Variables	Mean	Min.	Max.	Std. dev.	Alpha
Environment Uncertainty	3.52	1.09	6.70	1.33	0.878
Competition	4.03	1.19	7.00	0.93	0.784
Information Technology	3.31	1.00	6.50	1.09	0.772
Performance Measurement System	4.18	2.62	7	0.64	0.800
Organizational Performance	4.51	1.00	6.80	2.04	0.890