

## The Relationship Between Cultural Factors and Balanced Scorecard Implementation

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### *Abstract*

*This study tried to determine the implementation of Balanced Scorecard system rate and to examine the relationship between cultural factors and BSC adoption and implementation in Jordanian companies. A questionnaire survey was used to collect data on the cultural factors meant supposed to motivate the implementation of BSC in Jordanian industrial sector. The findings revealed that BSC implementation in the context of Jordanian Industrial Sector is approximately 25.3% measured according to the number of implementers companies within Jordanian Industrial Sector. In order to test hypotheses Logistic regression used in the current study. The findings in this study reveals that Outcome Orientation and Team orientation don't have significant influence on the implementation of BSC among industrial companies in Jordan, whereas the data analysis shows that, Innovation and Attention to Detail have significant relationship on BSC implementation, Therefore hypotheses H1 and H2 are rejected, whereas hypotheses H3, and H4 are accepted. This study show the extent of BSC within the Jordanian Companies, Most previous studies focused only on the implementation of BSC in western developed countries. This study contributes to the further development of knowledge in management accounting and provides a basis for further research in Jordan and other Middle East developing countries. To our knowledge, this is the first study conducted on Jordanian companies on the subject. Our contribution to this field of research is broader and it would help facilitate the implementation of appropriate management tools in the Jordanian companies. This research could also give some business leads for the implementation of BSC. However, Cultural factors play a significant role in determining the success or failure of BSC implementations. So, the companies must take these factors into account before, during and after BSC implementation, and it must adjust its expectations regarding the results to be attained and the speed at which they are realized to produce better benefit to the company.*

**Key Words:** *Balanced Scorecard (BSC), Cultural Factors, Implementers, Industrial Sector, Jordan.*

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### **Introduction**

The twenty first century brought about significant changes that challenged managers all over the globe. Owing to these changes, economic fluctuations in the economically interdependent countries of the world, the considerable computer use, and a dynamic global business market resulted. The situation is such that skilled managers face a complex business market place rife with both opportunities and risks, where in effective business decisions can be made, interpersonal relations can be enhanced and societal obligations

can be met through the correct strategy. This study concentrates on management accounting change, particularly on the strategy known as the "Balanced Scorecard" (BSC).

Several researchers including Abdel-Kader and Luther (2008) and Johnson and Kaplan (1987) reported crisis in management accounting owing to the low percentage of implementation. Additionally, others like Askarany (2009), Al Sawalqa, Holloway and Alam (2011), Upton (2012), and Rabab'ah (2014) emphasized innovation in terms of the BSC. Owing to its attractive potential, companies around the globe have implemented it as a tool. However, its successful operation requires the effective implementation and continuous management of measures and the relevant strategic linkages.

Niebecker, Eager, and Kubitza (2008) said that BSC has been widely implemented, but most of the implementer companies believe that long-term results will not be. In reality, less than 20% of companies implementing the BSC have realized measurable performance improvement (Williams, 2004). Previous studies tried to know the reason of low implementation rate by testing the relationship between some organizational and technological factors and BSC implementation, but there is been very few empirical research studies on the relationship between organizational culture and BSC implementation. Buytendijk (2007) said that the perception that implementation of a BSC, in and of itself, will lead to organizational alignment is a "fairy tale". Previous studies such as (Kaplan and Norton 2004, Assiri and Eid, 2006 and Deem et al. 2010) found a direct relationship between organizational culture and BSC implementation. Scapens and Roberts (1993) suggested that organizational culture is a vital Factor affecting resistance to management accounting change he added that People in business units with more innovative cultures are more likely to respond positively to new management techniques, then increasing the chance of their success, while the converse will apply in units with less innovative cultures.

Till now, there has been very few empirical research studies on the relationship between organizational culture and BSC implementation. The important of this study come from the wide spread use of the BSC and, at the same time, a high level of BSC project failure. Prior studies however are divided on their perspectives as to the factors that affect BSC implementation and they remain knowledge gaps with regards to the use of BSC as a novel management accounting tool. Similarly, information concerning the diffusion and success of new management accounting tools is still few and far between. Therefore, studying the influence of cultural factors to the new management accounting diffusion would be strong contributions to the field (Rababah, 2012). However in this study these cultural factors (Outcome-oriented, Innovation, Team orientation, and Attention to detail) will be tested to examine the relationship between organizational culture and Balanced Scorecard implementation.

Jordanian companies must adapt to a competitive environment more and more acute, both to survive and benefit from the opportunities presented to them. Of course, the economic environment is an important consideration in any research in management. Especially, Jordan became a member of the World Trade Organization (WTO), and signed the Free-Trade Agreement with different parties, which led to increasingly changing, hostile, complex and diverse. This recent diversity of forms of competition made it increasingly necessary to implement new tools to get better performance in developing countries as in developed countries, including the use of Balance Scorecard, add to those more multinational companies establishing joint ventures or regional offices in Jordan and this resulted in changes regarding management accounting practices in Jordan. These modifications are piloted by the need of the Jordanian companies to implement Balance Scorecard innovations for the purpose of having a competitive edge in the market.

Hutaibat (2005) and Sawalqa et al (2011) and Rababa'h (2014) said that Jordan suffers from a limitation of publications about management accounting research in general. This study contributes to the further development of knowledge in management accounting and provides a basis for further research in Jordan and other Middle East developing countries. To our knowledge, this is the first study conducted on

Jordanian companies' on the subject, Jordanian companies have a distinct environment and Jordanian employees have distinct culture and habits and this may be will influence to the relationship between dependent and independents variables in Jordan which is part of developing countries. In their study Assiri and Eid (2006) said *"one of this study's findings is that there are no differences in BSC implementation in the different countries worldwide. However, further studies may be required to further investigate this result in terms of developed and developing countries"*. Our contribution to this field of research is broader and it would help facilitate the implementation of appropriate management tools in the Jordanian companies. This research could also give some business leads for the implementation of BSC.

## Literature Review

### Balanced Scorecard

The BSC is utilized as a measurement system that assists organizations to transform their vision and strategy into actual actions and offers an extensive overview of their performance. The BSC was proposed by Robert Kaplan and David Norton in 1992. Companies have recently adopted the system to make up for the limitations of the traditional performance systems. The BSC got its name from the acknowledgement of the need to balance the objectives of performance measurement by the creation of shareholder value and the promotion of strategic objectives. This is done via financial and non-financial indicators which can address short as well as long-term strategic objectives. It is contrary to the traditional systems that comprises of measures with no clear association to the promotion of strategic objectives.

The BSC is distinct from other performance systems in that it caters to the organization's needs, operating environment and strategy and uses measures that are significant to its success. Three types of BSC were identified by Speckbacher, Bischof, and Pfeiffer (2003); 1) a distinct multidimensional framework for strategic performance measurement that is a combination of financial and non-financial strategic measures, 2) type one BSC that provides a description of the strategy through cause-and-effect relationships, 3) type two BSC that employs strategy by defining objectives, action plans, results and relating incentives with BSC.

Moreover, according to Ittner, Larcker and Randall (2003), BSC models improve performance by transforming strategy into objectives and measures that are related within a causal chain of leading and lagging indicators encapsulating the four scorecard perspectives. As such, the process of BSC can be summarized as; clarifying and translating vision into strategy, communicating and linking strategic objectives and measures, planning, setting targets and aligning strategic initiatives, and finally, enhancing strategic feedback and learning. In order to accomplish the above aims, the BSC consists of four perspectives namely customer perspective, internal business perspective, innovation and learning perspective and financial perspective.

### Organizational Culture

In the context of business, corporate culture and organizational culture are terms that are sometimes used interchangeably. Organizational culture refers to the behavior of employees who are working in the organization and the meanings that the employees attach to their actions. This includes organizational values, visions, norms, working language, systems, symbols, beliefs and habits. Ravasi and Shultz (2006) defined organizational culture as a set of shared mental assumptions that drive organizational action by defining suitable behavior for different contexts. Hence, a company may have its own distinct culture with negative and positive aspects.

According to Detert, Schroeder and Mauriel (2000), there are as many as 164 definitions of organizational culture proposed in literature. A major portion of these research area has focused on the measurement of culture (Marcoulides and Heck, 1993), the most effective culture types (Bhaskaran and Sukumaran, 2007; Denison, 1997; Denison and Mishra, 1995), and how to bring about an effective organizational culture (Korte and Chermack, 2007; Rashid, Sambasivan and Rahman, 2004).

However, previous studies have developed several models to describe different indicators of organizational cultures. Hofstede (1980) demonstrated that there are national and regional cultural groupings that affect the behavior of organizations and identified five dimensions of in his study of national cultures these are Power distance, Uncertainty avoidance, Individualism/Collectivism, Masculinity and. femininity, and Long- Versus Short-Term Orientation. However, Hofstede (1980) has suggested that most management theories need modification for different national contexts.

Two common models and their associated measurement tools have been developed by O'Reilly et al. and Denison. O'Reilly, Chatman & Caldwell (1991) developed a model based on the belief that cultures can be distinguished by values that are reinforced within organizations. Their Organizational Profile Model (OPM) is a self reporting tool which makes distinctions according seven categories - Innovation, Stability, Respect for People, Outcome Orientation, and Attention to Detail, Team Orientation, and Aggressiveness. The model is also suited to measure how organizational culture effects organizational performance, as it measures most efficient persons suited in an organization and as such organization's can be termed as good organizational culture. Daniel Denison's model (1990) asserts that organizational culture can be described by four general dimensions – Mission, Adaptability, Involvement and Consistency.

Deal and Kennedy (1982) defined organizational culture as the way things get done around here; they created a model of culture that is based on 4 different types of organizations. They each focus on how quickly the organization receives feedback, the way members are rewarded, and the level of risks taken.

The relationship between the culture and effectiveness of organizations has drawn attention from researchers for many years. Rigby and Bilodeau (2007) acknowledge that corporate culture directly affects the success of management tools used to aide companies in process improvement and decision making. Kaplan and Norton (2004) report that companies that successfully implemented the BSC had a culture in which "people were deeply aware of and internalized the mission, vision, and core values needed to execute the company's strategy." Research in management accounting filed by Baird, Harrison and Reeve (2007) tested some cultural factors developed based on O'Reilly et al. (1991) and Hofstede et al. (1990) models, these factors such as (outcome orientation, team orientation, attention to detail, as well as innovation) they suggest that there are a relationship between cultural factors and new management practices, such as ABC, to improve processes and enhance performance and competitiveness. In the same vein, Charaf and Bescos (2013) tested the influence of Cultural factors such as (Innovation, Outcome orientation, Team orientation, and attention to detail) to the adoption of ABC, and they found a relationship between some of these cultural factors and ABC adoption. Regarding balanced scorecard and organizational culture Assiri and Eid (2006) and Deem, Barnes, Segal, and Preziosi (2010) support the direct relationship of organizational culture to successful implementation of the BSC.

Current study will examine the relationship between cultural factors and BSC adoption and implementation in Jordanian companies the new model consist of four factors (Outcome orientation, Innovation, Team orientation, and attention to detail) related to O'Reilly et al. (1991) model, The reason is that these researcher have identified the categories of cultures that are often used on most of management accounting studies, allowing us to make comparisons between Jordan and elsewhere. and because its related to both motivate and facilitate the implementation process of BSC, previous studies such as , Charaf and Bescos (2013) examined the factors which influence to the adoption or non-adoption of ABC (motivators) other

studies such as, Deem et al. (2010) examined the factors which influence to the effectiveness of implementation of BSC (facilitators).

## Hypotheses Development

In the following sections the main hypotheses are described, it's focusing on the forth factors of company unit culture which are: outcome orientation, Team orientation, innovation and Attention to detail.

### Outcome Orientation

This factor means that Outcome-oriented organizations highlight Accomplishment, results, and action as significant values (Sheridan, 1992). This variable tacked from the O'Reilly et al. (1991) Organizational Culture Profile (OCP). Baird *et al.* (2004) found that companies that are outcome-oriented are attracted to new management practices, such as BSC, to enhance processes and get better performance and competitiveness. Charaf and Bescos (2013) tested the influence of Cultural factors such as (Innovation, Outcome orientation, Team orientation, and attention to detail) and the adoption of ABC, and he found a relationship between some of these cultural factors such as Outcome orientation and ABC adoption. Assiri and Eid (2006) and Deem et al. (2010) support the direct relationship of organizational culture to successful implementation of the BSC. Based on the above discussion the following research hypothesis is formulated:

**Hypothesis 1:** There is a positive relationship between Outcome oriented and the implementation of BSC

**Team Orientation:** This factor means that companies with a team-oriented culture highlight cooperation and collaboration among employees. This variable tacked from the O'Reilly et al. (1991) Organizational Culture Profile (OCP). Previous studies such as Baird *et al.* (2007) found a significant relationship between as Teem orientation and management success at each of the three levels of AA, ACA and ABC. In Morocco Charaf and Bescos (2013) tested the influence of Cultural factors to the adoption of ABC, and he didn't found a significant relationship between as Teem orientation and ABC adoption. Based on the above discussion the following research hypothesis is formulated:

**Hypothesis 2:** There is a positive relationship between Team oriented and the implementation of BSC.

**Innovation:** Companies that have innovative cultures are adaptable, Flexible, and experiment with new tools and ideas .This variable tacked from the O'Reilly et al. (1991). Baird *et al.* (2004; 2007) found a positive relationship between Innovative culture and the implementation of activity management and ABC. Malmi (1997) said that most obstacles affecting activity management success come from resistance in the company; employees in companies with more innovative cultures are more likely to react positively to new techniques, thus increasing the chance of their success, whereas the converse will apply in companies with less innovative cultures. Based on the above discussion the following research hypothesis is formulated:

**Hypothesis 3:** There is a positive relationship between Innovation and the implementation of BSC.

**Attention to Detail:** Business units with a detail-oriented culture pay attention to details and emphasize precision. These units are more likely to value the information produced by BSC because of their need for accuracy and detail. On the other hand, units that place less stress on detail might neglect the time or resources to make sure that BSC implementation is successful. However, this cultural factor adapted from the O'Reilly et al. (1991). Baird *et al.* (2007) found a positive relationship between Attention to detail and the implementation of activity management and ABC. Based on the above discussion the following research hypothesis is formulated:

**Hypothesis 4:** There is a positive relationship between Attention to detail and the implementation of BSC. Our research model is presented in Figure 1

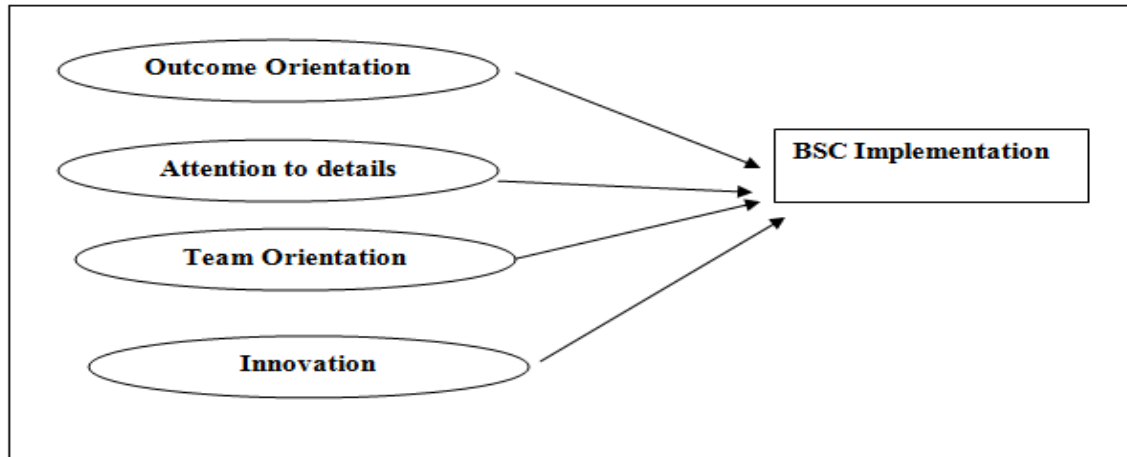


Figure 1. Research model

### Research Methodology

Questionnaire survey was used in the current study, The sample frame for this study includes those industrial companies with 50 employees and above Van der Stede et al. (2006) and Hutaibat (2005) said that type of sample frame necessary to make sure that the organizations have formal performance measurement system . 372 surveys were distributed within the Jordanian industrial companies. The questionnaires were aimed at financial managers / assistant financial managers of companies within the Jordanian manufacturing companies. The aim of the questionnaire is to know the implementation rate in this sector and to know the influence of Cultural Factors to Balanced Scorecard Implementation in the Jordanian industrial sector. This process took place from 10th Nov to 17th Dec 2013. 366 questionnaires were distributed. Each company was contacted by telephone before and after the questionnaire sending, to encourage the respondents to participate in the study and to check the accuracy of postal address details. 240 questionnaires returned, fifteen of them are rejected this remain 225 respondents only, thereby giving a response rate of 61%.

The questionnaire contains four sections, the first and second sections used to know the profile of respondent and profile of organization, to provide information about the BSC implementers Background and the BSC status in Jordan. The third section of the questionnaire included single question forwarded to the respondent to know if they are BSC implementer or non-implementer. To measure the dependent variable on the status of BSC, only two criteria used namely the implementation or non-implementation of BSC. So we come to a dichotomous variable. Regarding independent variable The fourth section of the questionnaire covered the business unit cultural dimensions fourth of the organization cultural factors were measured using the sum of the cultural value items which loaded on those dimensions following a factor analysis of the 26-item version of the Organizational Culture Profile (O'Reilly et al., 1991) and These factors (outcome orientation, team orientation, innovation and attention to detail) corresponded to previous studies (Baird et al. 2007; and McKinnon et al., 2003). Measures for the four focal factors (outcome orientation, team orientation, attention to detail, and innovation) were calculated as the sum of scores for the items loading cleanly on each factor All items used 5 point Likert scales with anchors of '1 = not valued at all' and '5 = valued to a very great extent'.(See Appendix A).

## Data Analysis

Implementation rate: Based on the results of the questionnaire survey, companies are classified in Table 1:

Table 1 : Number of companies in each category of BSC implementation

Name of the Stage	Number of the Companies
Implementers	57
Non-implementers	168
Total	225

### Implementation Rate

Based on the table 1 the BSC implementation rate in the Jordanian industrial sector is approximately 25.3% measured according to the number of implementers companies within this sector. In the same sector Al-Sawalqa et al. (2011) conducted a survey involving 168 medium and large industrial companies in order to determine their rate of BSC usage. The findings showed that 35.1% of the companies utilized the approach. However difference between the two studies may be return to the respondents' number in each study.

### Factors Analysis

To test the research hypotheses Logistic regression used in this research, Logistic regression can only be used where there are two dichotomous categories (e. g. BSC Implementation and non-BSC implementation). Under logistic regression, the normality is not necessarily the same for both dependent and independent variables. Hair et al. (1998) state that logistic regression is one of the most widely used linear probability models. logit estimates models in which the dependent variable can take only two values, 1 and 0. The overall measure of how well the model fits is given by the likelihood value (-2LL or -2 log likelihood). Logistic regression has been used and reported in the published management accounting. In this research logistic regression analysis was selected to test the hypotheses relating to the influence of the cultural factors on the implementation/non- implementation of BSC.

The sample size of the organizations is 57 implementers and 168 non-implementers. Table 2 below shows logistic regression data analysis.

Table 2: Logistic regression data analysis.

#### Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.793	.148		5.352	.000
	Y1	.008	.054	.009	.151	.880
	Y2	-.082	.078	-.097	-1.058	.291
	Y3	.750	.088	.827	8.544	.000
	Y4	.089	.051	.110	1.764	.079

a. Dependent Variable: X

Based on the above analysis the factors “Outcome Orientation and team orientation,” are not significant, because  $\text{sig} > 0.05$ , so the first and second hypotheses are rejected and no any relationship between BSC implementation and Outcome Orientation or team orientation, because the significant value more than 0.05, but factors innovation and Attention To Detail are significant because  $\text{sig} < 0.05$  and there are a relationship between these factors and BSC implementation because the significant value less than 0.05 so the third, and fourth hypotheses are accepted.

## Conclusion

This study distributed the questionnaires to collect the data to know the BSC implementation rate and to study if there are positive relationships between cultural factors such as (outcome-orientation, Team orientation, Innovation, and Attention to details) and BSC implementation. The data analysis shows that BSC implementation rate in the Jordanian industrial sector is approximately 25.3%. In Jordan, Al-Sawalqa et al. (2011) conducted a survey involving 168 medium and large industrial companies in order to determine their rate of BSC usage. The findings showed that 35.1% of the companies utilized the approach.

The data analysis shows no any relationship between Outcome Orientation and Team orientation and BSC implementation, the data analysis shows also that Innovation and Attention to Detail” have significant relationship on BSC implementation. These finding is consistent or conflict with previous studies such as Malmi (1997) who said that employees in companies with more innovative cultures are more likely to react positively to new techniques, Baird *et al.* (2004) found companies that are outcome-oriented and Innovation are attracted to new management practices, such as BSC, Charaf and Bescos (2013) tested the influence of Cultural factors such as (Innovation, Outcome orientation, Team orientation, and attention to detail) and the adoption of ABC, and they found a relationship between Outcome orientation, Innovation and ABC adoption, but they didn’t found a significant relationship between Team orientation, Attention to detail and ABC adoption. In the same regard Baird *et al.* (2007) found a significant relationship between as Team orientation, Innovation, Attention to detail and management success at each of the three levels of AA, ACA and ABC.

This research has advanced the literature by identifying the relationship between cultural factors and BSC implementation. These results give valuable information to managers about the possible for successful implementation of the BSC in their companies. This research suggests that cultural factors play a significant role in determining the success or failure of BSC implementations. So, the companies must take these factors into account before, during and after BSC implementation, and it must adjust its expectations regarding the results to be attained and the speed at which they are realized to produce better benefit to the company.

## Recommendations and Suggestions for Future Research

Several avenues have been identified for future researches. The following recommendations are pertinent: Firstly, the present study is focused only on Jordanian industrial sector this research limitation may unfavorably influence the findings generalizability. Therefore, a more expansive research ground is called for in future studies for the attainment of extensive information concerning other sectors’ BSC perceptions whether in Jordan or in other countries. Secondly literature review showed that only a few studies carried out an investigation of the impact of BSC implementation on financial performance. So, future research should try to find out the relationship between BSC implementation and the enhancement of financial performance. Finally these cultural dimensions are not chosen as comprehensive of the factors affecting adoption of new management accounting innovation. We choose them as examples of factors that have been suggested or found to affect of implementation of balanced scorecard t generally, future studies may test other cultural factors.



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### Appendix a. Variable Measurement

*Business unit culture (O'Reilly et al., 1991)* below is a list of values that may be used to describe the nature of the work environment in business units. For each item please indicate the extent to which it is valued in your business unit.

Variable	Not valued at all	valued to a small extent	valued to a moderate extent	valued to a great extent	valued to a very great extent
<p><b>Innovation</b></p> <p>A willingness to experiment Not being constrained by many rules Being quick to take advantage of opportunities Being innovative Risk taking Being aggressive</p>					
<p><b>Outcome Orientation</b></p> <p>Being competitive Being achievement oriented Having high expectations for performance Being results oriented Being action oriented</p>					
<p><b>Team Orientation</b></p> <p>Being people orientated Being team orientated Working in collaboration with others</p>					
<p><b>Attention to Detail</b></p> <p>Paying attention to detail Being precise Being careful</p>					