Dirasat, Engineering Sciences, Volume **39**, No. 1, 2013

A Statistical Comparative Study of ISO 9001: 2000 Implementation in the Hashemite Kingdom of Jordan and in the United Arab Emirates

Mohammad D. Al-Tahat, Ayman Abu Gharbieh *

ABSTRACT

This paper informs about the state of art of quality systems implemented in Hashemite Kingdom of Jordan (HKJ) and United Arab Emirates (UAE) it adds to the body of knowledge many details about the implementation of ISO 9001:2000 in the two markets. Pros and cons of some alternative data collection methods have been investigated. Interested parties in ISO implementation within the targeted two countries were contacted as advisors, they were advised in the selection of data collection method, evaluated the questionnaire structure and design, recommended a nonprobability convenience sample size, and accordingly validated the results obtained; an indication of more than 90 % confidence of results is obtained. Main drivers for adopting ISO 9001:2000 are investigated. ISO 9001:2000 forms a good starting point for the organizations in the two markets to continue with other quality initiatives. Organizations' perception to ISO 9001:2000 certifications based on their size, scope and period since ISO certification is also investigated, consequently level of satisfaction of dominant certification bodies operating in the two markets is evaluated. A non-parametric test was used to analyze a single Likert item and thus Kruskal-Wallis test was used to compare the statistics of the two markets. Kruskal-Wallis test is a nonparametric alternative to one-way ANOVA, it provides a good analysis since there is no need to ensure normal population in this test. As a result, around 42 % of certified organizations will give preference to their supplier if they are ISO 9000 certified, while around 25 % are not. The most perceived principle when implementing ISO 9001: 2000 in UAE and HKJ is the involvement of people, The most dominant driver in both countries was for promotional reasons, then improving internal efficiency and fulfilling customer's requirement of doing business, Small organizations are gaining benefits of ISO 9001: 2000 more than medium and large-scale organizations.

The paper could be interesting for the international audience because it is an international research that inform about the state of art of ISO 9001:2000 implementation in Hashemite Kingdom of Jordan (HKJ) and United Arab Emirates (UAE).

Keywords: Hashemite Kingdom of Jordan (HKJ) , United Arab Emirates (UAE) , ISO Series, ISO Drivers, One-way ANOVA, ISO implementation.

1. Introduction And Literature Review

Like many Socio-technical systems ISO 900: 2000 can be described as a management philosophy that can be used effectively to improve productivity and to enhance quality in any organization, that promotes quality of life; employee participation, customers suppliers involvement. Up to the end of 2006 United Arab Emirates (UAE) have 1040 ISO 9001: 2000 certified organizations while Hashemite Kingdom of Jordan (HKJ) has 248, UAE have the second largest number of certificates in the Arab world after Egypt, the number of certificates issued in UAE represents 45 % of the total number of certificates issued in the region, while HKJ is ranked in the seventh in the Arab world (AL-Tahat and Gharbieh, 2008). The topography of the UAE and Jordanian economy is encouraging the adaptation of quality concepts in general and ISO 9001: 2000 in particular.

The effectiveness of ISO 9001:2000 implementation in the two markets can be evaluated through answering the following questions: What are the main drivers for adopting ISO 9001:2000 in targeted countries?; What are

* Industrial Engineering Department, University of Jordan. Received on 26/2/2012 and Accepted for Publication on 15/4/2012.

the benefits of implementing ISO 9001:2000 in HKJ and UAE?; The level within which certified organizations utilized the quality management principles and the ISO 9001: 2000 main clauses; How certified organizations are looking to the roles of internal auditors, consultants and certification bodies in driving the continual improvement initiatives?; How certified organizations utilize human resources and training requirements for implementing ISO 9001: 2000?, Did ISO 9001: 2000 form a solid base for implementing other quality initiatives and standards such as business excellence model, six sigma, balanced score; Does an organization characteristic (size, scope of work and period of ISO 9001 certification) affect the main drivers for adopting ISO 9001:2000?; Does an organization characteristic affect the benefits of implementing ISO 9001:2000?; Does an organization characteristic affect the type of problems that may face the organization when implementing the standard?; Does the certified organizations in HKJ and UAE satisfied from the performance of the certification bodies?. Note that, there are no sufficient studies to form a base for other researchers to develop an understanding of ISO 9001:2000 implementation in neither HKJ nor UAE.

The initial implementation of ISO 9000 standard was by European firms (Pan, 2003). Douglas and others (Douglas et al., 2003) concluded that ISO 9001:2000 is very positive and it is less disputing the criticisms of the old revision. In addition, they concluded that the main reason within UK organizations to seek ISO 9001 certification was to allow them to tender for work that otherwise be unattainable. In Egypt and it has been concluded (Magd and Curry, 2003) that the most common reasons for seeking ISO certification in Egypt were to improve the efficiency of the quality system regarding construction organizations and pressures from competitors/foreign partners for manufacturing entities. Similar study for ISO 9001 perception has been conducted in Saudi Arabia the main finding was that the overall views and experiences of quality managers / representatives who responded to the survey on ISO 9000 were very positive and encouraging (Magd, 2006). Moreover, Magd concluded (Magd, 2006) that the three most important benefits achieved from implementing ISO 9000 in Saudi Arabia are; improving the efficiency of the quality system, better documentation procedures, and increased quality awareness within the certified firms and that differs according to the type of organization business. More exploration can be found in (AL-Tahat and Gharbieh, 2010), (AL-Tahat and Gharbieh, 2011), (Pan, 2003), Nasser et al. (2004), (McAdam and Jackson, 2002). Yahya and Goh (2001) included a sample of certified organization from Singapore, Japan, Korea, Taiwan, Europe, and USA. Naser et al. (2004) studied the effect of ISO 9001 certification on the performance of 162 public listed companies in Malaysia. Casadesu´s et al. (2001) concluded that although ISO 9000 has many positive points, but these points must be used in right context to maximize the benefits gained from the standard. Joseph A. Williams, (2004), presented a study about major innovation in the ISO 9000:2000 registration processes. Kunnanatt J. T., (2007), explored how the process of ISO 9000 implementation transforms the components of organizational climate. Zeng et al., (2007), explored the barriers to implementation of ISO 9000.

Many variations between main different groups of UAE and HKJ certified organizations are highlighted in this paper, organizations' perception to ISO 9001:2000 certification based on their size, scope and period since certification are evaluated, also level of satisfaction of dominant certification bodies operating in UAE and HKJ is discusses, more exploration to this work can be found on (AL-Tahat and Gharbieh, 2008).

2. Research Design Validation and Statistical Tests

Questionnaires are associated with positivistic and phenomenological methodologies (Collis and Hussey, 2003). Advantage of this data collection method lies in its ability of having feedbacks from wide range of sampled organizations which will enable latter a comparative analysis. Three main principles were followed as shown if Figure 1 when building the questionnaire, these are; principle of wording, principle of scaling and validity, and aesthetics and general rules.

Principle of wording: Frame work and the contents are determined, ordinary words is carefully selected, double-barreled questions as well as ambiguous questions have been avoided, recall dependent or biasing questions kept away from, type of questions and response format are proposed, and questions sequence is planned.

Principle of Scaling and validity: Scale is a tool by which individuals are distinguished as to how they differ from one another on the variables of interest to our study. Variant types of scales could be found in the literature, in particular; nominal scale; ordinal scale; interval scale, and ratio scale. In this paper interval scale is chosen

because: a) it lets us measure the distance, order, and difference between any two points on the scale, b) it allows us to perform certain arithmetical operations, and c) interval scale helps us to compute the means and standard devotions. As such, interval scale is a more powerful scale. Its measures of dispersion are range, standard deviation, and variance. Likert rating is designed to examine how strongly subjects agree or disagree with 41 carefully structured statements on Five-Point interval scale with these anchors.

Validation: Validity has been carried out by a panel of judges. This panel consists of interested parties in ISO implementation such as consulting firms, certification bodies and quality managers, and regulators. These parties were contacted as advisors to evaluate different factors that should be considered, they were advised on data collection method, evaluated the questionnaire structure and design, recommended a nonprobability convenience sample size, and accordingly validated the results obtained.

Statistical Tests: Non-parametric tests are used to analyze single Likert items which are normally treated as ordinal data. Kruskal-Wallis test under different parameters of Chi-Square probability distribution is used for comparison. Intuitively, it is identical to a one-way analysis of variance, with the data replaced by their ranks. This test is a nonparametric alternative to one-way analysis of variance and it can provide a good tool for analysis. Intuitively, it is identical to a one-way ANOVA, with the data replaced by their ranks. Norusis (Norusis, 2004) provides a good tool for analysis especially that no needs to ensure normal population in this test. Another important reason for selecting this test is due the previous usage of it in other similar conducted researches like the work of Magd (Magd, 2005) and Dimara (Dimara et al., 2004).

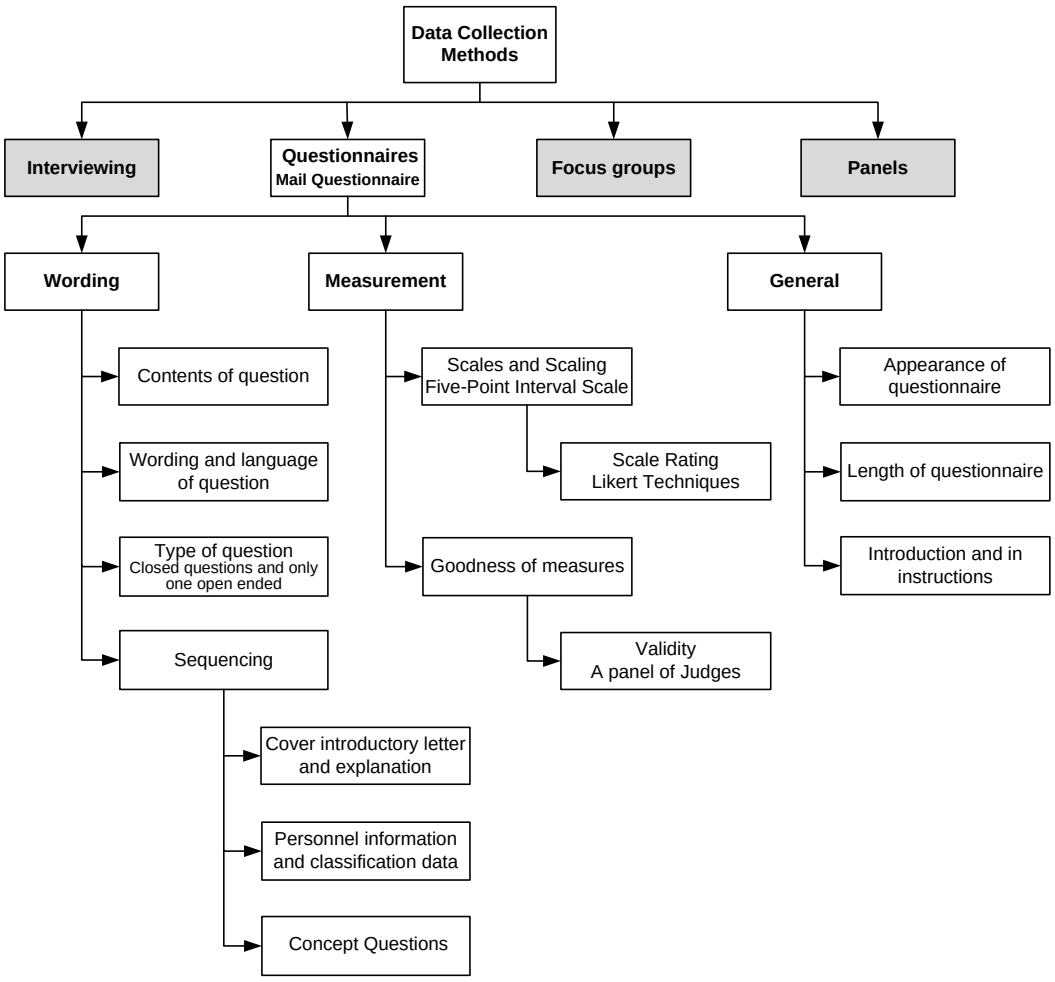

Figure 1: Structure and design of the developed questionnaire in this research

3. Pilot Study and Profiles of Participated Organizations

As shown in Table 1 the designed questionnaire is distributed to a sample size of 100 and 50 certified organizations in UAE and HKJ markets respectively. Based on Waston principles (Waston, 2004) number of obtained responses is adequate and gives an excellent confidence.

The scope of work for 23.3 % of the sample is in the manufacturing industries, the other 76.7 % is in the service industries in UAE while it was 33.3% manufacturing industries and 66.6% service industries in HKJ. Table 2 illustrates the number and percentage of employees of the studied organizations. Organization of large number of employees is more familiar with ISO than others. Also it is obviously concluded that less than ten years old organizations are more familiar with ISO 9000:2000 than older ones.

As seen by Table 3. In UAE 34 % of the organizations were certified by DNV, 28 % by Lloyd's, 15 % by BVQI and 11 % were certified by SGS. While in HKJ 70% were certified by SGS and 30% by Lloyd's. This indicated that four certification bodies (DNV, Lloyd's, SGS and BVQI) are dominating more than 89 % of ISO 9001:2000 UAE. And that in HKJ Lloyd's and SGS are having the whole shares. Last three columns of Table 2 reveals that organization in HKJ started looking for ISO certification before that in UAE with a growth rate of 20% per year.

Table 1: Statistics on responses and participated organizations

Market	Number of certified organization	Number of participated Organizations (Sample size)	Respondents		Incomplete responses		Non Responding organizations		organization Type (%)	
			Number	%	Number	%	Number	%	Industrial	Others
UAE	1048	100	61	61	6	6	33	33	23.3	76.6
HKJ	248	50	30	60	1	2	19	38	33.3	66.6

Table 2: Distribution of participated organizations (AL-Tahat and Gharbieh, 2010)

Market	Distribution of participated organizations (%) according to									
	Number of employees				Organization Life (Year)			Years of Certification		
	≤ 70	> 70 and < 151	≥ 151 and ≤ 500	> 500	≤ 9	> 9 and < 21	≥ 21	< 1	≥ 1 and ≤ 4	> 4
UAE	31	8	21	39	78	37	31	13	44	43
HKJ	17	10	30	43	41	33	30	7	33	60

Table 3: Number of organization certified by certification bodies

	SGS	DNV	Lloyd	BVQI	Others
UAE	7	21	17	9	7
HKJ	21	0	9	0	0

4. Drivers of adopting ISO 9001:2000

Four drivers have been addressed. These are: (1) Enhancing promotional efforts; (2) Improving internal efficiency costs; (3) Customer's requisition; and (4) Following competitors steps after they have been ISO 9001: 2000 certified; and,. Ranks of level of implementation of these drivers as are demonstrate by Table 4.

5. Main Benefits of Implementing ISO 9001

Benefits for implementing ISO 9000 were addressed by many researchers like (Pan, 2003), (Yahya and Goh, 2001), (Naser et al., 2004), (Singh et al., 2006) and in the Arab World (Magd et al., 2003), (Magd and Curry, 2003) and (Magd, 2006). The respondents were asked to provide their feedback of ISO 9001:2000 benefits, these benefits were ranked as shown in Table 5. The first benefit "better analyzing information that lead to more decisions that are appropriate" is more evidenced in small size organizations rather than medium and large ones. This is related to the close interaction within small organization after implementing the ISO system. Because ISO 9000 is requesting to have internal audits and management

reviews, these processes are more effective if the organization is smaller. Similarly, this benefit is clearly evidenced in trading organizations more than others trade. When compared with period of certification there is no clear evidence observed that this benefit is affected through time. The second benefit "enhancing internal communication within the organization" shows that there is no evidence to conclude that this benefit is changed between the different grouping variables (organization size, scope of word and years been certified).

Table 4: Drivers Statistics and ranks

Rank	Driver	μ	σ	No. of Employees	Mean Rank	Level of Importance
UAE						
1	For promotional reasons	4.03	0.72	≤ 70	44.2	**High**
				71-150	38.6	**Medium**
2	To improve internal efficiency	3.77	0.81	151-500	47.4	
				> 500	36.9	
3	To fulfill customers' requirements	3.65	0.73	≤ 70	45.1	**Medium**
				71-150	40.5	
				151-500	37.4	
				> 500	41.1	
4	Following competitors steps	2.67	1.02	≤ 70	47.5	**Low**
				71-150	35.0	
				151-500	44.7	
				> 500	40.9	
HKJ						
1	For promotional reasons	4.27	0.93	≤ 70	49.7	**High**
				71-150	44.2	**Medium**
2	To fulfill customers' requirements	3.76	0.50	151-500	52.3	
				> 500	46.1	
3	To improve internal efficiency	3.21	0.66	≤ 70	46.1	**Medium**
				71-150	44.5	
				151-500	50.1	
				> 500	4**8**.7	
4	Following competitors steps	2.32	1.08	≤ 70	45.6	**Low**
				71-150	45.3	
				151-500	46.5	
				> 500	47.3	

For the third, benefit "enhancing abilities of eliminating the causes of potential non-conformities" this factor is clearly evidenced more as a benefit for small organizations, and for contracting and trading organizations more than manufacturing ones. The fourth benefit "improving customer service" indicates that customer service for ISO 9001:2000 certified organizations is being observed to be improved better in small scale organizations rather than the other ones. This can be justified due to the small number of people handling customer requirements in small organization, which improve the effectiveness, especially after having a quality management system in place. Moreover, this benefit is much evidenced in trading organizations, due to the type of industry, which is focusing on customer more than other. and much less observed in manufacturing due to less customer interfaces between most of the operational units with customers, also there is quite good justification to observe improvement in customer service over certification period which shows more gained benefit to customers over more time of implementing the ISO 9000 standard by the certified organizations. The fifth benefit is more observed in contracting companies if compared to servicing sector organizations, which gave perception of less importance to this benefit, due to more tangible problems in the contracting systems that can be assessed and solved through the quality management system more than the servicing sector.

Table 5: Statistics and ranks of perceived benefits after implementing ISO 9001

Benefit No.	Benefit Description	μ	σ	Internal /External Factor
1	Better analyzing information lead appropriate decisions	4.06	0.86	**Internal**
2	Enhancing internal communication within the organization	4.04	0.83	**Internal**
3	Enhancing abilities of eliminating non-conformities	4.00	0.75	**Internal**
4	Improving customer service	3.98	0.84	**External**
5	Better identifying problems and effectively solving them	3.96	0.87	**Internal**
6	Improving customer satisfaction	3.88	0.88	**External**
7	Improving internal efficiency and reducing costs	3.86	0.81	**Internal**
8	Getting more business	3.77	0.96	**External**
9	Increasing employees' productivity	3.73	0.90	**Internal**
10	Increasing market share	3.70	0.97	**External**
11	Enhancing human resources competencies	3.59	1.02	**Internal**
12	Enhance relationship with suppliers	3.57	0.95	**External**
13	Improve supplier performance	3.38	1.01	**External**

6. Implementing ISO 9001

Respondents in large organizations are sharing the concern of after implementing ISO 9001 the work is being more complicated more than other organizations. This observation can be related with the existing number of systems implemented at large organizations, so when they are having ISO 9000 they feel that it is an extra system that is added to the original systems they were running. This point is highlighting the importance of integrating ISO 9001 with other systems in place especially for large organizations to avoid having duplication in systems and unclear definition of responsibilities. In other words, ISO 9000 should be a system embedded within the other implemented system and not a separate entity that is been maintained only for certification purposes.

When comparing the problems initiated after certification there is a tendency of having minimum problems in the first year of certification, while these problems are observed more between year one and three after certification then it is observed to become reduced after the three years of certification. The problems are minimal in the first year, because people are very enthusiastic with their certificates; they look at the positive side of ISO 9000 and how to maintain it. After one year, less commitment by the employee is observed as they become busier with doing operational work and they give less attention to system maintenance. At this stage doing internal audits adds more problems to them. The cycle starts again with the re-certification when employees give more attention to the implementation of quality management system especially with preparation for the re-certification process to avoid any disciplinary actions by the management.

7. Quality Management Principles and ISO 9001: 2000 Main Clauses

The overall perception of total quality management principles within the two countries is different in some way as shown in Table 6. In UAE people would see that implementing the standard made a chance to involve people more while in HKJ people recognized that ISO 9001 was important to measure process performance. The impact of implementing the standard on identifying customer requirements was apparently more obvious in HKJ rather than UAE. On the other hand the last rank was to beneficial supplier relationship in both countries.

A set of statements covering the level of satisfaction with three main common clauses of ISO 9001:2000 (Clauses 5: Management Responsibility, Clauses 6: Resource Management, and Clauses 8: Measurement, Analysis and Improvement) where asked to the participants, a reliability analysis for each clauses were analyzed, results are shown in Table 5. Clause 7 was eliminated due to the fact that companies can exclude non applicable sub-clauses from it depending on their scope of work and this will add more complexity while analyzing the data.

Table 7 illustrates high perception of implementation for

clause five then clause eight and finally clause six, in other terms UAE and Jordanian certified companies are more in favor of understanding and implementing the management responsibility clause more than measurement, analysis, improvement and resource management clauses respectively.

8. Certification Bodies and Quality Initiatives

Since the sample size of the certified organizations is very small, especially when addressed to the name of certification body it is difficult to get accurate results using standard statistical tests of comparison.

1. BVQI and TUV should focus slightly more to enhance the competencies of their auditors.
2. BVQI when compared with other certification bodies needs to focus more on the specialization of their auditors.
3. Lloyd's, BVQI and TUV should slightly improve information presented in their reports.

These results are demonstrated as shown in Figure2.

Table 6: Statistics of implementing quality management principles

UAE			**HKJ**		
Principle	**μ**	**σ**	**Principle**	**μ**	**σ**
Involvement of People	4.237	0.749	Process Approach	4.290	0.815
Process Approach	4.180	0.778	Customer Focused	4.137	0.839
Leadership	4.178	0.935	Involvement of People	4.095	0.880
Factual approach to decision making	4.159	0.858	Continual Improvement	3.997	0.795
Customer Focused	3.970	0.836	System Approach to Management	3.877	0.934
Continual Improvement	3.660	0.808	Leadership	3.795	0.918
System Approach to Management	3.521	0.763	Factual approach to decision making	3.599	0.912
Beneficial Supplier Relationship	3.519	0.950	Beneficial Supplier Relationship	3.581	0.919

Table 7: Perception Level of ISO 9001:2000 and main clauses

Country	**ISO 9001 Clause**	**μ**	**σ**	**Inter- Correlations**
UAE	Five	4.170	0.738	0.422
	Six	3.931	0.741	0.438
	Eight	4.082	0.624	0.412
HKJ	Five	4.231	0.673	0.467
	Six	3.81	0.827	0.441
	Eight	3.936	0.711	0.423

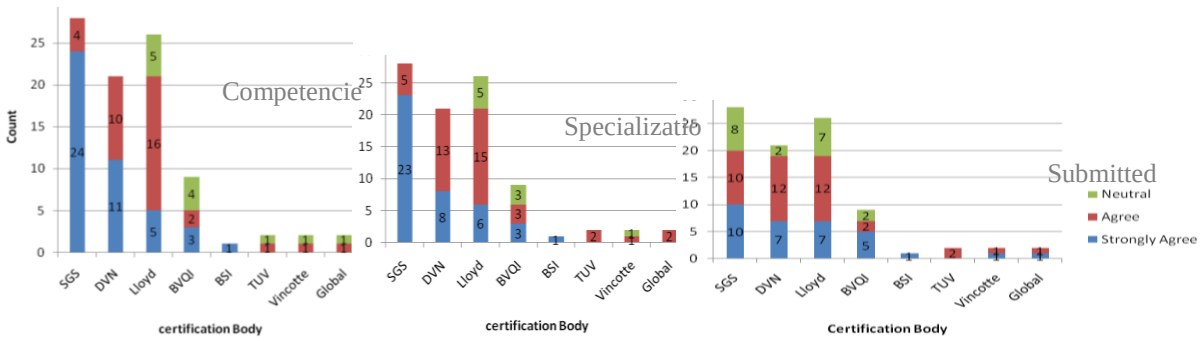

Figure 2: Satisfaction level of competencies, specialization, and submitted reports to external auditors of certification bodies

Certified organizations were requested to provide their feedback about their perception of the ability of ISO 9001: 2000 to promote implementing other standards such as; Occupational Health, Safety System (OHSAS 18001), information security management systems (BS 7799 or ISO 27001), etc. As for implementing other standards and other quality initiatives like Total Quality Management (TQM), Business Excellence Model (BEM), Six Sigma and any other initiatives. 29.7 % of respondents have other quality initiatives in place, which also indicates that ISO 9001:2000 is helping organizations to establish quality culture and to take further initiatives toward quality improvement. 12 % of the 91 organizations are having more than one quality initiative see Figure 3.

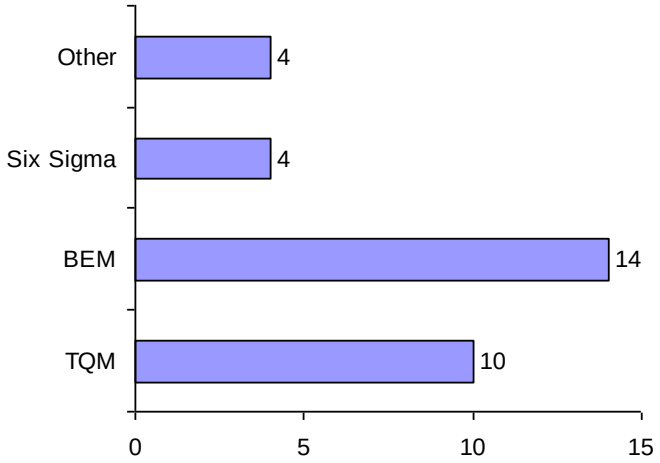

Figure 3: Quality initiatives used by certified organizations in the targeted countries.

9. Conclusions

The paper presents an international research that inform about the state of art of ISO 9001:2000 implementation in Hashemite Kingdom of Jordan (HKJ) and United Arab Emirates (UAE).The drawn results and concluded remarks throughout this work can be summarized through the following bullets:

- It is concluded that around 42 % of certified organizations will give preference to their supplier if they are ISO 9000 certified, while around 25 % of certified organizations are not. The internal benefits gained are more dominant than the external ones.
- The most perceived principle when implementing ISO 9001: 2000 in UAE and HKJ is the involvement of people while there is some doubt to enhance the relationship with suppliers.
- The new revision of the ISO 9000 standard is fulfilling its objectives in organizations in both countries through reducing extent of documentation requirements and focusing on system outcome. The most dominant driver in both countries was for promotional reasons, then improving internal efficiency and fulfilling customer's requirement of doing business, improving the internal efficiency was the second priority in UAE while fulfilling customer needs were ranked second. This finding is emphasizing the desire of organizations in both countries to enhance their images to be distinguished in such an open economy and it is also justifying why 29.3 % of certified organizations are taking the other quality.
- Contracting and trading organizations adopted drivers of ISO 9001: 2000 certifications for better promotion of their businesses to get competitive edge; Driver for enhancing internal efficiency is more evidenced in small-scale organizations. Small organizations are gaining benefits of ISO 9001: 2000 more than medium and large-scale organizations. ISO 9001:2000 is having a good perception of enhancing internal communication regardless of the scope of work of organizations, their sizes, or duration of certification. The internal relationship is enhanced through quality trainings, internal audits and management reviews that overcome barriers and encourage effective interaction between different parties.
- Difficulties of implementing ISO 9001 are faced more by certified organization between the first and the

third year after certification. Governmental, manufacturing, and service certified organizations are having other quality initiatives. This represents the willingness of these organizations for more improvements.

10. Recommendations and Limitations

As limitations of this research, Government in both considered countries should put more controls on the work of certification bodies and utilize the opportunity to promote standards implementation among developing countries. This research gives only some indicators in this area and still in the initial; more focus should be given to use the findings of this paper in other specific researches. One disadvantage of nonprobability convenience sampling design used here is that it is not general at all; it is used at this time to obtain quick information to get a feel for the scope of interest.

11. Acknowledgment

This work is extracted from a master thesis entitled "A comparative study for ISO 9001:2000 implementation in the Hashemite Kingdom of Jordan and United Arab Emirates State". The thesis was successfully defended approved, and published by the University Jordan on 1/12/2008. It was supervised by Dr. Mohammad D. Al-Tahat and was prepared by Ayman Abu Gharbieh.

REFERENCES

Al-Tahat M. D. and Gharbieh A. A. 2011. Evaluation of the Implementation of ISO 9001:2000 in the Hashemite Kingdom of Jordan and United Arab Emirates. The 6th International Working Conference ''TOTAL QUALITY MANAGEMENT - ADVANCED AND INTELLIGENT APPROACHES'', With Second Special Conference ''Manufuture in Serbia 2011'', Belgrade, Serbia.

Al-Tahat M. D. and Gharbieh A. A. 2010. A study for implementation of ISO 9001: 2000 based on organization type. International Science and Technology Conference Proceedings- Book, Turkish Republic of Northern Cyprus, Famagusta, 17-26.

Al-Tahat M. D. and Gharbieh A. A. 2008. A comparative study for ISO 9001:2000 implementation in the Hashemite Kingdom of Jordan and United Arab Emirates State. Master thesis published by Jordan University, Industrial Engineering department. Amman Jordan.

Dimara, et al. 2004. Strategic orientation and financial performance of firms implementing ISO 9000**.** *International Journal of Quality and Reliability Management*, 21, (1): 72-89.

Douglas, A., Coliman, S. and Oddy, R. 2003. The case for ISO 9000. *The TQM Magazine*, 15(5): 316-324.

Joseph A. Williams. 2004. The impact of motivating factors on implementation of ISO 9001:2000 registration process. *Management Research News*, 27(1/2): 74 – 84, ISSN: 0140-9174, DOI: 10.1108/01409170410784365.

Kunnanatt J. T. 2007. Impact of ISO 9000 on organizational climate: Strategic change management experience of an Indian organization. *International Journal of Manpower*, 28 (2): 175 – 192, ISSN: 0143-7720, DOI: 10.1108/01437720710747983.

Magd, H., Kadasah, N. and Curry, A. 2003. ISO 9000 implementation: A study of manufacturing companies in Saudi Arabia. *Managerial Auditing Journal*, 18 (4): 313-322.

Magd, H., Kadasah, N., and Curry, A. 2003. ISO 9000 implementation: A study of manufacturing companies in Saudi Arabia. *Managerial Auditing Journal*, 18 (4): 313-322.

Magd, H. 2005. An evaluation of ISO registration agencies: A study of Egyptian Hotels. *Management Research News*, 28(5): 27-42.

Magd, H. 2006. An investigation of ISO 9000 adoption in Saudi Arabia. *Managerial Auditing Journal***,** 21 (2): 132-147.

McAdam, R. and Jackson, N. 2002. A pectoral study of ISO 9000 and TQM transitions: the UK and Irish brewing sector. *Integrated Manufacturing System*, 13 (4): 255-263.

Naser, K., Karbhari, Y. and Mokhtar, M. Z. 2004. Impact of ISO 9000 registration on company performance Evidence from Malaysia. *Managerial Auditing Journal*, 19 (4): 509-516.

Norusis, M. J. 2004. SPSS 12.0 Guide to data analysis, Prentice Hall, New Jersey, 1st Edition.

Pan, J. 2003. A comprehensive study on motivation for and experience with ISO 9000 and ISO 14000 certification among Far East countries. *Industrial Management and Data Systems*, 103(8): 564-578.

Singh, P. J., Feng, M. and Smith, A. 2006. ISO 9000 series of standards: comparison of manufacturing and service organizations. *International Journal of Quality & Reliability Management*, 23 (2): 122-142.

Yahya, S. and Goh, W. 2001. *The implementation of ISO*

sustainable implementation of the ISO 9001 system. *Managerial Auditing Journal*, 22 (3): 244 – 254, ISSN: 0268-6902, DOI: 10.1108/02686900710733125.

Zeng S.X., Tian P., Tam C.M. 2007. Overcoming barriers to *9000 quality system.* International Journal of Quality & Reliability Management, 18 (9). 941-966.

دراسة إحصائية لتطبيقات الآيزو 9001: 2000 في المملكة الاردنية الهاشمية وفي الإمارات العربية المتحدة

محمد ضيف الله الطاهات، أيمن أبو غربية *

ملخص

يهدف هذا البحث الى تقييم فعالية تنفيذ الآيزو 9001: 2000 داخل الشركات الحاصلة على شهادة المطابقة في المملكة الأردنية الهاشمية ودولة الإمارات العربية المتحدة، وإجراء المقارنة الاحصائية لتطبيقات الآيزو 9001: 2000 في الدولتين. كما تعمد الدراسة إلى إجراء مقارنة النتائج بين السوق الإماراتي والأردني، وتبيان أهم الدوافع للحصول على الشهادة، ومدى استفادة الشركات الحاصلة على الشهادة من تطبيق متطلبات المواصفة، والمشكلات ذات الصلة، ومدى تأثير تطبيق المواصفة على تطبيق غيرها من المبادرات المتعلقة في نظم إدارة الجودة، فقد أظهرت النتائج أن تطبيق مواصفة الآيزو 9001: 2000 كان له أثر إيجابي داخل دولة الإمارات العربية المتحدة والمملكة الأردنية الهاشمية كما انه يشكل نقطة انطلاق جيدة لمواصلة المبادرات الخاصة بنظم إدارة الجودة.

اخذ بعين الاعتبار حجم الشركات في عينة الدراسة ومجال عملها ومدة سنوات حصولها شهادة الايزو، وقد تبين ان هناك اختلافاً طفيفاً بين دوافع تنفيذ مواصفة الآيزو 9001: 2000 بين الأردن ودولة الإمارات العربية المتحدة، ولكن من المتوقع مع الوقت أن الدوافع ستتقارب بين الدولتين مع بدء الأردن تنفيذ سياسة السوق المفتوح، التي تم تطبيقها مسبقاً في دولة الإمارات العربية المتحدة، كما أنه يجب على الجهات الحكومية المعنية في كلتا الدولتين وضع المزيد من الضوابط على عمل الجهات المانحة للشهادات والاستفادة من نظام الآيزو 9001: 2000 لتعزيز تنفيذ المعايير الدولية فيما بين البلدان النامية.

الكلمات الدالة : المملكة الأردنية الهاشمية، الإمارات العربية المتحدة، تطبيقات الأيزو.

* كلية الهندسة والتكنولوجيا، الجامعة الاردنية. تاريخ استلام البحث 2012/2/26، وتاريخ قبوله 2012/4/15.