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Quality Management Practices and Internal Knowledge Transfer Relationship: Empirical Study of Manufacturing Companies in Jordan

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Abstract
The purpose of the study was to investigate the relationship between quality management practices (QMP) and internal knowledge transfer in Jordanian Manufacturing Companies. It surveyed 230 employees by means of a questionnaire. Statistical techniques such as descriptive statistics, correlation, multiple regressions, were employed. To confirm the suitability of data collection instrument, a Kolmogorov-Smirnov (K-S) test, Cronbach's Alpha and factor analysis were used. The result of the study showed a positive significant relationship between QMP and IKT. The current study results showed that the main hypothesis was rejected and the alternative was accepted which states that the QMP variables (teamwork, empowering and process control) affect IKT. The results also indicated that involving employees in processes control and using different methods to ensure quality were having highest effect on IKT. Followed by working as a team during performing a task or activity, finally employee empowerment was having the lowest effect on IKT, though it was having positive and significant effect on IKT. The use of one industrial area study design may limit its generalisability to other areas. The data is also limited to Jordanian organizations; therefore, generalizing results of Jordanian setting to other countries may be questionable. Extending the analyses to other settings represent future research opportunities, which can be done by the following ways: Further testing with larger samples within same industry is important, and including other industries will help mitigate the issue of generalizing conclusions on other organizations and industries. Moreover, further empirical researches involving data collection over diverse countries especially Arab countries are needed. The research results might help both academics and practitioners. The data suggest that a similar set of QMP indicators could be developed for other organizations and industries whether government, public or private, profitable or non-profitable organizations. QMP should be taken into serious consideration when formulating the Jordanian Manufacturing Companies strategy.
Key Words: Quality Management Practices (QMP), Internal Knowledge Transfer(IKT), Jordanian Manufacturing Companies.

1.Introduction

QM focuses externally on meeting customer requirements, while internally on management commitment, employee training and education (Zhu and Scheuermann 1999). QM as an approach to doing business that attempts to maximize the competitiveness of an organization through the continual improvement of the quality of its products, services, people, processes, and environments (Davis and Goetsch 2006). The word "quality" means different things to different people. The ranges of meanings include that quality is excellence, value, conformance to specifications, conformance to requirements, fitness for use, customer satisfaction, meeting and exceeding customers' expectations and minimizing the loss imparted to society (Kumar et. al. 2009). QM means continuously improving the quality of processes, technology and people needs to improve overall organizational performance (Chauhan 2012). Flynn et al. (1994) identified and substantiated seven key dimensions of QM: top management support, quality information, process management, product design, workforce management, supplier involvement and customer involvement. Moreover, Motwani (2001). identified seven critical factors: top management commitment, quality measurement and benchmarking, process management, product design, employee training and empowerment, vendor QM and customer involvement and satisfaction based on extensive review of prescriptive, conceptual practitioners, and empirical literature. Finally, Knouse et. al.(2009) stated that Deming's ideas have furthered not only QM but have also touched areas in the social sciences, such as ethics and organizational relationships.

2. Literature Review

Joiner (2007) data analysis supported a strong positive relationship between the extent of implementation of TQM practices and organization performance. Sun et. al.(2009) concluded: QMS based on TQM aim to enhance product quality, providing organizations with a means of achieving higher quality processes. White et. al (2009)concluded that through the correct development of the QMS the company was able to generate bottom-line savings and business performance enhancement. Antunes et. al.(2009) concluded that the degree of QMS implementation affects positively the success of a performance measurement system. Iqbal et. al. (2012) data analysis showed that there is a strong and positive association between the TQM practices and quality performance, innovation performance and organization performance respectively. Aldaweesh et. al.(2012) concluded that TQM is one of the effective tools to minimize the cost and to improve the outcomes. Ali, et. al. (2012) study revealed that TQM has strong impact on hospital performance in the Jordan hospitals. Sajjad and Amjad (2012) findings revealed that TQM practices and implementation have positive effects on quality benefits or outcomes in services sector of telecom industry of Pakistan. Dizgah et. al. (2012) study result showed that almost all TQM practices positively affect organizational performance. Rabee (2012) research indicated that the application of TQM would improve educational organization performance. Bhat and Rajashekhar (2009) concluded that the main barriers for QM were the lack of benchmarking and employee’ s resistance to change, employee resistance can be overcome by proper training and by involving the employees in the planning and implementation phases of TQM. Mendez and Balbastre (2012) after an extensive literature review; they identified three key areas, which have a significant impact on the implementation of TQM: the processes, people, partnerships and cooperation agreements. Different people categorize knowledge into different types. Nonaka, et al. (1998) divided knowledge into explicit knowledge and tacit knowledge. Ramesh (2002) divided knowledge into two categories: product knowledge and process knowledge. Dixon (2000) said that the two categories of knowledge are interrelated to each other. Ahmed et. al.(2002) stated that knowledge is hard to imitate, hard to substitute, and can be transferred within an organization. The fundamental objectives of KM and QM are the same, to create more organizational knowledge so that improvement can occur, and lead to better firm's performance (Linderman et. al. 2004). The concepts of QM and KM are interrelated to each other (Zetie 2002), and are conceptualized in different ways (Honarpour, et. al. 2012). The connection between KM and the quality approach is not a new issue (Castilla and Ruiz 2008). TQM and KM contribute significantly to the improvement of performance for any organization (Ooi 2009). There is a positive correlation between TQM practice and knowledge assets and a positive correlation between provision of knowledge and performance improvement (Chuang and Tsai 2009). Argote and Ingram (2000) defined knowledge transfer in organizations as the process through which one unit is affected by the experience of another. Hansen (2002) stated theories about knowledge transfer have focused on explaining the transfers between organizational units or between firms in the same industry. While, Oliver (2001) said that others focused on the characteristics of the units that transfer knowledge. Ali et. al. (2011) stated all core elements of TQM have significant correlations with knowledge sharing. Teamwork and IKT*:* Ooi et. al. (2008) stated not all TQM practices enhance workers’ job satisfaction, only organization culture and teamwork showed a positive relationship with the workers’ job satisfaction. Saleki et. al. (2012) said in a successful organization, teams must be made up of people who have an interest in these processes. Empowerment and IKT*:* Empowerment goes hand in hand with responsibility for the results (Arias and Molina, 2002). Colurcio (2009) stated TQM emphasis on the involvement of all employees. While, Vanichchinchai and Igel (2009) added TQM emphasizes internal participation and external partnerships. Nazeri et. al. (2011) stated participative decision-making is the most important component of the QM process. Finally, the organization culture and employee empowerment are high involved in TQM practices (Jain and Gupta 2012). Process Control and IKT*:* TQM can be understood as a systematic and global approach to enterprise management, with the aim of continuous improvement (Colurcio,2009). TQM tools and techniques, and behavioral factors contribute to the successful implementation of TQM (Hassan et. al. 2012). Quality indicators are fundamental for theprocess of quality evaluation (Goncalves 2009). QM uses quality statistical tools to monitor and control processes (Renzi et. al. 2009).

3. Study Importance and Scope

A better understanding of the effect of QMP elements on IKT draws conclusions that can be beneficial not only for JMCs but also to other organizations, institutions and policy makers. The content also may be of an interest to

academic studies related to the reporting and decision-making concerning QMP. The current study might be considered as initiative that presents the effect of QMP on IKT in JMCs.

4. Study Purpose and Objectives

The current study attempts to investigate the effect of QMP on IKT in JMCs. The main objective of this research is to provide sound recommendations about performance measurement within QMP context by identifying and defining the main attributes of quality and productivity of QMP.

5. Problem Statement

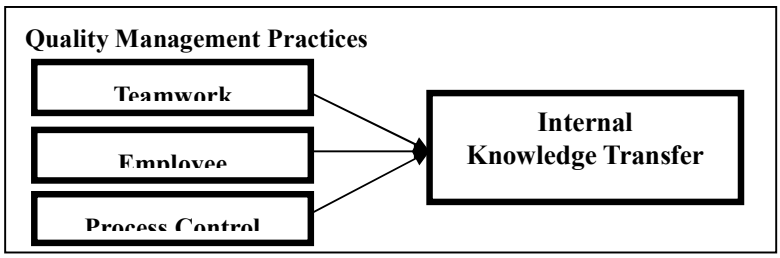
The main purpose of the current research is to investigate the relationship between QMP and IKT, more specifically to answer the following main question: Is there a direct impact of QMP on IKT in JMCs?

6. Study Hypotheses

Ho: QMP do not have direct and significant impact on IKT within JMCs, at $\alpha \leq 0.05$.
Ho-1: Teamwork practices do not have direct and significant impact on IKT in JMCs, at $\alpha \leq 0.05$.
Ho-2: Employee empowerment practices do not have direct and significant impact on IKT in JMCs, at $\alpha \leq 0.05$.
Ho-3: Process control practices do not have direct and significant impact on IKT in JMCs, at $\alpha \leq 0.05$.

6. Study Model

Figure (1) shows how both the technical and social aspects of QMP affect IKT.



Model (1): The Study Model: the Relationship between Quality Management Practices (QMP) and Internal Knowledge Transfer (IKT).

7. Research Methodology

7.1 Study Population and Unit of Analysis

The primary data were collected from all JMCs in Sahib Industrial City. The unit of analysis consists from all employees working at these companies. At the time of the study, there were (920) employees working in these companies. By systematic random sampling (230) employees were selected to complete the questionnaire.

7.2 Data Collection Method

Secondary data were collected from JMCs' annual reports and previous studies. The questionnaire was used to collect the primary data. Questionnaire's independent variables (QMP): teamwork, employee empowerment and process control. Dependent variable: IKT. All variables were measured by five-point Likert-type scale.

7.3 Data Collection and Analysis

Questionnaires were delivered to 230 employees selected by systematic random sampling. Only 152 out of 230 returned questionnaires were suitable for further analysis and coded against SPSS-20.

7. 4 Normal Distribution

Table (1) shows that K-S for all independent and dependent items and variables are more than (3) three. Therefore, they are considered acceptable.

Table (1): Normality Test: One-Sample Kolmogorov-Smirnov (Z) Test

Items	(K-S)Z	Sig.
Encourage teamwork	5.921	o.ooo
Team problem solving	3.407	o.ooo
Functional teamwork	5.516	o.ooo
Teamwork	**4.218**	**o.ooo**
Workers control work	5.948	o.ooo
Workers identify problems	5.597	o.ooo
Workers solve problems	4.704	o.ooo
Autonomy decision making	2.596	o.ooo
Employee Empowerment	**3.557**	**o.ooo**
Process statistical methods	4.948	o.ooo
Process mechanism quality	6.246	o.ooo
Process design quality	5.191	o.ooo
Process techniques & control	5.759	o.ooo
Process Control	**5.029**	**o.ooo**
IKT clear objectives	4.867	o.ooo
IKT specific requirements	3.812	o.ooo
IKT expertise	4.532	o.ooo
IKT written procedures	4.786	o.ooo
IKT superior practices	4.380	o.ooo
IKT clear recommendations	4.561	o.ooo
IKT	**3.893**	**o.ooo**

Sig. (2-tailed)

7.5 Reliability Test

Table (2) shows that the results of Cronbach's alpha for the research items were between 0.812 and 0.942, which registered acceptable.

Table (2): Cronbach's Alpha for Research Studies Variable:

Variables	No. of Items	Alpha
Teamwork	3	0.831
Employee Empowerment	4	0.812
Process Control	4	0.875
TQM	11	0.917
IKT	6	0.952

7.6 Validity

Two methods were used to confirm validity: First, multiple sources of data were used, then factor analysis was carried out for all items.

7.7 Factor Analysis

Table (3) shows that all items and variables were valid, since their factor loading values were more than 0.4.

Table (3): Factors Loading for Research Variable Items

Item	Extraction
Encourage teamwork	0.727
Team problem solving	0.677
Functional teamwork	0.649
Teamwork	**0.903**
Workers control work	0.392
Workers identify problems	0.687
Workers solve problems	0.708
Autonomy decision making	0.505
Employee Empowerment	**0.855**
Process statistical methods	0.747
Process mechanism quality	0.752
Process design quality	0.736
Process techniques & control	0.649
Process Control	**0.973**
IKT clear objectives	0.722
IKT specific requirements	0.774
IKT expertise	0.778
IKT written procedures	0.818
IKT superior practices	0.836
IKT clear recommendations	0.764
IKT	**0.998**

Principal Component Analysis.

7.8 Bivariate Pearson's Correlation Coefficient

The table (4) shows that the QMP variables significantly and strongly related to IKT. At the same time, QMP variables are strongly related to each other.

Table (4): Pearson's Correlation (r) Among Independent Variables and with Dependent Variable

	1	2	3	TW	4	5	6	7	EE	8	9	10	11	PC	12	13	14	15	16	17
1																				
2	.647**																			
3	.708**	.518**																		
TW	.903**	.840**	.854**																	
4	.349**	.399**	**.332****	.417**																
5	.595**	.560**	.580**	.668**	.422**															
6	.586**	.585**	.552**	.664**	.438**	.791**														
7	.446**	.529**	.402**	.532**	.347**	.535**	.583**													
EE	.621**	.651**	.585**	.716**	.639**	.863**	.887**	.801**												
8	.401**	.385**	.374**	.447**	.393**	.435**	.493**	.412**	.539**											
9	.465**	.434**	.520**	.546**	.433**	.526**	.551**	.406**	.594**	.742**										
10	.473**	.498**	.483**	.560**	.482**	.501**	.594**	.489**	.641**	.658**	.681**									
11	.466**	.405**	.443**	.506**	.467**	.533**	.495**	.413**	.588**	.566**	.615**	.619**								
PC	.527**	.503**	.529**	.601**	.520**	.583**	.622**	.504**	.691**	.860**	.873**	.867**	.828**							
12	.514**	.463**	.556**	.590**	.345**	.505**	.561**	.439**	.581**	.497**	.465**	.486**	.469**	.560**						
13	.437**	.424**	.535**	.538**	.419**	.486**	.522**	**.382****	.560**	.548**	.560**	.497**	.512**	.616**	.753**					
14	.398**	**.357****	.468**	.471**	.335**	.442**	.468**	**.383****	.509**	.421**	.484**	.496**	.465**	.545**	.668**	.720**				
15	.447**	.412**	.499**	.523**	.379**	.513**	.463**	**.343****	.525**	.442**	.465**	.466**	.425**	.524**	.692**	.729**	.752**			
16	.485**	.423**	.474**	.532**	.412**	.435**	.492**	**.385****	.533**	.526**	.566**	.525**	.455**	.602**	.683**	.760**	.767**	.824**		
17	.437**	**.339****	.460**	.475**	.380**	.474**	.516**	**.372****	.541**	.498**	.516**	.512**	.486**	.587**	.668**	.685**	.735**	.743**	.780**	
IKT	.515**	.459**	.567**	**.593****	.430**	.541**	.573**	.436**	**.615****	.556**	.579**	.564**	.533**	**.650****	.848**	.883**	.878**	.896**	.910**	.869**

** Correlation is significant at the 0.01 level (2-tailed).

8. Study Variables Analysis

Table (5) shows that the average means of the respondents' perception about the implementation of QMP variables were ranging from 3.57 to 3.75, with standard deviation that ranges from (0.717 to 0.855). Such results indicate that there is a varied agreement on the implementation of QMP variables. The overall result indicates that there is a significant implementation of the QMP among JMCs, where (t=65.31 sig.=0.000).

Table (5) also shows that the average means of the respondents' perception about the implementation of teamwork items were ranging from 3.31 to 3.76, with standard deviation that ranges from (0.978 to 1.024). Such results indicate that there is a varied agreement on the implementation of teamwork items. The overall result indicates that there is a significant implementation of the teamwork variable among JMCs, where (t=51.572 sig.=0.000). It also show that the average means of the respondents' perception about the implementation of employee empowerment items were ranging from 3.19 to 4.05, with standard deviation that ranges from (0.688 to 1.036). Such results indicate that there is a varied agreement on the implementation of employee empowerment variable. The overall result indicates that there is a significant implementation of the employee empowerment variable among JMCs, where (t=62.042 sig.=0.000). Finally, it shows that the average means of the respondents' perception about the implementation of process control items were ranging from 3.67 to 3.89, with standard deviation that ranges from (0.767 to 0.976). Such results indicate that there is a varied agreement on the implementation of process control variable. The overall result indicates that there is a significant implementation of the process control variable among JMCs, where (t=60.221 sig.=0.000).

Table (5): Mean, Standard Deviation and One-Sample T-Test Results for QMP Variables.

Item	Mean	Std. Deviation	Std. Error Mean	t	Sig. (2-tailed)
Encourage teamwork	3.7632	0.96108	0.07795	48.274	0.000
Team problem solving	3.3092	1.02443	0.08309	39.826	0.000
Functional teamwork	3.6513	0.97831	0.07935	46.015	0.000
Teamwork	**3.5746**	**0.85454**	**0.06931**	**51.572**	**0.000**
Workers control work	4.0526	0.68850	0.05584	72.570	0.000
Workers identify problems	3.6118	0.89183	0.07234	49.931	0.000
Workers solve problems	3.5658	0.93264	0.07565	47.137	0.000
Autonomy decision making	3.1974	1.03604	0.08403	38.049	0.000
Employee Empowerment	**3.6069**	**0.71676**	**0.05814**	**62.042**	**0.000**
Process techniques & control	3.6974	0.97681	0.07923	46.666	0.000
Process statistical methods	3.6711	0.89721	0.07277	50.445	0.000
Process mechanism quality	3.8947	0.77338	0.06273	62.088	0.000
Process design quality	3.7368	0.94018	0.07626	49.002	0.000
Process Control	**3.7500**	**0.76773**	**0.06227**	**60.221**	**0.000**
QMP	**3.6438**	**0.68790**	**0.07302**	**65.306**	**0.000**

Table (6) shows that the average means of the respondents' perception about the implementation of IKT variable were ranging from 3.39 to 3.58, with standard deviation that ranges from (0.963 to 1.074). Such results indicate that there is a varied agreement on the implementation of IKT variable. The overall result indicates that there is a significant implementation of the IKT among JMCs, where (t=48.10 sig.=0.000).

Table (6): Mean, Standard Deviation and One-Sample T-Test Results for IKT Variable

IKT Items	Mean	Std. Deviation	Std. Error Mean	t	Sig. (2-tailed)
IKT clear objectives	3.5197	1.05460	0.08554	41.147	0.000
IKT specific requirements	3.3947	1.07443	0.08715	38.954	0.000
IKT expertise	3.5132	1.02929	0.08349	42.081	0.000
IKT written procedures	3.5789	1.00017	0.08112	44.117	0.000
IKT superior practices	3.5658	1.01428	0.08227	43.343	0.000
IKT clear recommendations	3.5000	0.96289	0.07810	44.814	0.000
Total IKT	**3.5121**	**0.90031**	**0.07302**	**48.094**	**0.000**

9. Hypotheses Testing

Main Hypothesis **Ho**: QMP practices do not have direct and significant impact on IKT in JMCs, at $\alpha \leq 0.05$.

The R square value is 0.490; therefore, the model is regarded as being suitable to be used for multiple regressions with the data.

Table (7): Results of Multiple Regression Analysis: QMP Variables against IKT

Variable	r	R^2	ANOVA F- Value	Sig.
QMP Variable	0.707	0.490	49.377	0.000

Table (7) shows that the three variables together explained 49.0 percent of the variance, where (R^2=0.490, F=49.377, Sig.=0.000). Therefore, the null hypothesis is rejected and the alternative hypothesis is accepted, which states that the QMP variables affect IKT. The following table shows the significant effect of each variable within the QMP variables.

Table (8): Un-standardized and Standardized Coefficients of Multiple Regression Model for QMP Variables against IKT

QMP Variables	Un-Standardized Coefficients		Standardized Coefficients	t-value	P
Constant	B	Std. Error	Beta		
	0.117	0.288		0.405	0.686
Teamwork	0.241	0.090	0.229	2.686	0.008*
Employee Empowerment	0.234	0.118	0.186	1.977	0.050
Process Control	0. 451	0.096	0.384	4.677	0.000*

**Calculated less than 0.05*

The conclusion of table (8) shows that the process control variable has the highest effect on JMCs, where (Beta=0.384, sig.=0.000). Followed by teamwork variable, where (Beta=0.229, sig.=0.008), while employee empowerment variable has the lowest effect on JMCs, where (Beta=0.186, sig.=0.050). The relationship between the dependent and independent variables derived by this model can thus be expressed as:

QMP = 0.117 + 0.451 (Process Control) + 0.241 (Team Work) + 0.234 (Employee Empowerment).

Ho-1: Teamwork practices do not have direct and significant impact on IKT in JMCs, at $\alpha \leq 0.05$.

Table (9): Results of Multiple Regression Analysis: Teamwork Variable against IKT

Variable	R	R^2	ANOVA F- Value	Sig.
Teamwork	0.605	0.366	28.443	0.000*

**Calculated less than 0.05*

Table (9) shows that the teamwork variable alone explained 36.6 percent of the variance, where (R2=0.366, F=28.443, Sig.=0.000). Therefore, the null hypothesis is rejected and the alternative hypothesis is accepted, which states that the teamwork variable affects IKT. The following table shows the significant effect of each item within the teamwork variable.

Table (10): Un-standardized and Standardized Coefficients of Multiple Regression Model for Teamwork Items against IKT

Teamwork Items	Un-Standardized Coefficients		Standardized Coefficients	t-value	P
Constant	B	Std. Error	Beta		
	1.252	0.255		4.904	0.000*
Encourage teamwork	0.120	0.098	0.128	1.223	0.223
Team problem solving	0.155	0.076	0.177	2.046	0.043*
Functional teamwork	0.355	0.086	0.385	4.135	0.000*

**Calculated less than 0.05*

Table (10) shows that the inter-functional teamwork item has the highest effect on JMCs, where (Beta=0.385, sig.=0.000). Followed by team problem solving item, where (Beta=0.177, sig.=0.043), while encouraging teamwork item has the lowest effect on JMCs, where (Beta=0.128, sig.=0.223).

Ho-2: Employee empowerment practices do not have direct and significant impact on IKT in JMCs, at $\alpha \leq 0.05$.

Table (11): Results of Multiple Regression Analysis: Employee Empowerment Variable against IKT

Variable	R	R^2	ANOVA F- Value	Sig.
employee empowerment	0.624	0.389	23.396	0.000

**Calculated less than 0.05*

Table (11) shows that the employee empowerment variable alone explained 38.9 percent of the variance, where (R^2=0.389, F=23.396, Sig.=0.000). Therefore, the null hypothesis is rejected and the alternative hypothesis is accepted, which states that the employee empowerment variable affects IKT. The following table shows the significant effect of each item within the employee empowerment variable.

Table (12): Un-standardized and Standardized Coefficients of Multiple Regression Model for Employee Empowerment Items against IKT

Employee Empowerment Items	Un-Standardized Coefficients		Standardized Coefficients	t-value	P
Constant	B	Std. Error	Beta		
	0.565	0.361		1.563	0.120
Workers control work	0.252	0.095	0.193	2.649	0.009*
Workers identify problems	0.175	0.108	0.173	1.613	0.109
Workers solve problems	0.278	0.108	0.288	2.566	0.011*
Autonomy decision making	0.095	0.070	0.109	1.352	0.179

**Calculated less than 0.05*

The conclusion of table (12) shows that the workers are encouraged to solve problems item has the highest effect on JMCs, where (Beta=0.288, sig.=0.011). Followed by workers control their work item, where (Beta=0.193, sig.=0.009), while workers encouraged to identify their work related problems and autonomy of decision making items were having the lowest effect on JMCs, where (Beta=0.173, sig.=0.109) and (Beta=0.109 sig.=0.179) respectively.

Ho-3: Process control practices do not have direct and significant impact on IKT in JMCs, at $\alpha \leq 0.05$.

Table (13): Results of Multiple Regression Analysis: Process Control Variable against IKT

Variable	R	R^2	ANOVA F- Value	Sig.
process control	0.651	0. 424	27.003	0.000

Table (13) shows that the process control variable alone explained 42.4 percent of the variance, where (R2=0.424, F=27.003, Sig.=0.000). Therefore, the null hypothesis is rejected and the alternative hypothesis is accepted, which states that the process control variable affects IKT. The following table shows the significant effect of each item within the employee empowerment variable.

Table (14): Un-standardized and Standardized Coefficients of Multiple Regression Model for Process Control Items against IKT

Employee Empowerment Items	Un-Standardized Coefficients		Standardized Coefficients	t-value	P
Constant	B	Std. Error	Beta		
	0.619	0.295		2.097	0.038
Process mechanism quality	0.236	0.121	0.203	1.948	0.053
Process design quality	0.190	0.090	0.199	2.103	0.037*
Process techniques & control	0.176	0.079	0.191	2.236	0.027*
Process statistical methods	0.167	0.099	0.167	1.685	0.094

**Calculated less than 0.05*

Table (14) shows that the uses mechanisms to ensure quality item has the highest effect on JMCs, where (Beta=0.203, sig.=0.053). Followed by new product design quality item, where (Beta=0.199, sig.=0.037). Then, knowing controlling techniques item, (Beta=0.191, sig.=0.027). While using statistical methods for quality item was having the lowest effect on JMCs, where (Beta=0.167, sig.=0.094).

10. Discussion and Conclusions

Nowadays, knowledge has become a key element not only for organization's success, but also to be survived. Knowledge needs to be managed to leverage the organization performance. The most important and critical issue is how to retain and develop the knowledge; this cannot be done without transferring the knowledge from inside and outside resources to employees. Every organization struggles to convert implicit knowledge to explicit knowledge i.e. converting human capital to structural capital. QMP concerns about the processes and practices of knowledge

transfer. According to QMP practices, knowledge transfer can be done within the organization and can be gained from outside the organization. To transfer knowledge internally, teamwork, employee empowerment and involving the employees in processes control is important.

The current study results showed that the main hypothesis was rejected and the alternative was accepted which states that the QMP variables (teamwork, empowering and process control) affect IKT. The results also indicated that involving employees in processes control and using different methods to ensure quality were having highest effect on IKT. Followed by working as a team during performing a task or activity, finally employee empowerment was having the lowest effect on IKT, though it was having positive and significant effect on IKT.

11. Research Limitations/Recommendations

The use of one industrial area study design may limit its generalisability to other areas. The data is also limited to Jordanian organizations; therefore, generalizing results of Jordanian setting to other countries may be questionable. Extending the analyses to other settings represent future research opportunities, which can be done by the following ways: Further testing with larger samples within same industry is important, and including other industries will help mitigate the issue of generalizing conclusions on other organizations and industries. Moreover, further empirical researches involving data collection over diverse countries especially Arab countries are needed.

12. Contributions/Practical Implications

The research makes significant theoretical and empirical contributions to literature regarding influence of QMP on the organizations' IKT. The research results might help both academics and practitioners to be more ready to understand the components of QMP and provide insight into developing and increasing them within their organizations. QMP are important source of organizations' performance and therefore it should be taken into serious consideration when formulating the JMCs strategy. This strategy formulation process can be enhanced by fully integrating QMP components into management practices. JMCs should coordinate different perspectives of QMP to improve IKT and should assign scales for each of the three components of QMP. Finally, the data suggest that a similar set of QMP indicators could be developed for other organizations and industries whether government, public or private, profitable or non-profitable organizations.

References

Ahmed, K.P., Kok, K.L., and Loh, Y.E.A., (2002), *Learning through Knowledge Management,* (1st Ed.). Oxford: Butterworth Heinemann.

Aldaweesh, M., Al-Karaghouli, W. and Gallear, D. (2012), "The Relationship between Total Quality Management Implementation and Leadership in the Saudi Higher Education: A Review and Conceptual Framework". *European, Mediterranean & Middle Eastern Conference on Information Systems, June 7-8, Munich, Germany*, pp. 461-467.

Ali, K.A., Alolayyan, M.N. and Idris, F. (2012), "The Impact of Total Quality Management (TQM) on Hospital Performance in the Jordanian Hospitals: An Empirical Evidence (Medical Leaders' Perspectives"). *Global Conference on Operations and Supply Chain Management (GCOM 2012) Proceeding, Bandung, Indonesia,* pp. 148-170.

Antunes, G. and Pires, A. and Machado, V. (2009), "Process Improvement Measures in Social Area Organizations: A Study in Institutions for Elderly: Survey Results". The *TQM Journal*, Vol. 21 No. 4, pp. 334-352.

Argote, L., and Ingram, P., (2000), Knowledge Transfer: A Basis for Competitive Advantage in Firms. *Organizational Behavior and Human Decision Processes*, 82, pp.150-169.

Arias, D., and Molina, L.M., (2002), "Determinants of Innovation through a Knowledge-Based Theory Lens". *Industrial Management and Data Systems*, 102 (5), pp. 289–296.

Bhat, K.S. and Rajashekhar, J. (2009), "An Empirical Study of Barriers to TQM Implementation in Indian Industries". *The TQM Magazine,* Vol. 21 No. 3, pp. 261-272.

Castilla, J.I. and Ruiz, O.R. (2008), "EFQM Model: Knowledge Governance and Competitive Advantage", *Journal of Intellectual Capital*, Vol. 9 No. 1, pp. 133-156.

Chauhan, S. (2012), "Quality Management Practices in Indian IT Industry", *IJRIM*, Volume 2, Issue 2 (February, 2012), pp. 860-867.

Chuang, S.H. and Tsai, J. (2009), "Creating Knowledge Assets for Organizational Performance: An Organizational Learning Perspective", *APIEMS*, pp. 293-302.

Colurcio, M. (2009), "TQM: A Knowledge Enabler?" *The TQM Magazine*, Vol. 21 No.3, pp. 236-248.

Davis, S. and Goetsch, L., (2006), *Introduction to Total Quality.* New York, Merril: Macmillan College.

Dixon, N. M. (2000), *Common Knowledge: How Companies Thrive by Sharing what they Know.* Boston, MA: Harvard Business School Press.

Dizgah, M.R., Hossein, G. and Farshad, K. (2012), "The Relationship between TQM Practices and Organizational Performance in the Insurance Industry of Guilan Province", *Journal of Basic Applied Science Research*, 2(4), pp. 3397-3402.

Flynn, B.B., Schroeder, R.G., and Sakakibara, S., (1994), "A framework for Quality Management Study and an Associated Measurement Instrument", *Journal of Operations Management*, 11 (4), pp. 339–366.

Goncalves, H.S. (2009), "Proposal of a Strategy Model Planning Aligned to the Balanced Scorecard and the Quality Environments", *The TQM Journal,* Vol. 21 No. 5, pp. 462-472.

Hansen, M.T., (2002), "Knowledge Networks: Explaining Effective Knowledge Sharing in Multiunit Companies", *Organization Science,* 13 (3), pp. 232–248.

Hassan, M., Mukhtar, A., Qureshi, S.U. and Sharif, S. (2012), "Impact of TQM Practices on Firm's Performance of Pakistan's Manufacturing Organizations', *International Journal of Academic Research in Business and Social Sciences,* Vol. 2, No. 10, pp. 232-259.

Honarpour, A., Jusoh, A. and Nor, K.M. (2012), "Knowledge Management, Total Quality Management and Innovation: A New Look", *Journal of Technology Management Innovation*, Volume 7, Issue 3, pp. 22-31.

Iqbal, T., Khan, B.A., Talib, N., and Khan, K. (2012), "TQM and Organization Performance: The Mediation and Moderation Fit", *Life Science Journal*, 9(4), pp. 1571-1582.

Jain, A. and Gupta, S.L. (2012), "Effects of Total Quality Management on Perceptual. Human Resource Management Outcomes in Software Industry in India", *Research in Business and Management,* Vol.1(2), pp.23-35.

Joiner, T.A. (2007), "Total Quality Management and Performance - The Role of Organization Support and Co-worker Support", *International Journal of Quality & Reliability Management*, Vol. 24 No. 6, pp. 617-627.

Knouse, S.B., Carson, P.P., Carson, K.D. and Heady, R.B. (2009)," Improve Constantly and Forever The Influence of W. Edwards Deming into the Twenty-first Century", *The TQM Journal,* Vol. 21 No. 5, pp. 449-461.

Lia, C., and Chuang, S., (2006),"Exploring the Role of Knowledge Management for Enhancing Firm's Innovation and Performance", *MIS Quarterly*, 29 (1), pp. 112-131.

Linderman, K., Schroeder, R.G., Zaheer, S., Liedtke, C., Choo, A.S. (2004),"Integrating Quality Management Practices with Knowledge Creation Processes", *Journal of Operations Management*, 22, pp. 589–607.

Motwani, J., (2001)."Critical Factors and Performance Measures of TQM", *The TQM Magazine*, 13(4), pp. 292-300.

Nazeri, A., Javanmard, H., Rashidi, S. and Tohidi, A.A. (2011),"The Effect of Quality Management and Participative Decision-Making on Individual Performance", *International Conference on Information Communication and Management IPCSIT*, Vol.16, pp. 83-87.

Nonaka, I., Reinmoeller, P., and Senoo, D., (1998)," The 'ART' of Knowledge: Systems to Capitalize on Market Knowledge", *European Management Journal*, 16 (6), pp. 673–684.

Oliver, A.L., (2001),"Strategic Alliances and the Learning Life-cycle of Biotechnology firms", *Organization Studies,* 22 (3), pp. 467–489.

Ooi, K.B. (2009)," TQM and Knowledge Management: Literature Review and Proposed Framework", *African Journal of Business Management*, Vol.3 (11), pp. 633-643.

Ooi, K.B., Arumugam, V., Teh, P.L., and Chong, A.Y.L. (2008)." TQM Practices and its Association with Production Workers",. *Industrial Management & Data Systems,* Vol.108 No. 7, pp. 909-927.

Rabee, A.M. (2012),"Quality Management Practices and Their Impact on Educational Organizations Performance", *European Journal of Social Sciences,* Vol.31 No.2, pp.231-240.

Ramesh, B. (2002),"Process Knowledge Management with Traceability", *IEEE Software,* 19(3), pp. 50-53.

Renzi, M.F., Vicard, P., Guglielmetti, R. and Musella, F. (2009), "Probabilistic Expert Systems for Managing Information to Improve Services", *The TQM Journal,* Vol. 21, No. 4, pp. 429-442.

Sajjad, F. and Amjad, S. (2012),"Role of Benchmarking in Total Quality Management: Case of Telecom Services Sector of Pakistan*", Business Management Dynamics*, Vol.1, No.8, pp. 34-44.

Saleki, Z.S., Sabet, H.S., Roumi, R. and Dezfoulian, A. (2012), "Main Factors influencing TQM in Educational Industry", *Interdisciplinary Journal of Contemporary Research in Business*, Vol. 4, No 4, pp. 110-130.

Sun, H, Zhao, Y. and Hon Yau, H.K. (2009), "The Relationship between Quality Management and the Speed of New Product Development", *The TQM Journal,* Vol. 21, No. 6, pp. 576-588.

Vanichchinchai, A. and Igel, B. (2009),"Total Quality Management and Supply Chain Management: Similarities and Differences", *The TQM Magazine,* Vol. 21 No. 3, pp.249-260.

White, G.R.T., Samson, P., Jones, R.R. and A.J. Thomas (2009). The Implementation of a Quality Management System in the Not-for-profit Sector. *The TQM Magazine,* Vol. 21, No. 3, pp. 273-283.

Zetie, S. (2002). The Quality Circle Approach to Knowledge Management. *Managerial Auditing Journa*l, 17(6), pp. 317-321.

Zhu, Z. and Scheuermann, L., (1999). A Comparison of Quality Programs: Total Quality Management and ISO 9000. *Total Quality Management,* 10(2), pp. 291-297.

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