

Antecedents and Consequences of knowledge Sharing Behavior

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Abstract

Purpose – The purpose of this paper is to investigate an integrative model that explores the relationship between knowledge sharing antecedents (motivation, job involvement and job satisfaction) and its consequences (organizational human capital and organizational performance).

Design/methodology/approach – A structured questionnaire was developed. The hypotheses were simultaneously tested on a sample of 403 employees out of 800 distributed, giving a response rate of 50.37 per cent. Several analytical techniques were used to assess the relationships among the variables under investigation.

Findings – The findings of this study have shown significant positive relationships among the variables under investigation. The research confirmed the importance of motivation, job involvement and job satisfaction as key indicators of knowledge sharing and its consequences.

Practical Implications – the relationships among the variables under investigations may provide a clue regarding how companies can promote knowledge sharing culture, which focuses on the employees' job involvement and satisfaction derived from their motivation to boost organizational human

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capital and performance by increasing their willingness to collect knowledge and disseminate to their colleagues.

Research Limitations – The research was limited to one manufacturing company in Egypt. Future research could add views from the manager’s value perceptions point of view and also examine the crucial relationship network. Our model should be cross-validated with the same instruments in other industries. Also the use of cross-sectional design restricts inferences being drawn regarding casualty. Conducting longitudinal research could serve to enrich the results.

Originality/Value – the paper contributes in adding to the body of the Egyptian culture knowledge by addressing the antecedents and consequences of knowledge sharing behavior from the employees perspective - an emphasizing approach on the pivotal role of knowledge sharing as well as the asset of the organizational human capital that has not been taken before in the Egyptian business market.

Keywords –Motivation, Job Involvement, Job Satisfaction, Knowledge Sharing, Organizational Performance, Organizational Human Capital, Manufacturing Company, Egypt.

Research Type – Research Paper

1. Introduction

In a business economy characterized by severe global competition and the rapid delivery of excellent products and services, knowledge sharing has become a major focus of management literature (Barney, 1991; Chiang et al., 2011; Hsu, 2008; Teece et al., 1997; Weinerfelt, 1984). Knowledge sharing is defined as the informal communication process involving the

sharing of information between organizational members (Siemsen et al., 2008; Teh and Sun, 2011). Knowledge sharing is critically important for organizations to identify, capitalize, maintain and develop a core competitive advantage that enables them to meet customers' diverse and rapidly changing needs, wants and demands, learning new techniques in solving problems and initiating new services and products (Kim and Lee, 2006; Chen and Cheng, 2012; Renzl, 2008; Grant, 1996; Kogut and Zander, 1992; Hsu, 2008; Alavi et al., 2006; Davenport et al., 1998; Drucker, 1993; Husted and Michailova, 2002; Michailova and Husted, 2003; Lin, 2008; Chiang et al., 2011; Bollinger and Smith, 2001; Teece, 1998; Lee et al., 2013; Reid, 2003; Barney, 1991; Wernerfelt, 1984; Nahapiet and Ghoshal, 1998). Employees are more knowledgeable when they engage in knowledge sharing as it makes their job easier, save time, effort and money for more substantive tasks (Sitko-Lutek et al., 2010; Teh and Sun, 2011). As in any organizations, knowledge sharing behavior cannot be enforced as it depends upon the willingness or unwillingness of employees to share knowledge with their colleagues (Chow and Chan, 2008; Teh and Sun, 2011). The higher the employees perceive their knowledge as valuable assets, the higher the unwillingness to share their knowledge as sharing it may reduce their opportunities for promotion, consequently their natural tendency to keep information to themselves increased (Teh and Sun, 2011; Ho et al., 2009; Hsu, 2008; Cabrera and Cabrera, 2002;

Siemsen et al., 2008; French and Raven, 1959; Constant et al., 1996; Davenport and Prusak, 1998; Hsu et al., 2007; Block et al., 2005; Chen and Cheng, 2012) followed by creation of some problems embedded in organizational survival (Lin, 2007 a; Hsu, 2008).

Although knowledge sharing literature is rich and varied that provided useful insights over more than two decades, there still has been a gap in the literature regarding the antecedents and consequences of knowledge sharing. In other words, managerial interventions are needed to encourage and facilitate systematic knowledge sharing for a complete picture of the psychology surrounding it (Hislop, 2003; Yang, 2008; Bock and Kim, 2002; Husted and Michailova, 2002; Hsu, 2006, 2008; Becerra-Fernandez and Sabherwal, 2001; Lee and Choi, 2003; Teh and Sun, 2011; Wide'n-Wulff and Soumi, 2007).

The aims of this research are therefore to:

- Fill the gap in the literature by Putting various relational factors that have been widely used in the relationship marketing under the one umbrella through examining an integrative model that explores the relationship between knowledge sharing antecedents (motivation, job involvement and job satisfaction) and its consequences (organizational human capital and organizational performance).

- Establish a theoretical basis for evaluating a strategic increase in knowledge sharing specifically in terms of an increase in job attitudes (motivation, job involvement and job satisfaction) and the organization (organizational human capital and organizational performance).
- Examine this theoretical basis empirically in a manufacturing company in Egypt.

In the sections that follow, literature review on the factors under investigation that facilitates the conceptual model and hypotheses development followed by the research methodology description and the statistical analysis and results. Finally, discussion and conclusion, limitations and future research will be presented.

2. Literature review and hypotheses development

2.1 Knowledge sharing

Knowledge sharing is defined as the informal communication process involving the sharing of information between organizational members (Siemsen et al., 2008; Teh and Sun, 2011). Knowledge sharing is defined as a “social interaction culture, involving the exchange of employee knowledge, experiences, and skills through the whole department or organization” (Lin 2007 a, p. 315; Lin, 2007b, p. 136). Establishing, maintaining, enhancing and sustaining knowledge sharing culture in any organization is not an easy task, it is very challenging as getting employees to be willing to share their

knowledge with their colleagues is not easy (Lam and Lambermont-Ford, 2010; Teh and Sun, 2011). By nature, individuals' psychological behavioral outcomes are difficult to be understood. Employees are more willing to share their knowledge when they are freely involved, motivated, satisfied in their job and happy with their colleagues (Constant et al., 1994; Teh and Sun, 2011). Nonaka and Takeuchi (1995, p21) defined knowledge sharing “justified true belief”, followed by disseminating of these information within an organization that can guide employees in their judgments (Hsu, 2008; Liebeskind, 1996; Tsoukas and Vladimirou, 2001). Consequently increasing job performance and sustaining competitive advantage (Hsu, 2006). Knowledge sharing is important not only because of the loss of sustained knowledge acquisition caused by higher employees' turnover costs but also because it is related to the products and services offered to customers (Hallin and Marnburg, 2008; Kim and Lee, 2010; Yang and Wan, 2004; Lee et al., 2013). Various researchers agreed that knowledge sharing is a process of communication and receiving knowledge in which employees choose to receive (Senge, 1997; Davenport and Prusak, 1998; Lin, 2008; Gold et al., 2011; Chiang et al., 2011; Teece, 1998).

2.2 Antecedents of Knowledge sharing

2.2.1 Job involvement:

Job involvement was introduced by Allport (1945) as a type of job attitudes in psychological behavior research (Reeve and Smith, 2001; Tech and Sun, 2011). Job involvement is defined by Lodahl and Kejner(1965, p. 24) as the “degree to which a person is identified psychologically with his work or the importance of work in his total self-image”. Furthermore, job involvement is the degree to which an employee is involve in his and/or her current job (Blau, 1986; Paullay et al., 1994; Kanungo, 1982;Tech and Sun, 2011). Various researchers found a positive relationship between job involvement and organizational performance (Brown, 1996; Keller, 1997; Tech and Sun, 2011) and between job involvement and job satisfaction (Probst, 2000; Tech and Sun, 2011). Based on the fact that job involvement could make employee feel more confident and more willing to share knowledge about their work compared with those who are less involved in their job, thus we hypothesize that:

H1: There is a positive relationship between job involvement and knowledge sharing.

2.2.2 Job satisfaction.

Job satisfaction was initially proposed by Hoppock in 1935 (Tsai et al., 2007; Rageb et al., 2013). Job satisfaction is an internal feeling and emotional expression towards one's job that results from his and/or her achievement assessment (Golbasi et

al., 2008; Tech and Sun, 2011). According to Locke (1969, p. 316), job satisfaction is defined as “*the pleasurable emotional state resulting from the appraisal of one’s job as achieving or facilitating the achievement of one’s job values*”, also, Locke (1976,p. 1297) defined job satisfaction as “*a positive relationship characterized by pleasurable or positive state of mind resulting from the job experience*”. Various researchers found a positive relationship between job satisfaction and job performance (Zuckerman. 1989; Brown and Peterson, 1993; Babin and Boles, 1996; Mackenzie et al., 1998; Bhuian and Mengue, 2002; Kim et al., 2005; Le Rouge et al., 2006; Arnold et al., 2009; Yang, 2010; Aghdasi et al., 2011; Tech and Sun, 2011; Yucle and Bektas, 2012; Rageb et al., 2013). This satisfaction-performance relationship emerged from the Hawthorne studies and Hoppock's work on job satisfaction in the 1930's (Locke, 1969; Schwab and Cummings, 1970; Tech and Sun, 2011). Later organ (1977), Bateman and Organ (1983) and Tech and Sun (2011) agreed that employees who are highly satisfied towards their job are more inclined and more willing to engage voluntarily to share their knowledge with their colleagues. Following this rationale,we hypothesize that:

H2: There is a positive relationship between job satisfaction and knowledge sharing.

2.2.3 Motivation

According to Herzberg et al. study (1959, 1966) have divided motivation into two dimensions extrinsic and intrinsic. Ambrose and Kulik (1999: 231) defined motivation as "*the set of internal and external forces that initiate work-related behavior, and determine its form, direction, intensity and duration*". Efforts on the part of management to reduce levels of dissatisfaction are related to extrinsic factors of motivation because most of the factors in this category are extrinsic to the employees; on the other hand, intrinsic factors could be effective in motivating employees to perform better, i.e., if employees are satisfied with their pay, they are more likely to be intrinsically motivated than if they are not. This means that rewarding and recognizing excellent service highly affects service providers' job satisfaction (Lee et al., 2006; Fichter and Cipolla, 2010; Abd-El-Salam, 2013). Various researchers suggested that both internal and external motivation should be integrated into an incentive plan in order to be effective (Davenport and Prusak, 1998; Lin, 2008). Furthermore, any reward will only be effective if employees recognized it as valuable and satisfied (Amabile, 1996, 1998; Schwartz, 1990; Lin, 2008). Thus we hypothesize that:

H3: There is a positive relationship between motivation (intrinsic and extrinsic) and job satisfaction.

H4: There is a positive relationship between motivation (intrinsic and extrinsic) and job involvement.

2.3 Consequences of Knowledge sharing

2.3.1 Organizational Human Capital

Human capital is vital for any organization as it constitutes employees' skills, knowledge, competencies and capabilities in which a difference can be created, maintained and enhanced (Elias and Scarbrough, 2004; Flamholtz and Lacey, 1981; Nahapiet and Ghoshal, 1998; Snell and Dean, 1992; Youndt et al., 2004; Hsu, 2008). Parnes (1984, p. 32) defined human capital as that which ". . . embraces the abilities and know-how of men and women that have been acquired at some cost and that can command a price in the labor market because they are useful in the productive process". Following this link of thinking, the major thrust of human capital is a competence perspective; consequently, employees' competencies can lead to effective job performance that can lead to superior financial performance (Becerra-Fernandez and Sabherwal, 2001; Davenport et al., 1998; Youndt et al., 1996, 2004; Hsu, 2008). Furthermore, organizational human capital may play a vital role in developing a sustainable competitive advantage that cannot be imitated by competitors (Barney, 1991; Grant, 1991; Hsu, 2008; Peteraf, 1993; Teece et al., 1997; Ulrich and Lake, 1991; Wernerfelt, 1984). Human capital is a valuable asset to any organization as it constitutes bundles of unique resources, skills, knowledge, and abilities that are rare and highly inimitable and/ or amenable by competitors (Hsu, 2008). Thus we hypothesize that:

H5: There is a positive relationship between organizational human capital and organizational performance.

An organization within which knowledge sharing takes place will develop its human capital (Hitt, 2000; Hsu, 2008; Liebowitz, 2002; Quinn et al., 1996; Wide'n- WulffandSoumi, 2007). Various researchers stated that knowledge sharing can be the building block and the backbone of organizational human capital (Argote, 1999; Bartlett and Ghoshal, 2002; Garvin, 1993; Hsu, 2008; Liebowitz and Chen, 2001; Liebowitz, 2003, 2004). As mentioned before knowledge sharing involves the dissemination of information, knowledge, skills, ideas, expertise, and capabilities between two or more (Hamel and Prahalad, 1993; Hsu, 2008; Wasko and Faraj, 2005). Quinn et al. (1996, p. 8) stated that "As one shares knowledge with other units, not only do those units gain information (linear growth); they share it with others and feedback questions, amplifications, and modifications that add further value for the original sender, creating exponential total growth". Thus we hypothesize that:

H6: There is a positive relationship between knowledge sharing and organizational human capital.

2.3.2 Organizational performance

Organizations need highly performing employees in order to meet their goals, to deliver excellent services, and finally to achieve competitive advantage. Performance is also important for the employees as it can be a source of satisfaction, with feelings of pleasure and pride. Furthermore, high recognized job performance

often rewarded by financial and/or other benefits such as getting promoted more easily and having better career opportunities. On the other hand, low job performance might lead to job dissatisfaction or even as a personal failure (Brown and Peterson, 1993; Babin and Boles, 1996; Munro et al., 1998; Mackenzie et al., 1998; Bhuian and Mengue, 2002; Kim et al., 2005; Le Rouge et al., 2006; Arnold et al., 2009; Yang, 2010; Aghdasi et al., 2011; Yucle and Bektas, 2012; Rageb, 2013). Various researchers agreed that the ability to share knowledge between an employee and his and/or her colleague(s) has a significant contribution towards the organizational performance (Argote et al., 2000; von Krogh, 2002; Renzl, 2008). Thus we hypothesize that:

H7: There is a positive relationship between knowledge sharing and organizational performance.

3. Research questions and model of the study:

1. Is there a significant relationship between job involvement, job satisfaction and knowledge sharing? Answers H1 and H2.
2. Is there a significant relationship between motivation (intrinsic and extrinsic) and job involvement and job satisfaction? Answers H3 and H4.
3. Is there a significant relationship between organizational human capital and organizational performance? Answers H5.
4. Is there a significant relationship between knowledge sharing and organizational human capital and organizational performance? Answers H6 and H7

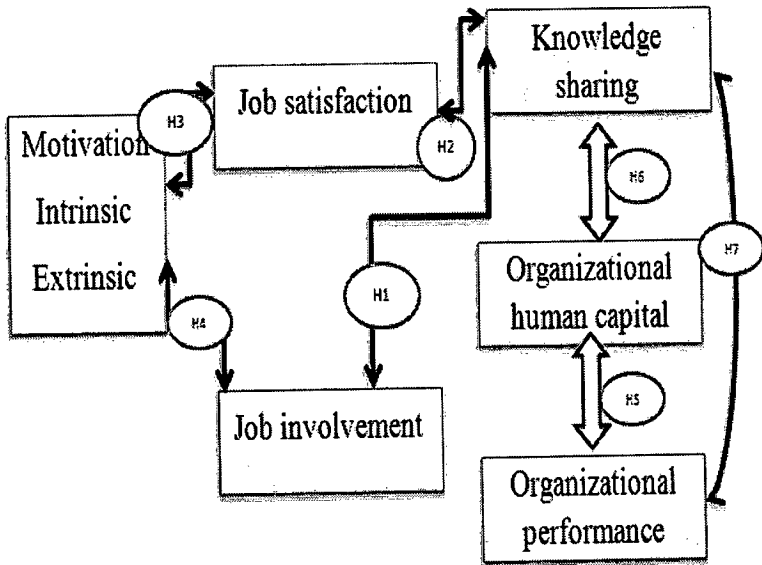


Figure (1) Model of the study

4. Research Methodology

4.1 Sample and data collection

Survey data was collected from employees of a manufacturing company. 403 questionnaires were distributed among the entire employees out of 800 distributed, giving a response rate of 50.37 per cent. 32 per cent were males and 68 per cent were females. Their ages ranged from 20 to less than 50 years old with job experience over seven years. Most of them were bachelor and master with a relatively high monthly income.

4.2 Measures

A questionnaire survey was used to obtain measures of motivation, job satisfaction, job involvement, knowledge sharing, organizational human capital and organizational

performance. All of the scales were translated from English into Arabic using the double translation method. A pilot study based on 65 returned questionnaires showed that respondents were clear about the content of the questions and instructions. Thus no change was necessary for the questionnaire to be used in the main study. The reliability and validity for Egyptian use were established using the sample from the pilot study as well as the final one.

4.3 Instrumentation

The survey instrument used in this study comprised six establishment scales. The measure of motivation was adapted from Lin (2008). The second is related to knowledge sharing was adapted from (Lin, 2008; Hsu, 2008). The third is related to job involvement was adapted from (Teh and Sun, 2011). The fourth is related to job satisfaction developed by Hackman and Oldham (1974, 1975); Dubinsky et al. (1986); Hartline and Ferrell (1996); Sohi et al. (1996) and (Teh and Sun, 2011). The fifth and the sixth are related to organizational human capital and organizational performances were adapted from Hsu (2008). All of the rating is accomplished on a five-point scale ranging from strongly disagree (1) to strongly agree (5).

5. Analysis and Results

5.1 Reliability

Internal reliability analyses were conducted using Cronbach's alpha. The scale is considered reliable when α is between 0.6 and above (Hair et al., 2006). Based on the results using SPSS

20 all of the factors values under investigation were sufficiently significant. Table (1) will illustrate the cronbach alpha

S	Construct	Cronbach Alpha
1	Intrinsic motivation	0.67
2	Extrinsic motivation	0.94
3	Job involvement	0.91
4	Job satisfaction	0.90
5	Knowledge sharing	0.90
6	Organizational human capital	0.89
7	Organizational performance	0.86

Table (1) Reliability analysis by cronbach alpha for the factors under investigation.
Source: author, based on data analysis

5.2 Validity

Second a confirmatory factor analyses were conducted using SPSS 20. The author aimed to select relevant items with increased accuracy by performing a validity assessment on each construct before investigating the validity of the overall measurement model (Singh and Rhoads, 1991). Table (2) will illustrate the standardized factor loading and AVE for factors under investigation.

s	Construct	Items	Factor loading	AVE
1	Knowledge sharing	Your department is able to update and assess data by using IT facilities for the convenience of contacting other departments	0.829	71.793
		Your department uses the various databases frequently to improve the quality of operation flows involving other departments	0.884	
		Your department has a motivation policy in place for encouraging employees to make recommendations for improvements and exchange experience with other departments	0.883	
		Your department and other department	0.874	

		have exchanged knowledge or experience with other departments on numerous occasions		
		As your department is more specialized relative to others, there are quite a few opportunities requiring your department to exchange knowledge with other departments	0.870	
2	Extrinsic motivation	Your department emphasizes material incentives to increase staff morale	0.933	83.778
		Your department has a motivation policy in place to remunerate employees for putting forward problem-solving proposals	0.949	
		Your department emphasizes the importance of a bonus policy to increase morale	0.954	
		Your department has a profit-sharing policy in place	0.819	
3	Intrinsic motivation	Wages and salaries are the most important form of income for employees in your department	0.533	59.406
		Your department shows appreciation for employees who have put forward problem-solving proposals mainly by making a public citation	0.873	
		Your department stresses the importance of work quality over sales performance in its staff performance reviews	0.858	
4	Job involvement	The most important things that happen to me involve my present job.	0.806	73.472
		Most of my interests are centered around my job	0.892	
		I have very strong ties with my present job which would be very difficult to break	0.884	
		I like to be absorbed in my job most of the time	0.888	
		The most important things that happen in life involve work	0.812	

To be continued

s	Construct	Items	Factor loading	AVE
5	Job satisfaction	The chance to make use of my abilities and skills	0.835	62.788
		The feeling of accomplishment I get from the job	0.887	
		The way my job provides for steady employment	0.858	
		The way my supervisor and I understand each other	0.742	
		The way my co-workers get along with each other	0.744	
		The chance to help people	0.693	
6	Organizational human capital	The company's employees identify themselves with company values and vision	0.756	66.199

		The company's employees exert their best efforts to achieve organizational goals and objectives	0.680	
		The company's employees are better than those of competitors at innovation and R&D	0.860	
		The company's employees are better than those of competitors at reducing the company's operating costs	0.872	
		The company's employees are better than those of competitors at responding to customer demands	0.851	
		The company's employees outperform those of competitors	0.844	
7	Organizational performance	The company has higher long-run profitability than its competitors.	0.728	59.573
		The company has higher growth prospect in sales than its competitors.	0.840	
		The company's employees have higher job satisfaction than those of competitors.	0.678	
		The company's employees have higher productivity than those of competitors.	0.815	
		The company has better goodwill than its competitors.	0.740	
		The company has better quality products or services than its competitors.	0.817	
Table (2) confirmatory factor analyses for the factors under investigation.				
Source: author, based on data analysis				

In this research, principal components analysis (PCA) is employed as it is better in providing an empirical summary of the data set (Stevens, 1996; Tabachnick and Fidell, 1996; Youssef, 2007).

To investigate the convergent validity, we calculated constructs validity and average variance extracted (AVE) as shown table (2). The measurement items of each research construct satisfied the universal standards of $CR \geq 0.6$ and $AVE \geq 0.5$ (Hair et al., 2006). And thus the convergent validity was secured for the measurement items of each construct. Thus all of the factors values under investigation were valid.

5.3 Bartlett's test of Sphericity and Kaiser-Meyer-Olkin (KMO) measure

In order to consider the suitability of the data, Bartlett's test of Sphericity should be significant ($p < 0.05$) to be appropriate. In addition Kaiser-Meyer-Olkin (KMO) index ranges from 0 to 1, in which 0.5 and above is suggested as the minimum value for good factor analysis (Tabachnick and Fidell, 1996; Pallant, 2001; Youssef, 2007). Table (3) will illustrate Bartlett's test of Sphericity and Kaiser-Meyer-Olkin (KMO) index for the factors under investigation.

s	Construct	Kaiser-Meyer-Olkin (KMO)	Bartlett's test of Sphericity	
1	Knowledge sharing	0.816	Approx. Chi-square	310.936
			df	10
			Sig	0.000
2	Extrinsic motivation	0.815	Approx. Chi-square	380.474
			df	6
			Sig	0.000
3	Intrinsic motivation	0.561	Approx. Chi-square	55.565
			df	3
			Sig	0.000
4	Job involvement	0.853	Approx. Chi-square	325.995
			df	10
			Sig	0.000
5	Job satisfaction	0.880	Approx. Chi-square	390.745
			df	21
			Sig	0.000
6	Organizational human capital	0.830	Approx. Chi-square	371.121
			df	15
			Sig	0.000
To be continued				
s	Construct	Kaiser-Meyer-Olkin (KMO)	Bartlett's test of Sphericity	
7	Organizational performance	0.751	Approx. Chi-square	289.302
			df	15
			Sig	0.000
<p>Table (3) Bartlett's test of Sphericity and Kaiser-Meyer-Olkin (KMO) measure for the factors under investigation.</p> <p>Source: author, based on data analysis</p>				

Table (3) shows Bartlett's test of Sphericity and Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy for all items that

will shape the model of the study. Obviously, the figures satisfy the required conditions, therefore, factor analysis is appropriate to this research paper.

In order to determine the goodness of fit of the model, analyses were conducted using SPSS 20 and AMOS 20. The author used goodness-of-fit index (GFI), adjusted goodness-of-fit index (AGFI), P-value, root mean residual (RMSR) and normed-fit index (NFI) (Hair et al., 2006). As a result some of the items were eliminated. Research hypotheses were tested through a structural equation model (SEM) using AMOS 20 as shown in figure (1) selecting the maximum likelihood estimation method. As a result, the goodness of fit elements in our research mostly satisfied the fit criteria of $GFI \geq 0.9$ (0.90), $AGFI \geq 0.9$ (0.91), $P\text{-value} \geq 0.05$, $RMR \leq 0.05$ (0.003) and $NFI \geq 0.9$ (0.90) indicating that each met the satisfactory criterion (Hair et al., 2006).

5.4 Correlation Analysis

S	Variables	1	2	3	4	5	6	7	AVE
1	Knowledge sharing	1							71.793
2	Extrinsic Motivation	0.639**	1						83.778
3	Intrinsic Motivation	0.598**	0.763**	1					59.406
4	Job involvement	0.428**	0.546**	0.436**	1				73.472
5	Job satisfaction	0.526**	0.596**	0.547**	0.808**	1			62.788
6	Organizational human capital	0.419**	0.394**	0.291**	0.543**	0.605**	1		66.199
7	Organizational performance	0.353**	0.312**	0.278**	0.416**	0.405**	0.678**	1	59.573
SQR (AVE)		0.847	0.915	0.771	0.857	0.792	0.814	0.772	

Table (4) Correlation Coefficient between knowledge sharing, motivation both intrinsic and extrinsic, job involvement, job satisfaction, organizational human capital and organizational performance.

Source: the researcher, based on data analysis

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

* . Correlation is significant at the 0.05 level (2-tailed).

In reference to the discriminate validity, Fornell and Larcker (1981) suggested it to be secured for two particular constructs when the AVE values of each of these constructs are greater than the coefficient determination (r^2) of the constructs. Table (4) showed the correlation coefficients among the seven research constructs. As shown there are no issues regarding the discriminate validity, therefore, the researchers can conclude that the discriminate validity was secured. Therefore, the researcher can proceed to interpret the results which lead to accept or reject the hypotheses under investigation.

5.5 Correlation Coefficient

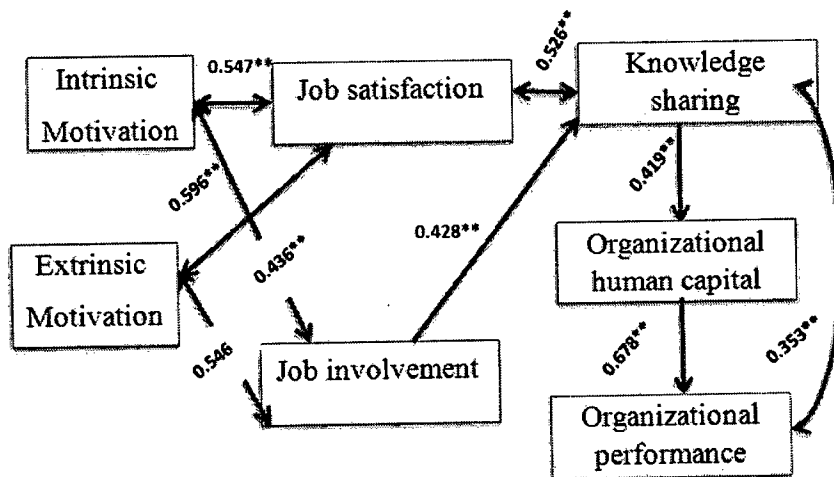
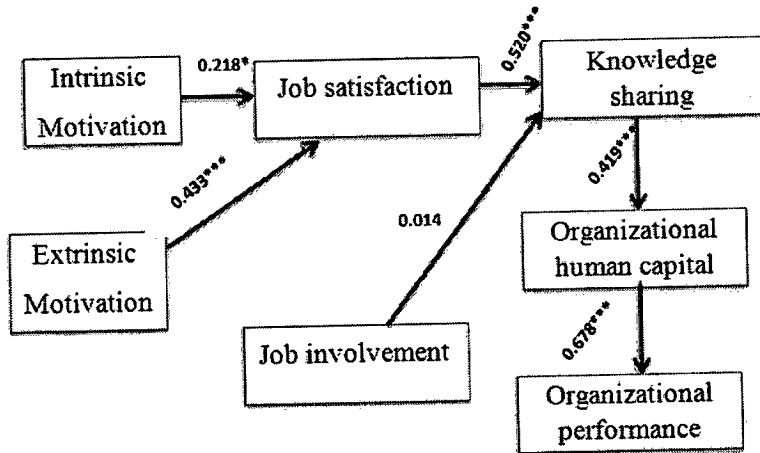


Figure (2) Correlation Coefficient

Evidence from Figure (2) and table (4) showed that there was a significant positive relationship between job involvement and knowledge sharing ($r=0.428$, $P<0.1$), thus H1 was supported. Furthermore, it was found that there was a significant positive relationship between job satisfaction and knowledge sharing ($r=0.526$, $P<0.1$), thus H2 was supported. Also, it was found that there was a significant positive relationship between motivation and job satisfaction, extrinsic motivation ($r=0.596$, $P<0.1$), intrinsic motivation ($r=0.547$, $P<0.1$), thus H3 was supported. Moreover, it was found that there was a significant positive relationship between motivation and job involvement,

extrinsic motivation($r=0.546$, $P<0.1$), intrinsic motivation ($r=0.436$, $P<0.1$), thus H4 was supported. Along with these lines, it was found that there was a significant positive relationship between organizational human capital and organizational performance ($r=0.678$, $P<0.1$), thus H5 was supported. Last but not least, it was found that there was a significant positive relationship between knowledge sharing and both organizational human capital and organizational performance ($r=0.419$, $P<0.1$), ($r=0.353$, $P<0.1$) respectively, thus H6 and H7 were supported.

5.6 Standardized Regression Weights:



6. Discussion and conclusion

This study sheds some light on how to foster knowledge sharing behavior via job attitudes practices. High involvement, satisfaction and motivation can be adapted by an organization to make employees feel that the organization appreciates them.

This is due to that employees with higher levels of job involvement are in a stronger position to understand their job tasks. Consequently, this will generate attachment toward an organization as well as more confident and inclined to share their knowledge with their colleagues. The practice of employee participation can be adapted to establish, maintain, improve and enhance employee trust in the organization and tasks which is produces through a cooperative process. Also these results can be explained from an employees' orientation towards collectivism. These high levels of collectivism would value job involvement in team and they are more likely to share knowledge with other colleagues. Furthermore, employees with higher levels of job satisfaction are more likely to share knowledge and engage with their behavior which might be regarded as a form of reciprocation to the organization in exchange for job satisfaction experienced. Much is known about motivation whether intrinsic or extrinsic and their role in leading to knowledge sharing behavior. Our findings highlights the importance of employees' job attitudes namely motivation, job satisfaction and job involvement. These results are consistent with (Chiang et al., 2011; Flynn, 2005; Fuller et al., 2003;Whitener, 2001) The present study also would be valuable to industrial practitioners because the proposed model can serve as a practical assessment tool for measuring employees' job attitudes and relating those measurements to employees' knowledge sharing behavior. Based on these assessments,

management can identify which one constitutes a barrier and direct their resources and efforts at improving the associated job attitude .Knowledge sharing behavior can make an organization clearly understands the demands of the markets followed by fulfilling them with the right products and services thus enhancing organizational performance. Hence, managers should recognize the importance of human resource management programs to monitor, develop and improve employees' job attitudes. Within service-oriented organizations, rules and job descriptions can turn into barriers as implied by Wat and Shaffer (2005) and Teh and Sun (2012). Also, this study shows the importance of organizational human capital by providing supporting evidence on its positive significance relationship on organizational performance as knowledge sharing practices improve organizational performance through the development of organizational human capital. Antecedent of knowledge sharing and its relationship with organizational culture are important. Also the importance of leadership in the construction of knowledge culture within an organization to knowledge sharing and developing organizational human capital cannot be ignored. Since empowerment is viewed as a process of enabling from the aspect of social exchange theory (Cogner and Kanugo, 1988) employees should also be empowered to exercise direction when they carry out their job functions. Narrowly defined rules and regulations as well as job descriptions should be reduced to facilitate knowledge sharing behavior. As knowledge sharing is

an informal process and therefore employees will be able to share knowledge if they have adequate slack time at work. From this aspect, management can create a work environment favorable for employees' knowledge sharing such as making time available and providing employees with more autonomy to adjust their work hours. As Lado and Wilson (1994) and Hsu (2008) claimed that strategy, cultural values and human capital developing practices should be used effectively and efficiently in capitalizing and promoting competitive advantage of an organization.

7. Research limitations and direction for future research

The current study offers insights into the unique contribution and interesting relationships between the constructs under investigation and provides a clear understanding of the importance and critical role of knowledge sharing. Nevertheless, the findings must be tempered by several limitations: first, although the use of quantitative methods alone relying on cross-sectional data as the only source of information in establishing and making causal statements about the hypothesized relationships between variables is considered valuable, it is however a weak method when attempting to identify the reasons for those relationships. Therefore, using quantitative research along with qualitative research in the future will provide richer data and greatly support the research design and the findings to account for more rigorous tests of causality. This study does not incorporate moderating variable in examining the relationships

between variables under investigation. Future research should attempt to include the moderators such as situational factors. Although this research has these limitations, it has provided theoretical and empirical justification for expecting employees' job attitudes to be related to knowledge sharing behavior. The researchers hope that the findings may help the organization administrators' and managers to attain a collective understanding regarding job attitude and its ramifications in knowledge sharing behavior. However, despite possible problems, the researcher cannot find any reason to believe that the theoretical relationships assessed in the Egyptian sample here would be dissimilar to findings on these issues in other countries. There may be concerns about the generalisability of these findings. It might be beneficial to obtain data from other types of companies in the same industry or even different industries to examine whether this model can be generalized. Overall, this research's measurement results were acceptable in terms of reliability and validity, but there is certainly a need for additional work to perfect measures. In addition, when employees know that they are being evaluated, they might perform better, which could produce the Hawthorne effect. However, the researcher did not believe these issues seriously affected the assessments of the hypothesized relationship in this study. Future research can be conducted to overcome these limitations.

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