

Investigating the influence of organizational agility on value creation competency through knowledge share process In Irancell telecommunication company

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Abstract: In today's business world, one of the most important characteristics is organizational agility especially in competitive industries. Speed of the processes of change in technology in one hand, and variation in the nature of the customers' requests in the other hand cause organizations strongly seeking new advantages to provide customers' needs better. The purpose of this study is to investigate the effect of organizational agility components on value creation ability through mediator variable of knowledge sharing in Irancell Telecommunication Company. This is a descriptive and empirical survey. Statistical population involves all 300 employees of Irancell Company in Isfahan province. The numbers of 170 employees were chosen randomly as sample case by using Morgan table. For measuring organizational agility and value creation ability self-report questionnaire with 45 items was used, and also for measuring knowledge sharing, 10 items self-report questionnaire was used. In order to assess the reliability of measurements Cronbach's alpha was used and SPSS and LISREL were applied to data analysis. Results of the analysis which done by structural equation modeling showed that organizational agility influences on knowledge sharing and value creation competency with value of 0.51 for knowledge sharing, and 0.61 for value creation competency.

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1. Introduction

Competition in uncertain, unpredictable, aggressive environment is characteristics of today's dynamic environment. To develop the skills, competencies, knowledge, abilities and actions to meet business changes, organizations have to achieve and maintain competitive advantages faster than their competitors (Porter, 1985).

For the first time, in 1991, concept of agility was introduced by researchers of Yacoca Institute and since so far, it has attracted the considerations of industrial associations. Since 1990s numerous researches have tried to provide a comprehensive and complete definition of agility.

Confirmed definitions of agility states: "agility is organizational capability of rapid response in order to meet diverse clients' needs, in some instances, such as price, quantity, quality, and delivery time (Prince and Kay, 2003). Therefore, agility is identified as an essential factor for survival in chaotic markets (Lin and Chiu, 2006).

Later Peter Draucker introduced the concept of agile enterprise to business world and then researchers such as Nagel and Goldman determined and explained aspects and components of agility at the level of the organization although the texture and major space

which they focused on were production and producer (Goldman et al, 1995).

Knowledge in information technology era is one of the main sources of achieving competitive advantage (Brent and Vittal, 2007; Wang and Noe, 2009). Knowledge sharing and knowledge management are frameworks of organizational success and creators of competitive advantages (Bock and Kim, 2002; Layck, 2005). Knowledge sharing is a vital tool in order to implementing knowledge, creation of innovation and ultimately achieving competitive advantage (Jackson et al., 2006).

Organization Design is the basis of its performance and its competitive advantage. Studies found that supporting of structures, processes and systems of organization are important to achieve strategy's goals. Agility is the dynamics capability of organization designing which can diagnose needs to change from internal and external sources, do them and control performance stable (Worley and Lawler, 2010).

In this article first we review the subjects of organizational agility, process of knowledge sharing and value creation competency, and then provide a comprehensive model due to investigating the influences of Organizational agility on value creation

competency and knowledge sharing and also the effects of knowledge sharing on value creation competency and finally the influence of agility on value creation competency through mediator variable of knowledge sharing.

2. Literature review

In high competitive business environment, the ability of companies to develop new products and services depends on using more effective methods of knowledge sharing among company's staffs than its other competitors. For development Organizations have to use chaotic environment as an opportunity not a threat. It seems that the primary key to active and creative responses to changing environments is knowledge sharing methods.

2.1. Agility competency

Different concepts and terminology in the literature have been used instead of the term "organization agility", such as flexibility, responsibility, adaptation, etc. However, some researchers distinguish clearly between these concepts and terminology of "agility" (Conboy and Fitzgerald, 2004), while some others consider these concepts synonyms (Sharifi and Zhang, 1999; Yusuf et al., 1999, 2004). Lack of an accepted definition of agility may be caused by being irrelevance, anesthesia, non-explicit, vague, fuzzy logic, and operational actions (Giachetti et al., 2003; Arteta and Giachetti, 2004; Lin et al., 2006a; Jain et al., 2007). Achieving agility requires a new mindset of agility and using new criteria for evaluation of performance. Goldman and

his colleagues, defined agility as offering value to the customers, readiness for change, admiring knowledge and skills of staff and shaping Virtual Institute (Goldman et al, 1995). According to Zain and his colleagues (2005), agility is the response to imposed challenges by business environment which is surrounded by uncertainty. Agile organization meets the demands fast although the environment is unstable (Ramesh and Devadasan, 2007).

2.1.1. Elements of agility competency

We can explain elements of agility competency as following:

1. Responsibility: Being able to identify, responsibility: improving rapid changes in the form of action.
2. Competency: the ability to achieve goals effectively and efficiently
3. Flexibility/adaptability: consist of an ability to perform various processes and apply various facilities to achieve the same objectives.
4. Speed/pace: consist of an ability to complete organization's activity with the highest possible speed.

Lin et al. (2006) summarized motivations of agility in the five factors: 1- Volatility of market 2- robust competition 3- change in customers' needs 4- increasing the speed of changes in technology 5- changing social factors.

Table 1. Represents elements of agile competencies from viewpoints of distinguished scholars

Zhang and Sharif (2000)	Responsibility, Competency, Flexibility, Speed
Goldman et al. (1995)	customer enrich, cooperation to increase competition, Organizing for domination on change, effectively leveraging people and information
Yusef et al. (1999)	Speed, Flexibility, Innovation, activation, quality, profitability
Jackson and Yuhanson (2003)	Producing regarding to change capability, competency to change Operation, external and internal collaboration, staff, knowledge and innovation
Lin et al. (2006)	Responsibility, Competency, Flexibility, transfer rate / speed
Sherehiy et al. (2007)	Flexibility, responsibility speed, Change culture, integration and low complexity, high quality, customized products, supplying core competencies

2.1.2. Sustainable strategy

The first feature of agility design is sustainable strategy characterized as an ability to introduce results under ambient conditions. Sustainable strategy has three elements: an alternative economic logic, strong emphasis on future and flexible intention (Worley and Lawler, 2010). Organizations with sustainable capability seek to implement sustainable strategies to gain economic and cultural advantages through responsiveness to the environment (Stead and Stead, 1995). Each organization has to specifically choose objectives and directions of sustainability regarding to Organizational tendencies and objectives (Van Marrewijk and Were, 2003).

2.1.3. Adaptable organization design

Agile organizations have designs to be able to respond quickly to internal and external pressure and to adapt with change in strategy (Worley and Lawler, 2010). Sharifi and Zhang (2001) mentioned that organizational structure requires creation of adaption regarding to the following actions:

- Cooperation with other organizations
- Increased flexibility with the decentralization and the creation of flexible structures
- Focus on reorganization and innovation

2.1.4. Leadership and Identity

Because of changing hierarchy and traditional structures, it is necessary to examine new styles of leadership such as shared leadership and teamwork (Nygren and Levine, 1995). From Worley and Lawler's (2010) viewpoint, the third feature of organizational agility design is shared leadership and identity. As the most stable feature of agility, identity determines the organization characteristic which, if not change at all, would change very slowly.

Today, the traditional leadership style cannot be effective anymore. This has caused paying much more attention to shared leadership in the past two decades (Jackson, 2000). The shared leadership is the processes of dynamic interaction among members which emphasizes on group, active and multidirectional performance (Bligh et al, 2006). The group process of shared leadership in many cases improves effectiveness of the results and group performance especially in more complex work conditions (Pearce and Sims, 2002). The philosophy of shared leadership and decentralization leadership are contingent and can improve employees' empowerment (Konu and Vittanen, 2008). In other words, guiding employees to the shared purpose is one the important tasks of leadership (Lee-Daivies et al., 2007). To implement shared leadership in organisation paying attention to human resources, involving all staff in measurement, establishing relationships, creating and maintaining a supportive structure and team work is important (Oosterhoff and Rowell, 2004).

2.2. Value creation competency

Value creation refers to an approach, which is an organization implement for all stakeholders, and in particular, its customers. Therefore customer will be the centre of all company's activities and processes due to meeting all his needs and demands (Wayne Brock bank and Dave Ulrich, 2005). In viewpoints of Worley and Lawler (2010), these dynamic competencies explain what the organizations have to perform for keeping agility sustainable. Change, learning and innovation competencies are such scale which measure value creation process. Mission of the organization should embark on value creation in which value will be defined, by the customer. In value

creation design, worthless activities will be eliminated and the chain of activities will be initiated and ended by customers' satisfaction and demands (Wayne Brock bank and Dave Ulrich, 2005).

2.3. Knowledge sharing

Knowledge sharing is one the best methods of improving the performance, recognition of existing knowledge, and moving to the optimal conditions. Sharing and transferring of knowledge include targeted information exchange from sender to the recipient (King, 2006). From the viewpoint of individual, knowledge sharing means Exchange of knowledge with colleagues for the help them to perform duties better, faster and more efficient. From the viewpoint of organization, knowledge sharing includes the acquisition, organize, use and transfer the knowledge to improve efficiency (Hsiu-Fen, 2007).

2.3.1. The concept of knowledge sharing

Bartol and Srivastava (2002) defined knowledge sharing as activities in which employees disseminate information all over the organization. Knowledge sharing includes wide interactions between employees to distribute and absorb the knowledge and experience (Sheng, 2005). Knowledge sharing is a systematic approach in order to transfer and exchange of knowledge and experience among the members of a group or organization with a common goal to better solving problems (Holdt, 2007).

Organizational capital, human capital and technology based capital are the most important aspects of empowerment in knowledge sharing (Miroslav and Karin, 2007; Lin, 2007). Study of the extensive literature of knowledge sharing indicates that it has three main principles (Chiu et al., 2006; Lin, 2008). Researchers found that existing intend employees to share knowledge can cause the process of creating new knowledge or combining it, automatically start and expand (Holdt, 2007). The role of knowledge sharing is as important as having a supporter of knowledge management (Davenport et al, 1998; Huysman and Dewit, 2000). Knowledge sharing will reduce costs, improve performance, improve offering services to customers, reduce the development time for new products, reduce the delay time in goods delivery, and finally reduce costs to find and access to a variety of valuable knowledge within the organization (Alavi and Leidner, 2001; Scryme, 2002; Dyer and Nobeoka, 2000). Senge (1998) believed that the final goal of knowledge sharing is to transform the experiences and knowledge in order to increase the Organization's effectiveness. Knowledge sharing includes the employees' tendency of employees to actively transfer knowledge and also consult with colleagues in order to receive the knowledge (Lin, 2007). One of the effective characteristics of knowledge sharing is the reciprocal

interaction with others (Jolly and Wakeland, 2009; Minbaeva, 2007) and will be caused by group cooperation to solving problems (King, 2006; Arteta et al., 2004).

2.3.2. Barriers of knowledge sharing:

Lin (2008) indicated three following elements are motivations of knowledge share: characteristics of organizational structure, organizational culture, and organizational enhancement. Also, Yang (2007) stated the role of the leaders (i.e. facilitating, trainer and inventive) and the culture of cooperation have strong relationships with knowledge sharing. Incomplete transfer of knowledge can lead to a depreciation of knowledge (Yang, 2007) which can be caused by:

(A) Leaving jobs before sharing knowledge.

(B) Incomplete knowledge transfer between staffs.

(C) Difficult access to the knowledge.

Effective communication (either written or in speech) that the most common approach of sharing tacit knowledge (Davenport and Prusak, 1998; Hendriks, 1999; Meyer, 2002).

The conceptual model of present study investigates the relationship between organizational agility and value creation competency regarding to the mediation role of knowledge share. In one hand, the final aim of knowledge sharing is increasing value creation, and in the other hand, features of agility can improve knowledge share in organisation. The conceptual model illustrates in figure 1.

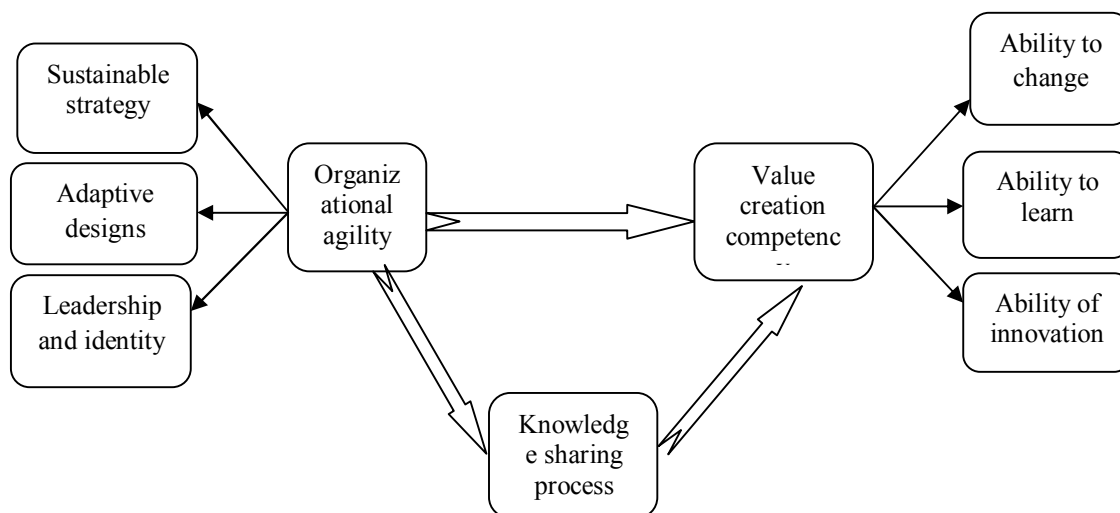


Figure 1. conceptual model

3. Research hypotheses

Hypothesis 1: organizational agility is a good predictive of knowledge share.

Hypothesis 2: organizational agility is a good predictive of value creation competency.

Hypothesis 3: organizational agility influences on knowledge sharing process through mediator factor of value creation competency.

4. Research method

The present study is a descriptive and empirical survey. Total 300 employees of Isfahan Irancell Company were statistical population. The sample size was 170 employees which were chosen randomly by using a Morgan table. In this study to measure organizational agility and value creation competency we use 45 items questionnaire of Lawler and Worley. Also, for measuring knowledge share we use 10 items questionnaire of Huysman and Hoof. In order to evaluate the reliability, we applied Cronbach's alpha coefficient which are 0.907, 0.770 and 0.852 for agility questionnaire, knowledge share questionnaire

and value creation questionnaire. We applied SPSS and LISREL software for data analysis. This study adopted structural equation model (SEM) for data analysis. SEM includes two stages: measurement model analysis and structural model analysis, which both was applied in this study. For the intended structural equation modeling (SEM), the power of the test is dependent upon the number of specified parameters and the sample sizes.

In this study for evaluation of the model we used CMIN (X^2/df , RMSEA, GFI, AGFI, RMR, NFI, and CFI).

X^2/df Indicator lacks a stable rate for an acceptable model, but its less value, indicates the model fit better. Bruni and Kodak proposed to use root mean square error as the size of the difference for each degree of freedom. RMSEA for good model is 0.05 or less. RMSEA of more than 0.10 shows weak fitness. Jarzkg and Sorbom (1989) have introduced good fitness indicator (GFI) and adjusted good fitness indicator (AGFI). These indexes are demonstrated to

what extent the model compared to the lack of it, to find out better fitness. On the basis of a contract, values of the GFI, AGFI, NFI, CFI, must be equal to or greater than 0.90, then a model can be accepted. GFI and AGFI are influenced by sample size, and also the optimal value of RMR is less than 0.05 (Hooman, 1384).

5. Findings

According to the table 2, mean and standard deviation of each variable is presented, by applying Likert scale. Means of sustainable strategy, flexibility, leadership and identity, knowledge share, value creation and agility are 2.92, 2.55, 2.77, 3.53, 2.92 and 2.74.

Table 2. mean and standard deviation

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
Strategy	170	2.9247	.89223	.06843
flexibility	170	2.5512	.96318	.07387
leadership	170	2.7710	.97232	.07457
sharing	170	3.5447	.72700	.05576
agility	170	2.7490	.91410	.07011
Value	170	2.9284	.85822	.06582

According to the table 3, regarding the one-sample t test for each of the variables, considering t scores achieved on ($p = 0.05$), flexibility, leadership and identity, knowledge share and agility are meaningful, while knowledge share mean is significantly more than mean test, the others' are significantly less than mean test. On ($p = 0.05$) t test indicates that sustainable strategy and value creation are not meaningful.

Table 3. one-sample t

One-Sample Test						
Test Value = 3						
					95% Confidence Interval of the Difference	
	T	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
Strategy	-1.100	169	.273	-.07529	-.2104	.0598
Flexibility	-6.076	169	.000	-.44882	-.5947	-.3030
Leadership	-3.070	169	.002	-.22896	-.3762	-.0817
Sharing	9.769	169	.000	.54471	.4346	.6548
Agility	-3.581	169	.000	-.25103	-.3894	-.1126
Value	-1.087	169	.278	-.07157	-.2015	.0584

H1: The organizational elements of organizational agility (sustainable strategy, flexibility, leadership and identity) strongly predict knowledge share.

According to the table 4, correlation coefficient between elements of organizational agility (suitable strategy, flexible design and leadership and identity) and knowledge share is 0.592 and also, R^2 is 0.350. Therefore it can be concluded that 35 percent of changes of knowledge share belongs to the organizational agility (suitable strategy, flexible design and leadership and identity) and the remained changes related to other variables.

Table 4. correlation coefficient

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.592 ^a	.350	.339	.59126

a. Predictors: (Constant), leadership, Strategy, flexibility

According to the table 5, regarding the f-test to confirm the correlation coefficient, as f-test value is ($f = 29.833$) on ($p = 0.05$), the correlation between organizational agility elements (suitable strategy, flexible design and leadership and identity) and knowledge share is confirmed.

Table 5. f-test

ANOVA ^b						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	31.288	3	10.429	29.833	.000 ^a
	Residual	58.032	166	.350		
	Total	89.320	169			
a. Predictors: (Constant), leadership, Strategy, flexibility						
b. Dependent Variable: sharing						

According to the t-value on ($p = 0.05$), the slope of line, for sustainable strategy, flexible designs, and leadership and identity is meaningful. Therefore, they can predict knowledge share (table 6).

Table 6. coefficients

Model		Un standardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.329	.161		20.614	.000
	Strategy	-.977	.138	-1.199	-7.060	.000
	flexibility	.593	.138	.786	4.311	.000
	leadership	.564	.125	.754	4.504	.000
a. Dependent Variable: sharing						

Therefore, as we presumed hypothesis 1 is accepted.

H 2: The organizational elements of organizational agility (sustainable strategy, flexibility, leadership and identity) strongly predict value creation competency.

According to the table 7, correlation between organizational elements of organizational agility (sustainable strategy, flexibility, leadership and identity) and value creation competency is 0.950 while R² is 0.902. Therefore, it can be concluded that 90.2 percent of value creation changes belong to the organizational elements of organizational agility and remained changes related to other variables.

Table 7. correlation coefficient

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.950 ^a	.902	.900	.27103

a. Predictors: (Constant), leadership, Strategy, flexibility

According to the table 8, regarding the f-test to confirm the correlation coefficient, as f-test value is ($f = 29.833$) on ($p = 0.05$), the correlation between organizational agility elements (suitable strategy, flexible design and leadership and identity) and value creation competency is confirmed.

Table 8. f-test

ANOVA ^b						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	112.282	3	37.427	509.494	.000 ^a
	Residual	12.194	166	.073		
	Total	124.476	169			
a. Predictors: (Constant), leadership, Strategy, flexibility						
b. Dependent Variable: value						

According to the t-value on ($p = 0.05$), the slope of line, for flexible designs, and leadership and identity is meaningful. Therefore, they can predict value creation competency. Also as t-value on ($p = 0.05$) is not meaningful for variable of suitable strategy, it can be concluded that suitable strategy cannot predict value creation competency (table 9).

Table 9. coefficients

Coefficients ^a						
Model		Un standardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.661	.074		8.925	.000
	Strategy	-.017	.063	-.017	-.263	.793
	flexibility	.501	.063	.562	7.941	.000
	leadership	.375	.057	.425	6.539	.000

a. Dependent Variable: value

Therefore, as we predicted the hypothesis 2 is confirmed.

H 3: Organizational agility, through mediator factor of knowledge share, influences on value creation competency.

The results indicate that the impact factors of knowledge share and value creation competency are 0.51 and 0.61. It can be concluded that agility predicts changes of knowledge share and value creation competency with the amount of 0.26 and 0.37. Also, the impact factor of agility with the mediator of knowledge share on value creation is 0.44 that means agility with the mediator of knowledge share, determines 0.19 of value creation competency changes.

Table 10 indicates fitness of the research model. The value of X^2/DF is 1.87. The root of mean error in model is 0.037. The value of GFI, AGFI, CFI, and NFI factors are 0.95, 0.87, 0.97, and 0.94. Also, the value of RMR in the model is 0.016. According to the indicators and outputs of Lisrel software, it can be concluded that the good fitness of model is achieved and the model can present the impact of agility on knowledge share and value creation.

Table 10. Model fitness indicators

Indicator	Value
Chi-Square	20.58
Df	11
Chi-Square/ Df	1.87
RMSEA	0.037
GFI	0.95
AGFI	0.87
CFI	0.97
NFI	0.94
RMR	0.016

Therefore, regarding to the results of LISREL, the hypothesis 3 is accepted, too.

6. Discussions

By confirming hypothesis 1 we conclude that agile organizations are value creation. Therefore, one approach of improving value creation competency within organizations can be enhancing their agility features. The results are contingent with Worley and Lawler (2010) findings.

Accepting hypothesis 2 state that agile organizations are knowledge share. To improve the process of knowledge sharing, managers can improve agility in their organizations.

The role of knowledge share process in the agility and value creation relationship is important and effective. Improving value creation via knowledge share can be achieved in agile organizations as confirmed in hypothesis 3.

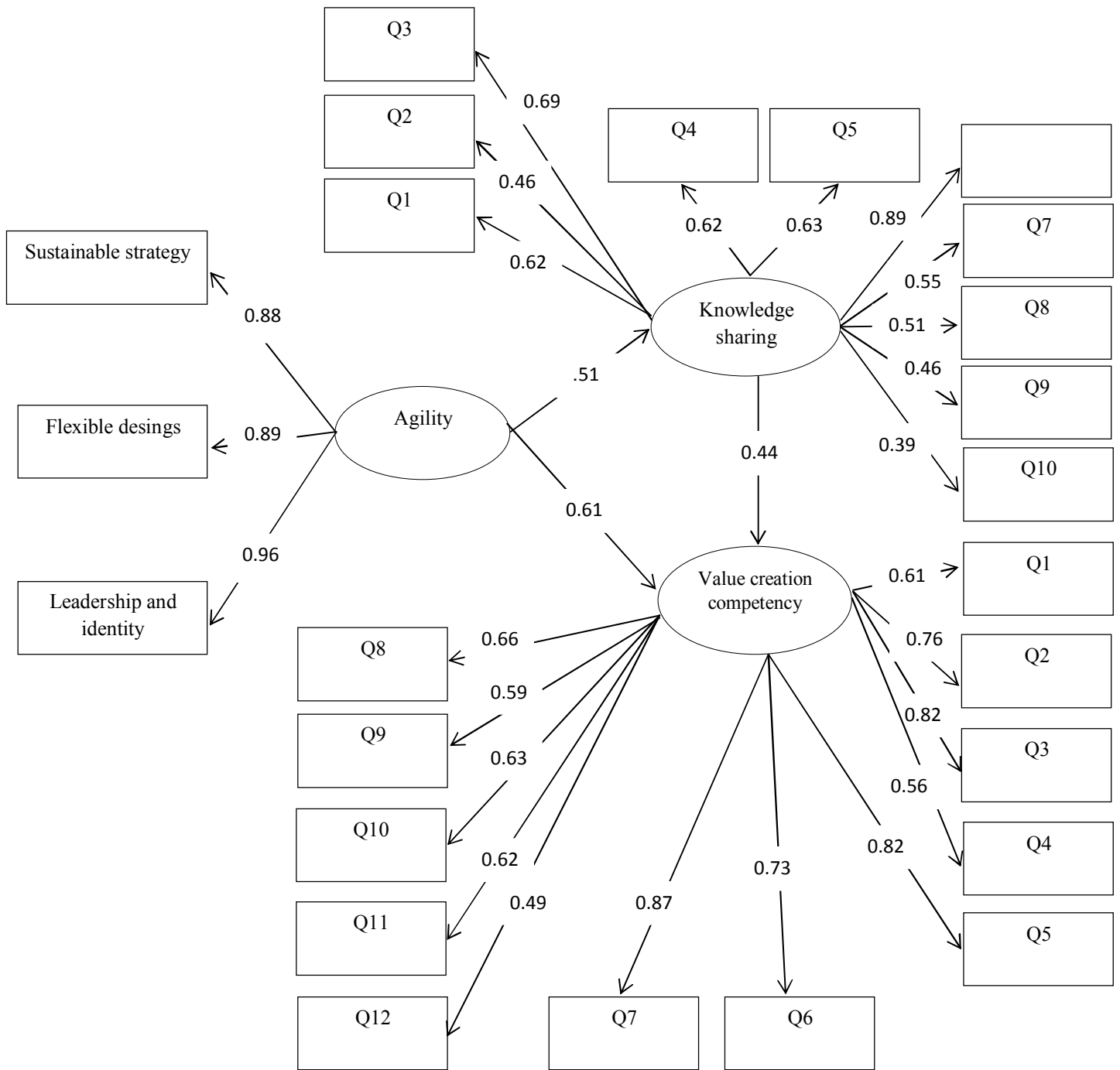


Figure 2 the final structural model of agility effect on knowledge share and value creation

7. Conclusion

The aim of present study is to investigate the influence of organizational agility and its elements on value creation competency through mediator variable of knowledge share. To gain this goal, we designed a proposed model with three main variables of organizational agility, knowledge share and value

creation competency. Organizational agility includes three elements of sustainable strategy, flexible/adaptive organizational design, and shared leadership and identity. Value creation competency includes tree elements of ability to change, ability to learn and innovation. We considered the process of knowledge share entirety. In conclusion, the results

indicated that the process of agility is all organizations' requirements, especially organizations which work in competition environments such as Irancell Company in Iran. Knowledge share is one of the important variables to help and facilitate agility process within organizations.

One of the significant aspects of agile organization is paying adequate attention to the market needs and customer satisfaction. Irancell Company has to identify customers' needs faster than other competitors. One of the conditions of having agile organization is sustainable organizational strategy. In this area the Irancell has to consider comprehensive goals and missions which are adopted by Iran community. It also should create appropriate conditions to achieve compatibility in variable environment, which requires paying attention to the future and predicting future situations. It also requires targeted planning and paying attention to staffs and especially to talent ones. Agile Organizations need adaptive flexible designs which can be achieved by: allocating adequate budget, considering reward systems for using opportunity, supporting employees which have high knowledge and skills, and introducing flexible work tasks.

For having agile organization we propose that shared leadership and identity should be considered. Irancell should develop leaders for all levels of organization to providing suitable background for communications between top managers, staffs and all parts of Organizations. Considering organizational ethics and shared values as guider for making dairy decisions, and creating a culture in which change and progress are important, seems necessary. Since the results indicate the effect of organizational agility and knowledge share on value creation, it is essential for Irancell to pay adequate attention to innovation, change ability and learning in organizations. These can be achieved by encouraging innovation in the Organization, allocating budget for the skill and knowledge of employees, and paying attention to employees' training and developing.

References

- Porter, ME. "Competitive Advantage". The Free Press: New York, 1985.
- Prince, J, Kay, JM. Combining lean and agile characteristics: creation of virtual groups by enhanced production flow analysis. *International Journal of Production Economics* 2003; 85, 305-318.
- Lin, CT, Chiu, H, Chu, PY. Agility index in the supply chain. *International Journal of Production Economics* 2006; 100(2), 285-299.
- Zhang, Z, Sharifi, H. A methodology for achieving agility in manufacturing organizations. *International Journal of operations and production management* 2000; 20 No.4, 496-512.
- Goldman, S.L, Nagel, RN, Preiss, K. *Agile Competitors & Virtual Organisations—Measuring Agility & Infrastructure for Agility*. Van Nostrand Reinhold, International Thomas Publishing, London, 1995.
- Brent, MH, S.A Vittal. Knowledge sharing in large IT organizations: a case study. *The journal of information and knowledge management systems*, 2007; (37)4: 421-439.
- Wang, S, Noe, RA. Knowledge sharing: A review and directions for future research. *Human Resource Management Review* 2009; (20)2: 115-131.
- Bock, GW, Kim, YG. Breaking the myths of rewards: An exploratory study of attitudes about knowledge sharing. *Information Resources Management Journal* 2002; 15(2), 14-21. Retrieved from Association for Information Systems website: <http://aisel.aisnet.org/>
- Laycock, M. Collaborating to compete: Achieving effective knowledge sharing in organizations. *The Learning Organization* 2005; 12(6), 523-538. doi: 10.1108/09696470510626739
- Jackson, SEC-H, Chuang, EF, Harden, YJ, Joseph JM. Toward developing human resource management systems for knowledge - intensive teamwork. *Research in Personnel and Human Resources Management* 2005; (25): 27-70.
- Worley, GC, Lawler, EE. Agility and Organization Design: A Diagnostic Framework. *Organizational Dynamics* 2010; 39, 194-204.
- Conboy, K, Fitzgerald. Toward a conceptual framework of agile methods: a study of agility in different disciplines". *Proceedings of the 2004 ACM workshop on Interdisciplinary software engineering research*. Newport Beach 2004; CA, USA. pp. 37 - 44.
- Sharifi, H, Zhang, Z. A methodology for achieving agility in manufacturing organisations. An introduction", *International Journal of Production Economics* 1999; Vol. 62 No.1-2, pp.7-22.
- Yusuf, YY, Sarhadi, M, Gunasekaran, A. Agile manufacturing: The drivers, concepts and attribute. *International Journal of Production Economics* 1999; Vol. 62 No.1-2, pp.33-43.
- Yusuf, YY, Gunasekaran, M, Adeleye, EO, Sivayoganathan, K. Agile supply chain capabilities: Determinants of competitive objectives. *European Journal of Operational Research* 2004; Vol.159 No.2, pp.379-392.
- Giachetti, R, Martinez, L, Saenz OA, Chen, CS. Analysis of the structural measures of flexibility and agility using a measurement theoretical

- framework. *International Journal of Production Economics* 2003; Vol. 86 No.1, pp.47-62.
17. Arteta, BM, Giachetti, RE. A measure of Agility as the complexity of the enterprise system”, *Robotics and Computer-Integrated Manufacturing* 2004; Vol. 20 No.6, pp.495-503.
 18. Lin, CT, Chiu, H, Tseung, YH. Agility evaluation using fuzzy logic”. *International Journal of Production Economics* 2006; Vol.101 No.2, pp.353-368.
 19. Jain, V, Benyoucef, L, Deshmukh, S. A new approach for evaluating agility in supply chains using Fuzzy Association Rules Mining. *Engineering Application of Artificial Intelligence*; In Press, 2007.
 20. Zain, M, Rose, RC, Abdullah, I, Masromd, M. The relationship between information technology acceptance and organizational agility in Malaysia. *Information & Management* 2005; 42, 829–839.
 21. Ramesh, G, Devadasan, SR. Literature review on the agile manufacturing criteria. *Journal of Manufacturing Technology Management* 2007; 18(2),182-201.
 22. Jackson, M, Johansson, C. Agility analysis from a production perspective. *Integrated Manufacturing Systems* 2003; Vol.14 No.6, pp.482-488.
 23. Sherehiy, B, Karwowski, W, Layer, J. A review of enterprise agility: Concepts, frameworks, and attributes. *International Journal of Industrial Ergonomics* 2007; Vol.37 No.5, pp.445-460.
 24. Stead, WE, Stead, JG. An Empirical Investigation of Sustainability Strategy Implementation in Industrial Organizations. *Research in Corporate Social Performance and Policy* 1995; Supplement 1, pp. 43-66.
 25. van Marrewijk, M, Were, M. Multiple Levels of Corporate Sustainability. *Journal of Business Ethics* 2003; Vol. 44, no. 2, 1-12.
 26. Sharifi, H, Zhang, Z. Agile Manufacturing in Practice. Application of a Methodology. *International Journal of Operations & Production Management* 2001; Vol. 21(5), pp. 772-794.
 27. Nygren, R, Levine, EL. Leadership of work teams: Factor sinfluencing team outcomes, Paper presented at the Third University of North Texas Symposium on Work Teams, Dallas, TX, 1995.
 28. Jackson, S. A qualitative evaluation of shared leadership barriers, drivers, and recommendations. *Journal of Management in Medicine* 2000; 14, pp. 166-78.
 29. Bligh, MC, Pearce, CL, Kohles, JC. The impact of self-and shared leadership in team based knowledge work. *Journal of Managerial Psychology* 2006; 21 (4), pp. 296-318.
 30. Pearce, CL, Sims, HP. Vertical versus shared leadership as predictors of the effectiveness of change management teams: an examination of aversive, directive, transactional, transformational, and empowering leader behaviors. *Group Dynamics: Theory, Research, and Practice* 2002; 6, pp. 172-97.
 31. Konu, A, Viitanen, E. Shared leadership in Finnish social and healthcare. *Journal Leadership in Health Service* 2008; 21 (1), pp. 28-40.
 32. Lee-Daivies, L, Kaksabadse, N, Kakabadse, A. Shared leadership: leading through polylogue. *Journal of Business Strategy Series* 2007; 8 (4), pp. 246-253.
 33. Oosterhoff, DD, Rowell, M. Shared leadership: the freedom to do bioethics. *HealthCare Ethics Committee Forum* 2004; 16 (4), pp. 297-316.
 34. Wayne Brock bank, Dave Ulrich. *The HR Value Proposition*. HBS, 2005.
 35. King, WR. Knowledge sharing In *The Encyclopedia of Knowledge Management*. ed. David Schwartz, 2006; 493-480. Hershey: Idea Group Publishing.
 36. Hsiu-Fen, L. Knowledge sharing and firm innovation capability: an empirical study. *International Journal of Manpower* 2007; (28)3/4: 315-332.
 37. Bartol, KM, Srivastava, A. Encouraging knowledge sharing: The role of organizational reward systems. *Journal of Leadership and Organizational Studies* 2002; Vol. 9 No.1, pp.64–76.
 38. Sheng TF. Composite Diversity, Social Capital, and Group Knowledge Sharing: A Case Narration. *Operational Research Society Ltd*, 2005.
 39. Holdt, CP. Knowledge Sharing: Moving away from the Obsession with Best Practices. *Journal of Knowledge Management* 2007; Vol. 11, No. 1, pp. 36-47.
 40. Miroslav, R S, Karin. Fostering innovation by unlearning tacit knowledge. *Kybernetes* 2007; (36)3/4: 406-419.
 41. Lin, HF. Knowledge sharing and firm innovation capability: an empirical study. *International Journal of Manpower* 2007; (28)3/4: 315-332.
 42. Chiu, C, Hsu, M, Wang, E. Understanding knowledge sharing in virtual communities: an integration of social capital and social cognitive theories. *Decision Support Systems* 2006; Vol. 42, No. 3, pp.1872-1888.
 43. Lin, WB. The effect of knowledge sharing model, *Expert System with applications*, 2008; Vol.34 No.2, pp1508-1528.

44. Davenport, TH, Prusak, L. Working Knowledge: How Organisations Manage what they Know. HBS Press, Boston, MA, 1998.
45. Huysman, M, de Wit, D. Knowledge management in practice. In Edwards, J. & Kidd, J. (Eds.) Knowledge Management Conference (KMAC 2000), Birmingham, UK, 2000.
46. Alavi, M, Leidner, DE. Review: Knowledge management and knowledge management systems: conceptual foundations and research issues. *MS Quarterly* 2000; Vol. 25 No. 1, pp. 32-107.
47. Scryme DJ. The 3Cs of Knowledge Sharing: Culture, Co-opetition and Commitment. Retrieved Nov 2002; 145-158.
48. Dyer, JH, Nobeoka, K. Creating and managing a high-performance knowledge sharing network: The Toyota case. *Strategic Management Journal* 2000; 21,345-367.
49. Jolly, R, Wakeland, W. Using agent based simulation and game theory analysis to study knowledge flow in organizations: The KMscope. *International Journal of Knowledge Management* 2009; 5(1), 17-28.doi: 10.4018/jkm.2009010102
50. Minbaeva, DB. Knowledge transfer in multinational corporations. *Management International Review* 2007; 47(4), 567-593.doi: 10.1007/s11575-007-0030-4.
51. Hendriks, P. Why share knowledge? The influence of ICT on the motivation for knowledge sharing. *Knowledge and Process Management* 1999; Vol. 6 No. 2, pp. 91-100.
52. Meyer, P. Improvisation power. *Executive Excellence* 2002; Vol. 19 No. 12, pp.17-18.

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