Empirical Study on Interorganizational Coordination

(Evidence Case: Organizations of Job and Employment in Iran)

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Abstract

Interorganizational coordination (IOC) is a critical part of planning, because planning mostly involves multiple organizational interactions. Investment and employment are considered as multi-dimensional and multi-sectional challenges that the management of them requires intersectional and interorganizational cooperation. The goal of this research is the investigation of the interorganizational coordination among the investment and employment organizations in Iran. Statistical samples are 491 people who are. mostly from managers of the organizations of the employment and investment in Iran and experts in investment. Data-collecting instrument was related to a questionnaire consisting of some standard questions with the reliability level of 0.76. The collected data related to the variables were analyzed by a model of path analysis Regression and T-Student and Friedman tests. The research findings indicate that the six studied variables are affected by interorganizational coordination directly and indirectly. Therefore, mutual trust (1.22) had the highest direct effect, and other variables such as ease of mutual communication (0.37), goal-orientation (0.36), mutual interests, and group thinking (0.20) were considered important respectively. The variable compatible organizational cultures had no direct effect on the subject, while all of the six variables affected the interorganizational coordination directly. Finally, based on these results, some suggestions were given on how the managers and authorities can improve the interorganizational coordination among the investment and employment organizations in Iran.

Keywords:

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Introduction

Shared action by two or more organizations in order to solve their shared problems is called coordination (Galbraith, 1977, P.18). Interorganizational coordination is the process in that two or more organizations design and perform the plans and policies to achieve a shared goal (Kilgor & Ellefson, 1982). Generally, interorganizational coordination emphasizes on the collaboration and assistance in compiling and organizing the plans in order to achieve shared objectives and goals of two or more organizations. With respect to the networks and interaction techniques among organizations, interorganizational coordination is a process whereby the organizations make decisions and share interests (Warren, 1969). Today, the problems are getting so complicated that organizations cannot make decisions and act in the society' problems individualy. The limitations of sources, personnel, facilities and especially multi-dimensional characteristics of problems such as tourism, employment, social services, etc. make it necessary for the organizations to be collaborated and coordinated. Without sufficient budget and facilities, no individual organization can provide the societies with all their needs, because in this case, the costs of intraorganizational coordination will increase incredibly (Mulford and Klonglan, 1982). Thus, to solve some of the multi-dimensional problems such as employment, it is necessary to use interorganizational coordination. Emergence of networks is another reason for paying more attention to the new interorganization structures (Toole, 1997). There are many challenges in the society which solving and managing them requires collaboration of several organizations. Some of them are employment, tourism, health care and urban services. Because of the lack of the financial and informational resources, increasing environmental problems and multi-dimensional nature of the problems, a network consisting of different organizationsis required to make the decisions (Coward *et al*., 1994; Selin & Beason, 1991; Crandall *et al*., 1990; Shortell *et al*., 1996). Indeed a new insight and method is needed to manage the great and multi-dimensional challenges in societies.

According to the points mentioned above, the goal of this research is to investigate the interorganizational coordination among the investment and employment organizations in Iran with respect to the

six variables: mutual trust, goal orientation, collective thinking, mutual interests, consistent organizational cultures, and ease of communications.

Background and Hypotheses

Lack of interorganizational coordination may have negative effects on the quality and results obtained from public service. Interorganizational collaboration and coordination suggest important innovations in managing and solving the challenges and multi-dimensional problems in societies. Coordination and structures of networks have an important effect on collaboration (Williams, 2005). Suitable decision-making mechanisms in organizations and ability in making liberal relations to other organizations are other important factors of achieving shared objectives (Whetten & leung, 1979). Interorganizational relation and coordination with respect to their formation may have various forms (Hall *et al*., 1977). Successes and failures of interorganizational networks on national, regional and local scales depend on the complications in networks and technical considerations affecting the operation of organizations (Mutch, 1996). Organizational and environmental factors have important effects on the effectiveness of interorganizational collaboration and coordination (Schumacher, 2002, p.392). Formal and informal learning behaviours of the employees in organizations can affect the organizational learning (Janowicz-Pan Gaitana & Noorderhaven, 2008).

So far, various studies have been done on the interorganizational coordination in different multi-dimensions like tourism, social services, health services, urban services, environmental problems and transit (Coward *et al*., 1994; Mulford & Klonglan, 1982; Bailey & Koney, 1996; Selin & Beason, 1991; Aghajani, 2002, p.101; Jamshidian & Mehdipoor, 2000, p.7). The explication of interorganizational relationship and coordination among the organizations of the healthcare affairs, that use just one criterion is not possible (Paulson *et al*., 1980). Determinant factors results and structural orders are based on the three criteria that explicate interorganizational collaborations and coordination among non-governmental organizations in Pakistan (Gulzar & Henry, 2005). The

most important factors affecting the formation of interorganizational relations and coordination can be divided into three groups of organizational and environmental factors and also characteristics of board of directors in organization (Fried *et al*., 2005). For creating coordination among organizations, five practical actions are required that includes: primary decisions, individual organizational decisions, common organizational decisions, common actions, and the appraisal of the effectiveness of creating interorganizational coordination (Mulford & Klonglan, 1982). The effectiveness of interorganizational coordination is based on three groups of positional, process and structural factors (Van de ven, 2001). The mutual collaboration between independent organizations increases their individual competition advantage (Cravens *et al*., 1993). Four prerequisites including incentive, willingness, ability and coordination capacity have a significant positive relationship with the effectiveness of interorganizational coordination (Einbinder *et al*., 2000). rganizations should pay attention to the interorganizational factors, such as competition and preparedness of shared organizations, to create an effective interorganizational system (Lin, 2006).

Absorption of only twenty percent of the potential income of transit in Iran is the lack of coordination among the transit organizations (Aghajani, 2002, p.101). Interorganizational coordination activities take place to manage multi-dimensional problems in the society in order to exploit various differences and capabilities among organizations (Caker, 2008). Communicative activities and information technology have a significant relationship with the effectiveness of a variation strategy and interorganizational coordination (Shyh-Rong, 2008). The characteristics of organizations, the type of relationships and the way of interaction among them have a positive effect on the costs of interorganizational coordination and relations (Agndala & Nillssonb, 2009). The evaluation of effectiveness in interorganizational relations and coordination should take place in levels such as society and networks of organizations (Babiak, 2009). The process of collaboration among several organizations that concern innovation may cause the development and improvement of innovation in interorganizational relations (Bossink, 2007). Environmental factors and perception of the members and

shared organizations of the benefits gained through collaboration have a key role in the success of an interorganizational collaboration and coordination (Yao *et al*., 2007). In electronic government the interorganizational information systems with respect to the operational, organizational and governmental factors are very important for managing public issues and presenting better services (Schooley & Horan, 2007). Interorganizational and interpersonal networks have a positive effect on the capabilities and strategic conformability capacities of the companies (Ma *et al*., 2009). In the economic environment of the countries, the basis of interorganizational collaboration can be due to the economic interchanges, the responsibilities and liabilities of organizations (Weber & Gobel, 2010). The organizations would be more successful, effective and sustainable if they had more collaboration instead of threatening each other (Jiong, 2009). The size, structure, variety and trust among the members are effective in the success of the interorganizational relationships (Van de ven & Ferry, 1980; Kogut & Singh, 1988; Alter & Hage, 1993; Alexander, 1995). The factors that emphasize on the interorganizational relationship and coordination consist of: volunteer exchange among organizations (Mulford & Rogerd , 1982; Pfeiffer & Salamick, 1978; Benson, 1975), informal coordination (Hall *et al*., 1977), mutual communications (Van de ven & Walker, 1984) and availability of foreign sources (Proven *et al*., 1980), intermember coexistence (Alexander, 1995), dependence in intermember relationships (Selznick, 1949), open and flexible management systems, and the importance of technologies conforming with change in sheeting (Thompson, 1967), organizational self-praising (Knoke, 1988). Based on the above literature review, below hypothesis will be investigated and tested in this research.

Hypothesis
There is interorganizational coordination among the investment and employment organizations in Iran with respect to the six variables including mutual trust, goal orientation, collective thinking, mutual interests, consistent organizational cultures, and ease of communications.

Methodology

Sample

Statistical population consists all managers of the employment and investment organizations in Iran. The total quantity of employees in statistical population was 26000 of whom 491 were selected by both stratified sampling and random methods. In the sample, 77 percent were over 40 years old, 96 percent had more than 15 years of working experience, and 97 percent had higher educations (bachelor degree and higher).

Data and Scale

The tool used for data gathering was questionnaire. A standard questionnaire (Cunningham and Lischeron, 1991; Ho and Koh, 1992; Morris and Trotter, 1990; Koh, 1996; Kuratko, 1998; Gürol & Atsan, 2006; Rasmussen, 2006; Papayannakisa *et al*., 2008; Postigo, 2002; Kaushik *et al*., 2006; Kiggundo, 2002; Sohn *et al*., 2007; Wang & Lin, 2008; Yapp & Fairman, 2006; Sun *et al*., 2005) was given to the participants for collecting data. The questionnaire included 18 questions with interval scales of 10 choices from very low to very high. In using factor analysis tests with (KMO = 0.60) and 81 percent explanation of variance, the questions were reduced to six variables including mutual trust, goal orientation, collective thinking, mutual interests, consistent organizational cultures, and ease of communications among Iranian organizations of employment. As achieving objective criteria for functions in organizational units is practically impossible (Matsuno *et al*., 2002), therefore effectiveness of interorganizational coordination can be measured through computing and measuring the functional gap between the existing and desired status with respect to the perception of experts in an interorganizational collaboration (Schumaker, 2002, p.393), That is because measurement scales for subjective function have significant relationship with measurement scales for objective function (Jaworski & Kohli, 1993; Li & calantone, 1998; Narver & Slater, 1990). The designed questionnaire was given to the members of the sample in all provinces, in order to confirm or reject the hypothesis Friedman and T-student tests were used.

Validity

In order to validate the questionnaire of research, the procedure of literature review and then extracting the components of measuring variants, the specialist ideas and a primary sample have been used. So the designed questionnaire has been offered to ten professors and experts in the form of a pre-test (Hult & Ferrel, 1997; Bazargan *et al*., 1998, pp.166-171; Sarookhani, 2003, p.139). Then after taking reformed opinions and modifying some cases of them, again it has been offered to 31 persons of the members of population as a primary sample, and also according to this group's reforming opinions, it was driven certain that the questions are related to variables.

Reliability

There are different ways to determine the reliability of measuring instrument, that one of them is the measurement of its internal harmony (Conca *et al*., 2004). The internal harmony of measuring tool can be measured by the coefficient of Cronbach Alpha. Cronbach's Alpha is used to measure the reliability of questionnaires (Cronbach, 1951). This is a way that is applied in most researches (Peterson, 1994). Although the least acceptable quantity for this coefficient must be 0.7 but 0.6 and even 0.55 are acceptable (Van de ven and Ferry, 1997) (Nunnally, 1978). In this research, the reliability of measuring tool was 0.76. Collected data were analyzed by one-sample T-test and Friedman test and Pearson correlation test by SPSS and LISREL software. By the way, Friedman's test has shown that the subjects have answered the questions without any prejudice and they have properly perceived the difference among the questions.

Findings

Path Diagram Model

In this section, a regression model of path diagram (structural equations model) of the six variables explicating interorganizational coordination is presented by using the Lisrel software. Note that from the various indices determining suitability of a model of structural equations, indices RMSEA, GFI, and NFI are among the best known and can determine the suitability of a model of structural equations sufficiently. RMSEA< 0.10 indicates this model has an acceptable
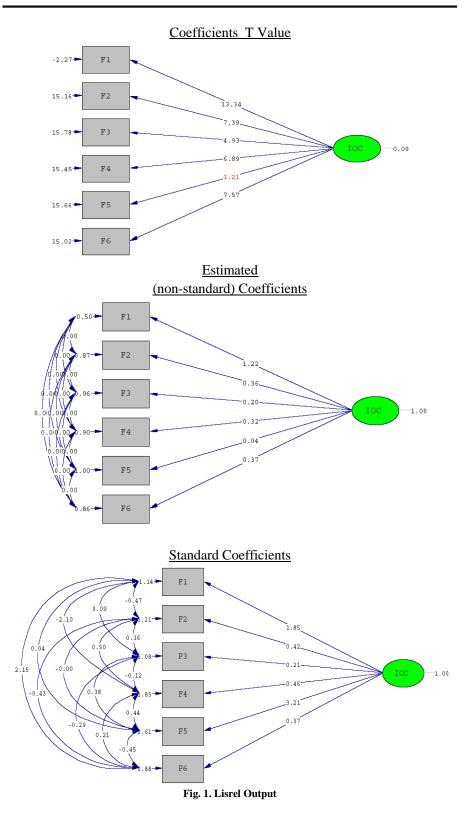
proportion to suitability with the real world (Joreskong & Sorbom, 1989). In this study RMSEA = 0.043, GFI = 0.95, AGFI = 0.82, NFI = 0.94 and NNFI = 0.83 were obtained. Therefore the study model has the regressed suitability and is totally confirmed, because RMSEA was <10% and NFI and GFI were >90% and the six variables can explicate 82% of the unclear main variable study, that is, interorganizational coordination among the organizations of employment directly or indirectly.

The structural equation model of relations among the six clear variables and the unclear variable of interorganizational coordination among the employment and investment organizations are shown in Figure 1. Variables in the structural equations have two types of direct and indirect explicating relations. As seen in T-Value diagram, in the section of direct relations, the fifth variable is not confirmed while the rest of the variables are confirmed both in direct and indirect sections. In the other two diagrams, standard regression coefficients and direct/ indirect estimation (non-standard) of the structural equation model are presented and the detailed explanations of clear and unclear variables, direct standard and non-standard coefficients and T-value of the structural equation are given in the Table 1.

As seen in the below table and diagram, the five direct relations and all of the indirect relations between clear variables and interorganizational coordination among the investment and employment organizations are confirmed. Because according to the output of Lisrel software only the relation of the fifth variable in T-value coefficient has been read. Thus, in extracting a structural equation, it is required that all direct and indirect relations, except for direct relation of the fifth variable to be entered into the general structural equation of interactive relations among the variables (direct and indirect impacts) is as follows: Structural equation model= direct effects + indirect effects.

As noted in Figure 1, structural equation model explicating interorganizational coordination among the investment and employment organization based on standard coefficients (only direct relations) is as follows:

$$F = (1.22\ F1 + 0.36\ F2 + 0.20\ F3 + 0.32\ F4 + 0.37\ F6)$$

Coefficients T Value

Estimated
(non-standard) Coefficients

Standard Coefficients

Fig. 1. Lisrel Output

Table 1. Tests Results

Unclear Variables	Clear Variables	Abbreviations	T Value	Standard Coefficients	non - Standard Coefficients	Confirmation of Model	Confirmation of Relations		Direct Influence Ranking
							Direct	**Indirect**	
Inter organizational coordination on the organization of employment-IOC	Mutual trust	F_1	13.34	1.22	1.85	RMSA= 0.043 GFI = 0.95 AGFI = 0.82 NFI = 0.94 NNFI = 0.83 model is confirmed	Confirmation	Confirmation	First
	Goal orientation	F_2	7.39	0.36	0.42		Confirmation	Confirmation	Third
	Collective thinking	F_3	4.93	0.20	0.21		Confirmation	Confirmation	Fifth
	Mutual interests	F_4	6.89	0.32	0.46		Confirmation	Confirmation	Fourth
	consistent organizational cultures	F_5	1.21	0.04	3.21		Rejection	Confirmation	=
	Ease of mutual communication	F_6	7.57	0.37	0.37		Confirmation	Confirmation	Second

Moreover, the structural equation model explicating interorganizational coordination among the investment and employment organizations, based on non-standard coefficients is as follows:

F = (1.85 F1 + 0.42 F2 + 0.21 F3 + 0.46 F4 + 0.37 F6)

F1 = (-0.47 F1 × 0.42 F2) + (0.09 F1 × 0.21 F3) + (-2.10 F1 × 0.46 F4) + (2.15 F1 × 0.37 F6)

F2 = (-0.47 F2 × 1.85 F1) + (0.36 F2 × 0.21 F3) + (0.50 F2 × 0.46 F4) + (-0.43 F2 × 0.37 F6)

F3 = (0.09 F3 × 1.85 F1) + (0.36 F3 × 0.42 F2) + (-0.12 F3 × 0.46 F4)
        + (-0.29 F3 × 0.31 F6)

F4 = (-2.10 F4 × 1.85 F1) + (0.50 F4 × 0.42 F2) + (-0.12 F4 × 0.21 F3)
        + (0.21 F4 × 0.37 F6)

F6 = (2.15 F6 × 1.85 F1) + (-0.43 F6 × 0.42 F2) + (-0.29 F6 × 0.21 F3)
        + (0.21 F6 × 0.46 F4)

F= (direct effect of six variables)

F1= (indirect effect of mutual trust)

F2= (indirect effects of goal orientation)

F3= (indirect effects of collective thinking)

F4= (indirect effects of mutual interests)

F6= (indirect effects of ease of mutual communications)

Based on the above equations, any change and improvement in interorganizational coordination among the organizations of investment and employment can be investigated and explicated with respect to those six variables mentioned above and the above mathematical relations.

Hypotheses Test

Noting the orientation of the study hypotheses, in the following T-student test, based on the measuring scale interval (1-10), the least mean acceptable for confirming the hypotheses is considered as 70% of the scale, that is T-value. However, values 0.60 and 0.55 are also acceptable (Van de ven & Ferry, 1979, p.38; Nunnally, 1978, p.62). Table 2 shows tests results for the six hypotheses.

Table 2. Tests Results

		One sample T-test Index number =7 Hypothesis acceptance level: T_s more than- 1.64						Test Result
		T	df	Sig (2-tailed)	Mean of differences	Confidence interval % 95		
						upper limit	lower limit	
Hypotheses	Mutual trust	-44.14	490	0.000	-3.01	-2.88	-3.14	Rejected
	Goal orientation	-54.25	490	0.000	-2.89	-2.78	-2.99	Rejected
	Collective thinking	-27.56	490	0.000	-1.32	-1.23	-1.41	Rejected
	Mutual interests	-52.36	490	0.000	-3.40	-3.27	-3.52	Rejected
	Consistent organizational cultures	-37.42	490	0.000	-2.73	-2.59	-2.88	Rejected
	Ease of mutual communication	-60.40	490	0.000	-2.76	-2.67	-2.85	Rejected

It is seen that, based on each of the six variables determining interorganizational coordination; there is no coordination among the investment and employment organizations. In each of the hypothesis, it is required to be higher than -1.64 Ts for the confirmation of interorganizational coordination existence. However, in 'T' column, it is seen that values for T are much lwess than -1.64. While, despite the unsuitable situation of all variables, the group-thinking variable is rather in a better situation than the other variables

Correlation and statistics

Table 3 shows the correlation (level 0.01) and the descriptive statistics of the six variables.

The down correlation coefficients indicate that the variables such as "mutual trust" and "goal-orientation" have no significant relations with the consistent organizational cultures, and there is no significant relation between the variables group thinking and mutual interests, while the other variables are significant. The last three columns of the table 3 show that in spite of rather equal distribution of five these variables compared with each other, the variable group thinking has better condition than the other variables.

Table 3. Tests Results

	F_1	F_2	F_3	F_4	F_5	F_6	Mean	Standard deviation	Coefficient of variation
F_1=Mutual trust	1	0.45	0.23	0.45	0.05	0.40	3.99	1.51	0.38
Sig	0.000	0.000	0.000	0.000	0/27	0.000			
F_2 = Goal orientation		1	0.35	0.36	0.02	-0.14	4.11	1.18	0.44
Sig		0.000	0.000	0.000	0.760	0.002			
F_3= Collective thinking			1	-0.02	0.24	-0.19	5.68	1.1	0.19
Sig			0.000	0/775	0.000	0.000			
F_4= Mutual interests				1	0.21	0.23	3.61	1.44	0.40
Sig				0.000	0.000	0.000			
F_5= Consistent organizational cultures					1	-0.27	4.27	1.62	0.38
Sig					0.000	0.000			
F_6= Ease of mutual communication						1	4.24	1.01	0.24
Sig						0.000			

Discussion

Limitations related to time and place in humanism and social sciences have caused the research findings to be significantly different in spite of the similarities among the variables and utilized methods. Thus, it is necessary to localize the results with respect to time and place conditions so that the applications of results can be authentic. As it is mentioned in the background, interorganizational coordination among organizations depends on several different factors such as structural orders (Gulzar & Henry, 2005), collaboration capacity (Einbinder *et al*., 2000), environmental limitations (Fried *et al*., 2005), organizational factors (Schumaker, 2002), information (Shyh-Rong, 2008), perception (Stern *et al*., 1975), formal and informal learning (Janowicz-Panjaitana & Noorderhaven, 2008), interaction among organizations (Agndala & Nilssonb, 2009), relations among organization managers (Kauremaa *et al*., 2009), conformability capacity (Ma *et al*., 2009), collaboration (Jiang, 2009), interpersonal trust (Alexander, 1995), and volunteer exchange of sources (Mulford & Rogers, 1982). Current study has shown that the above factors have significant effect on interorganizational coordination among the investment and employment organizations. It is distinguished that there is coordination among the investment and employment organizations in Iran.

Conclusions

As noted before, there are many problems and challenges in the society that solving them requires collaboration of organizations. These include employment, tourism, health care services, civil services etc. Because in all of the problems such as lack of financial and information sources, increasing environmental complications, and multi-dimensional problems a network of various organizations is required to make decisions. In general, according to the literature review, there is an interorganizational coordination among organizations regarding their time and place. Results of this research reveal that there is a coordination among the organizations related to the investment and employment in Iran with respect to the six independent variables consisting of mutual trust, goal orientation,

collective thinking, mutual interests, consistent organizational cultures, and ease of communications. Mutual trust had the highest direct effect on interorganizational coordination. The variables such as ease of mutual communication, goal-orientation, mutual interests, and collective thinking were considered important respectively, and the organizational cultures had no direct effect. Meanwhile, all of these six variables affected interorganizational coordination indirectly. Base on the findings, it is concluded that in order to improve the interorganizational coordination among the organizations related to the investment and employment in Iran, a necessary actions can be taken with regard to their explicating variables in real world conditions. In this respect, the variable consistent organizational cultures require more attention while other variables need attention afterwards. According to thirteen percent rate of unemployment in Iran (Statistical Centre of Iran, 2012), more attention, collaboration and support of the governmental and private organizations of the employment is required. In order to improve the interorganizational collaborations among the governmental organizations, managing the challenges, and use the opportunities, it would be better to design interorganizational information systems.

Considering the above article, the following issues articles are suggested for future studies:

- The explication of an interorganizational coordination among the organizations relate to every other multi-dimensional problem or challenge like tourism, transit, health care services etc, in various times and places.
- The planning, development and explication of models and patterns in order to improve the components of interorganizational coordination.
- The recognition of existing multi-dimensional issues and problems in a society that require interorganizational collaborations and coordination among various, independent organizations.

References

Aghajani, H. (2002). *Appraisal of Iran ground transit route for transportation of middle Asia countries goods using mathematical techniques and design of a model for promotion of it's efficiency.* Ph.D thesis, Tehran, University of Tehran, Faculty of Managemen.

Agndala, H. & Nilssonb, U. (2009). "Interorganizational cost management in the exchange process". *Management Accounting Research*, 20(Iss2), 85–101.

Alexander, E. (1995). *How organizations act together: Interorganizational coordination in theory and practice*. Amsterdam, Gordon and Breach.

Alter, C. & Hage, J. (1993). *Organizations Work Together.* Newbury Parkm CA, Sage.

Asgharpoor, M. J. (1998). *Multicriteria decisions making*. Tehran, University of Tehran Publisher, p. 192, (In Persian).

Babiak, K. M. (2009). "Criteria of effectiveness in multiple cross-sectoral interorganizational Relationships". *Evaluation and Program Planning*, 32(Iss1), 1–12.

Bailey, D. & Koney, K. M. (1996). "Interorganizational community-based collaborative: A strategic response to shape the social work agenda". *Social work*, 41(6), 602-611.

Bazargan, A.; Hejazi, E. & Sarmad, Z. (1998). *Research methods in behavioral sciences*, Tehran, Agah Publishing Co.(In Persian).

Benson, J. K. (1975). "The Organizational Network as a Political Economy". *Administrative Science Quarterly*, 20(2), 229-249.

Bossink, B. A. G. (2007). "The interorganizational innovation processes of sustainable building: A Dutch case of joint building innovation in sustainability". *Building and Environment*, 42, 4086–4092.

Caker, M. (2008). "Intertwined coordination mechanisms in interorganizational relationships with dominated suppliers". *Management Accounting Research*, 19(Iss3), 231–251.

Churchill, G. A. Jr. (1979). "A paradigm for developing better measures of marketing constructs". *Journal of Marketing Research*, 16, 64–73.

Conca, F. J.; Llopis, J. & Tarí, J. (2004). "Development of a measure to assess quality management in certified firms". *European journal of operational research*, 156, 683-697.

Coward, R. T.; Bull, C. N. & Kukulka, G. (1994). *Health Services for Rural Elders*, New York, Springer.

Crandall, L. A.; Dwyer, J. & Duncan, R. (1990). "Recruitment and Retention of Rural Physicians: Issues for the 1990s". *Rural Health*, 6, 1.

Cravens, D. W.; Shipp, S. H.; Cravens, K. S. (1993). "Analysis of cooperative interorganizational relationships, strategic alliance formation, and strategic alliance effectiveness". *Journal of Strategic Marketing*, 1, 55-70.

Cronbach, L. J. (1951). "Coefficient alpha and the internal structure of test". *Psychometricka*, 16, 297-334.

Dedrick, J. & Kraemer, K. L. (2010). "Impacts of internal and interorganizational information systems on the outsourcing of manufacturing". *Journal of Strategic Information Systems*, In press. 19(Iss2), 78-95.

Einbinder, S. D.; Robertson, P. J. & Garsia, A. (2000). "Interorganizational coolaboration with social service organizations: A study of the prerequisites to success". *Children & Poverty*, 6(2), 119-140.

Fried, B. J.; Worthington, C. & Gelmon, S. B. (2005). *Determinants of interorganizational relationships among Canadian Acute Care Hospitals*. Google Advanced Search.

Galbraith, J. R., (1977). *Organization design reading.* Massachusetts, Addison-Wesley Publishing Company.

Glisson, C. & Hemmelgarn, A. (1998). "The Effects of Organizational Climate and Interorganizational Coordination on the Quality and Outcomes of Children's Service Systems". *Child Abuse & Neglect*, 22(5), 401-421.

Gulzar, L. & Henry, B. (2005). "Interorganizational collaboration for health care between nongovernmental organizations(NGOs) in Pakistan". *Social Science and Medicine*, 61, 1930-1943.

Hair, J. F.; Anderson, R. E.; Tatham, R. L. & Black, W. C. (1998). *Multivariate data analysis", Prentice Hall International Inc*. Upper Saddle River, NJ.

Hall, R. H.; Clark, J. P.; Giordano, P. C. & Johnson, P. V. (1977). "Patterns of Interorganizational Relationships". *Administrative Science Quarterly*, 22(3), 457-474.

Hartonoa, E.; Li, X.; Na, K. & Simpsonc, J. T. (2010). "The role of the quality of shared information in interorganizational systems use". *International Journal of Information Management*, In Press. 30(Iss5), 399-407.

Hooman, H. (2002). *Statistical inference in social sciences.* Tehran, Parsa Publishing Co., 409-412.

Hult, G. M. T. & Ferrell, O. C. (1997). "A Global Learning Organization Structure and Market Information Processing". *Journal of Business Research*, 40, 155-166.

Jahanbakhsh, E. (2003). *A simple guide of statistical test applied in scientific research using SPSS.* Esfahan, Daneshpazhoohan Barin and Arkan Publishers, (In Persian).

Jamshedian, M. & Mehdipoor Ata.Abadi, A. (2000). *Tourism Management.* Tehran, Mani Publications.

Janowicz-Panjaitana, M. & Noorderhaven, N. G. (2008). "Formal and informal interorganizational learning within strategic alliances". *Research Policy*, 37, 1337–1355.

Jaworski, B. J. & Kohli, A. K. (1993). "Market Orientation: Antecedents and Consequences". *Journal of Marketing*, 57(3), 53-70.

Jiang, J., (2009). "The effects of interorganizational governance on supplier's compliance with SCC: An empirical examination of compliant and non-compliant". *Journal of Operations Management*, 27, 267–280.

Joreskong, K.G. & Sorbom, D. (1989). *LISREL 7: A Guide to the Program and Application.* 2^{Ed}, Chicago, SPSS Software.

Kauremaa, J.; Ka¨rkka¨inen, M. & Ala-Risku, T. (2009). "Customer initiated interorganizational information systems: The operational impacts and obstacles for small and medium sized suppliers". *Int. J. Production Economics*, 119(Iss2), 228–239.

Kilgor, M. A. & Elefson, P. V. (1992) *Coordination of forest resource policies and programs.* U.S.A, University of Minnesota.

Knoke, D. (1988). "Incentives in Collective Organizations". *American Sociological Review*, 53(3), 311-329.

Kogut, B. & Singh, H. (1988). *Entering the United States by Joint Venture: Competitive rivalry and industrial structure.* in F. Contractor and P. Lorange (Eds.), Competitive Strategies in International Business, Lexington, MA: Lexington Books.

Kwon, H.; Pardo, T. A. & Burke, B. (2009). "Interorganizational collaboration and community building for the preservation of state government digital information: Lessons from NDIIPP state partnership initiative". *Government Information Quarterly*, 26(Iss1), 186–192.

Li T, Calantone R.J. (1998). "The impact of market knowledge competence on new product advantage: conceptualization and empirical examination". *Journal of Marketing*, 62(4), 13– 29.

Lin, H. F. (2006). "Interorganizational and organizational determinants of planning effectiveness for Internet-based interorganizational systems". *Information & Management*, 43(Iss4), 423–433.

Ma, X.; Yao, X. & Xi, Y. (2009). "How do interorganizational and

interpersonal networks affect a .rm's strategic adaptive capability in a transition economy?". *Journal of Business Research*, 62, 1087–1095.

Matsuno, K. Mentzer, J., T. & Özsomer, A. (2002). "The Effects of Entrepreneurial Proclivity and Market Orientation on Business Performance". *Journal of Marketing*, 66(July), 18-32.

McBeath, B. & Meezan, W. (2009). "Interorganizational disparities in foster care service provision". *Children and Youth Services Review*, 31, 513–525.

Mulford, C. L. & Klonglan, G. E. (1982). *Creating coordination among organizations,* USA, North Central Region Extension Sociology Committee.

Mulford, C. L. & Rogers, D. I. (1982), *Definitions and Models in Interorganizational Coordination*, in D. L. Rogers and D. A. Whetten (eds.). Theory, Research, and Implementation, Ames, IA, University of Iowa Press.

Mutch, A. (1996). "The English tourism network automation project: A case study in interorganizational system failure". *Tourism management*, 17(8), 603-609.

Narver, J. C. & Slater, S. F. (1990). "The Effect of a Market Orientation on Business Profitability". *Journal of Marketing*, 54, 20–35.

Nunnally, J. C. (1978). *Psychometric theory.* Second Ed., McGraw-Hill, New York.

O'Toole, L. J. (1997). "Treating Networks Seriously: Practice and Research-Based Agendas in Public Administration". *Public Administration Review*, 57(1), 45-52.

Parasuraman, A.; Zeithaml, V. A. & Berry, L. L. (1988). "SERVQUAL: a Multi-item Scale for Measuring Consumer Perceptions of Service Quality". *Journal of Retailing*, 64, 2-40.

Paulson, S. K.; Klonglan, G. E. & Rogers, D. L. (1980) "A model for the measurement of cooperative relationships among health related organizations". *Management International Review*, 20(2), 96-107.

Peterson, R. A. (1994). "A meta-analysis of cronbach,s coefficient alpha". *Journal of consumer research*, 21, 381-391.

Pfeffer, J. & Salancik, G. R. (1978). *The External Control of Organizations: A Resource Dependence Perspective.* New York, Harper and Row.

Provan, K. G.; Beyer, G. M. & Kruytbosch, C. (1980). "Environmental Linkages and Power in Resource-Dependence Relations between organizations". *Administrative Science Quarterly*, 25(2), 200-225.

Sarookhani, B. (2003). *Research method in social sciences.* Tehran, Research Organization of Human Sciences & Cultural Studies.

Schooley, B. L. & Horan, T. A. (2007). "Towards an end-to-end government performance management: Case study of interorganizational information integration in emergency medical services (EMS)". *Government Information Quarterly*, 24, 755–784.

Schumaker, A. M. (2002), "Interorganizational networks: Using a theoretical model to predict effectiveness of rural health care delivery networks". *Journal of Health & Human Services Administration*, 25(3), 371-406.

SCI. (2012), *Statistical Yearbook of Iran.* Tehran, Statistical Center of Iran.

Selin, S. & Beason, K. (1991). "Interorganizational relations in tourism". *Annals of tourism research*, 18(4), 639-652.

Selznick, P. (1949). *TVA and the Grass Roots.* Berkeley, University of California Press.

Shortell, S. M.; Gillies, R. R. & Anderson, D. A. (1996). *Remaking Health Care in America: Building Organized Delivery Systems*. San Francisco, Jossey-Bass.

Shyh-Rong, Fang.; Jyh-Jeng, Wu.; Shih-Chieh, Fang. & Yong-Sheng, Chang Pei-Wen, Chao (2008). "Generating effective interorganizational change: A relational approach". *Industrial Marketing Management*, 37, 977–991.

Stern, L. W.; Sternthal, B. & Craig, C. S. (1975). "Strategies for managing interorganizational conflict: A laboratory paradigm". *Journal of Applied Psychology*, 60(4), 472-482.

Thompson, J. D. (1967). *Organizations in action: Social science bases administrative theory*. New York, McGraw-Hill.

Thorgren, S.; Wincent, J. & Ortqvist, D. (2009). "Designing interorganizational networks for innovation: An empirical examination of network conguration, formation and governance". *J. Eng. Technol. Manage*, 26, 148–166.

Turdik, A. (2005). *Analysis of success factors of public/private partnership.* Netherlands, Twente University.

Van de ven, A. & Ferry, D. (1979). *Measuring and assessing organizations.* John Wiley, New York.

Van de ven, A. H. & Gordon, W. (1980). *A longitudinal examination of coordination among organizations*. Proceedings of the Annual Meeting of the Academy of Management, Detroit, Michigan.

Van de ven, A. H. & Walker, R. (1984). "The Dynamics of Interorganizational Coordination". *Administrative Science Quarterly*, 29(4), 598-621.

Van de ven, A. H. (2001). "On the nature, formation, and maintenance of relations among organizations". *Management Review*, 24-36.

Warren, R. L. (1969). "The interorganizational field as a focus of investigation". *Administrative science quarterly*, 12, 396-419.

Weber, C. & Gobel, M. (2010). "Reciprocity and interorganizational governance: A multi-case analysis of exchange systems". *Scandinavian Journal of Management*, 26, 134-150.

Whetten, D. A. & Leung, T. K. (1979). "The instrumental value of interorganizational relations: Antecedents and consequences of linkage formation" *Academy of Management Journal*, 22(2), 325-344.

Williams, T. (2005). "Cooperation by design: structure and cooperation in interorganizational networs". *Journal of Business Research*, 58, 223–231.

Yao, Y.; Palmer, J. & Dresner, M. (2007). "An interorganizational perspective on the use of electronically-enabled supply chains". *Decision Support Systems*, 43, 884–896.