

**Formal Contracts, Social Capital, or Social Exchange; Which One Works
Better in Regulating Client-contractor Relationships in Unstable
Environments?**

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ABSTRACT

Drawing on transaction cost economics (TCE), social capital theory and social exchange theory, this study develops a framework on how formal contracts, social capital, and social exchange as governance mechanisms impact on project and relationship performance of large construction projects in developing countries with unstable environment. The framework is tested using survey data from 84 Iranian large construction projects. Partial Least Square (PLS) analyses indicate the joint contribution of social capital and social exchange to relationship performance. Despite this positive effect of social capital and social exchange, formal contracts deteriorate relationship performance echoing the substitute role of relational mechanisms to contractual mechanisms. Further, the study suggests that while contractual arrangements do not have any significant effects on project performance in such unstable environments with ineffective legal systems, social capital may be the sole contributor to achieving project objectives. The study paves the road for more research on governance issues in various contexts with special attention to cultural, political and economic differences.

INTRODUCTION

Client-contractor relationships in large construction projects have usually been subject to adversarial relationships and consequently have called for deploying inter-organizational governance mechanisms as remedies for mitigating the adverse consequences (Ling et al. 2013). Historically, the client-contractor relationships have been governed predominantly by formal contracts, however, the adversarial and ‘incomplete’ nature of contractual arrangements in practice has shifted the attentions to the use of alternative governance mechanisms to contracts—relational governance mechanisms (Lyons and Mehta 1997). In line with this view, different theoretical perspectives on the significance of contractual and relational governance mechanisms and on the interplay between them have emerged (Poppo and Zenger 2002).

Despite the great strides being made during past years, the majority of

empirical studies in inter-organizational relationships (IORs) governance were conducted in emerging economies such as China, Hong Kong, Taiwan, and Turkey (Li et al. 2010), or developed countries such as US, Canada, and Europe (Poppo and Zenger 2002), still ignoring developing countries such as Iran with distinct economic and political conditions that affect their cultural and legal systems. As reemphasized by Poppo and Zenger (2002), variations in legal and economic systems may function as important contingency factors and consequently, may change the effect of different governance mechanisms in explaining exchange performance. This is departing point for the present study to fill the gap through examining the role of contractual and relational governance mechanisms in Iran. For doing this, a model for predicting the efficacy of formal contracts and relational governance mechanisms in regulating client- contractor relationships is proposed and validated by using the data collected from 84 large construction projects in Iran. The results reconfirm the importance of the context in IORs governance studies.

In the following sections, we review the relevant literature, and accordingly, develop our conceptual model. Then, research design is described and results are reported. Finally, research findings are discussed and conclusions are drawn.

BACKGROUND AND HYPOTHESES

Formal contracts and performance. As contract becomes more complete, it may provide more clear scope and objectives, more detailed guidelines for project teams to follow the scheduled activities, as well as more comprehensive and effective systems of penalties and rewards in order to control the partners' behavior. Consequently, it would be more probable to achieve planned project outcomes.

On the other hand, although formal contracts are used to reduce the risk and uncertainty in exchange relationships, they are incomplete (Williamson 1985). Since the partners cannot write a priori comprehensive agreement that incorporates all the future contingencies and states how potential situations will be handled, strict adherence to contractual mechanisms may impede the required flexibility in an exchange and enhance distrust among partners, and consequently lead to adversarial relationships (Macneil 1980). Additionally, using detailed contracts, in the absence of well-developed social relationships, may damage relationship performance (Cannon et al. 2000). According to abovementioned arguments, we postulate:

H1: The extent to which formal contracts are used in a project is positively associated with project performance.

H2: The extent to which formal contracts are used in a project is negatively associated with relationship performance.

Social capital and performance. Some studies considered existing shared norms or trust between partners as relational governance mechanisms (Li et al. 2010). As shown by Banihashemi and Liu (2014), social capital as an umbrella concept may reflect the aggregate meaning of these concepts. Literature refers to social capital as

a valuable asset that is created through long-term and effective social interactions among partners (Adler and Kwon 2002). Longer history of relationships enhances trust between partners that may result in cost reductions and development of problem solving capabilities in the project (Stuart et al. 1998). Shared norms among partners, on the other hand, can promote their shared understanding of possible improvements in the project plan and the way to accomplish it (Krause, et al. 2007) and also develops a common language for discussing technical and design issues (Buckley and Casson 1976). Additionally, partners with long history of relationships may be more knowledgeable about each other's capabilities and consequently it may help them to effectively assign the tasks to the most capable party (Fichman and Levinthal 1991) that would lead to greater improvement in project performance.

On the other hand, partners with high level of trust are more likely to give leeway to each other in mutual dealings that may reduce the scope, severity, and frequency of adversarial conflicts (Zaheer et al. 1998). Additionally, if the goals and values between partners are incongruent, misinterpretations of events and conflicts are expected that would lead to dissatisfaction and poor relationship performance (Inkpen and Tsang 2005). Thus, we hypothesize:

H3: The level of social capital among partners at the beginning of the project is positively associated with project performance.

H4: The level of social capital among partners at the beginning of the project is positively associated with relationship performance.

Social exchange and performance. Following Banihashemi and Liu (Forthcoming), we argue that social exchange is another form of relational governance through which creation/recreation and reconfirmation of social bonds among partners is taken place. Although formal rules and regulations, information systems and special reporting procedures are good mechanisms for handling projects with large quantities of information and reducing the uncertainties accompanied with these undertakings, these mechanisms are inadequate and there is still a need for informal governance mechanisms such as face to face meetings and social interactions to provide opportunities for partners to share understandings, debate about project issues, and develop consensus on problem definitions (Daft and Lengel 1986). Sicotte and Langley (2000) showed that effective communication between partners has contribution to project performance.

On the other hand, social interactions and information exchange among partners can develop relational norms during the relationship time and it is assumed that these norms are able to safeguard the exchange against opportunistic behavior by providing implicit behavioral guidelines that enforce obligations in the exchange (Heide and John, 1992). Previous studies in different industries have shown positive association of ex-post relational governance with relationship performance (Ferguson et al. 2005). Thus, we hypothesize:

H5: The extent to which the partners develop social exchange in their current relationships is positively associated with project performance.

H6: The extent to which the partners develop social exchange in their current

relationships is positively associated with relationship performance.

Our conceptual model that hypothesizes the impact of three governance mechanisms on project and relationship performance is represented (see Figure 1).

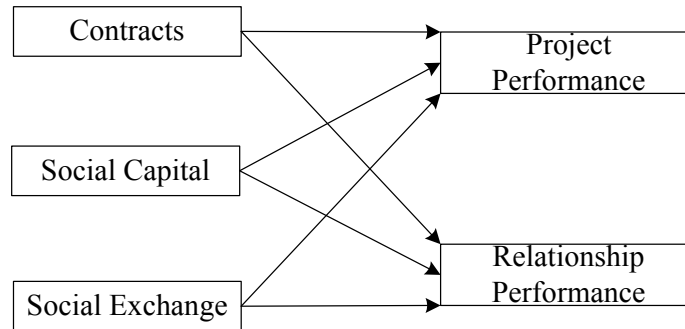


Figure 1. Conceptual model.

RESEARCH DESIGN AND ANALYSIS

Data collection. We used questionnaire survey to collect field data to test the hypotheses developed above. Considering the unstable economic and political conditions in Iran today in comparison with many other countries, and the impact of this unreliability on enforceability of country's legal system, it was found to be a suitable case to be evaluated in this study. To collect data about large construction projects, we targeted large construction companies holding tier 1 or tier 2 grades in the construction related fields. According to Iranian government official directories, there were 365 companies that fulfilled the research requirements. A questionnaire was designed and sent to executive and project managers who have been involved in large construction projects in those companies. Out of 365 questionnaires sent to the nominated companies, 95 responses were received from which 84 were complete and valid, giving a response rate of 23%. The respondents were requested to provide data about a recently completed construction project with a total contract value of more than \$5 M. A profile of the nominated projects is presented (see Table 1).

Measures. We established multi-item scales with an effort to rely on existing measurement scales used in previous relevant literature. Four items used to measure reliance on formal contracts were obtained from Li et al. (2010) and Zhang et al. (2009). Social capital was defined as a second-order construct consisted of trust and shared norms. Shared norms was measured by three questions that was adopted from the work of Li et al. (2010). For measuring trust, we used three items obtained from Şengün and Wasti (2009) For operationalizing social exchange, we adapted four items from Selnes and Sallis (2003), Yang et al. (2011), and Luo et al. (2011). We differentiated between project performance and relationship performance. While we measured the former by asking the respondents about their nominated projects' time and cost performance, the latter was measured using four items from Saxton (1997). The questions were rated on a seven-point Likert scale (1= Strongly disagree, 7= Strongly agree). For questions related to project performance the anchors were

different: 1= very poor to 7= Excellent. We included project size as control variable in our analysis. For measuring the project size we asked about planned budget and planned duration of the project. All the measures are presented (see Table 2).

Table 1. Profile of the Nominated Projects.

Characteristic		Number	Percentage
Field	Building	24	28
	Water	8	10
	Transportation	17	20
	Power	8	10
	Oil and Gas	27	32
Planned budget (Million AUD)	5-10	18	21
	10-50	38	45
	50-100	5	6
	100-500	13	16
	500-1000	5	6
Planned duration (Months)	>1000	5	6
	<12	5	6
	12-18	16	19
	18-24	23	27
	24-36	23	27
	36-48	8	10
	>48	9	11

Measurement model evaluation. To validate the measures, we used confirmatory factor analysis (CFA) using Smart PLS software package (Ringle et al. 2005). Table 2 shows that Cranach’s alpha for each construct is over 0.7, indicating good internal consistency for all variables (Nunnally and Bernstein 1994). Following Bagozzi and Yi (1988), composite reliability (CR) scores are calculated to assess convergent validity. The scores presented in table 2 show that all factors have CRs greater than 0.7. The table also shows that all the AVE (average variance extracted) values are satisfactorily greater than 0.5, indicating good convergent validity. For examining discriminant validity, we applied the procedure recommended by Fornell and Larcker (1981). The analyses showed that the square root of AVEs for each construct is greater than all correlation values between each pair of constructs that represents strong discriminant validity (see Table 3).

Structural model evaluation. There are two general approaches for estimating structural equation models, including covariance-based methods and variance-based PLS-SEM approach (Hair et al. 2014). To consider the impact of contractual and relational governance mechanisms on performance of large construction projects, Partial Least Squares Structural Equation Modeling (PLS-SEM) was undertaken, using Smart PLS software package (Ringle et al. 2005). We selected PLS-SEM because of its ability to model latent constructs, deal with non-normal data set, and its minimum demand for sample size (Hair et al. 2014). Table 4 indicates the structural model evaluation results for our hypotheses testing.

Table 2. Construct Reliability and Validity.

	Factor loading	AVE	CR	Cronbach Alpha
Formal Contracts (FC)		0.674	0.891	0.839
CG1: Generally, the contract was the primary mechanism to regulate the behavior of the partner in cooperation.	0.858			
CG2: In our contract with our partner we defined project targets in detail.	0.849			
CG3: There were well-specified responsibilities and rights for each partner.	0.679			
CG4: Each partner considered the contingencies that might emerge in the future at its best and made an exhaustive explanation in the contract.	0.858			
Social Exchange (SE)		0.607	0.860	0.793
EP1: The two sides exchanged information on charges related to organizations' strategies and policies.	0.682			
EP2: The two sides exchanged information on successful and unsuccessful experiences.	0.769			
EP3: The two sides agreed to effectively do things for each other.	0.824			
EP4: The two sides agreed to work together to resolve the problems caused by whichever party.	0.833			
Project Performance (PP)		0.799	0.888	0.757
PP1: Time performance	0.932			
PP2: Cost performance	0.854			
Relationship Performance (RP)		0.616	0.864	0.790
RP1: This cooperation contributed to our core competencies and competitive advantage.	0.658			
RP2: This cooperation realized the objectives we set out to achieve.	0.875			
RP3: This cooperation improved our relationship and increased the likelihood of working together in the future.	0.821			
RP4: Overall, we were satisfied with the performance of this cooperation.	0.769			
Project Size (PS)		0.845	0.916	0.816
PS1: What was the size of the project in terms of total planned budget? (specified in your organization's contract with your partner)	0.925			
PS2: What was the size of the project in terms of total planned duration?	0.913			

Table 3. Correlation Matrix and Square Root of Aves for Each Factor.

	RP	PP	FC	SE	SC	PS
RP	0.7848	0	0	0	0	0
PP	0.4599	0.8941	0	0	0	0
FC	-0.0004	0.2626	0.8211	0	0	0
SE	0.3859	0.1587	0.3768	0.7791	0	0
SC	0.3552	0.3079	0.4498	0.6210	0.7772	0
PS	0.0037	0.0342	0.1611	0.1847	0.1868	0.9190

Note 1: RP= Relational performance, PP= Project performance, FC= Formal contracts, SE= Social Exchange, SC= Social capital, PS= Project size.

Note 2: Bolded numbers are square root of AVEs.

Table 4. Structural Model Evaluation.

	Original Sample	Sample Mean	Standard Deviation	Standard Error	T Statistics
FC -> PP	0.1680	0.1546	0.1217	0.1217	1.3807
FC -> RP	-0.2325*	-0.2280	0.1029	0.1029	2.2598
SC -> PP	0.2855 [†]	0.2874	0.1702	0.1702	1.6773
SC -> RP	0.2778**	0.2730	0.1069	0.1069	2.5997
SE -> PP	-0.0759	-0.0792	0.1783	0.1783	0.4255
SE -> RP	0.3137*	0.3159	0.1295	0.1295	2.4222

Note 1: RP= Relational performance, PP= Project performance, FC= Formal contracts, SE= Social Exchange, SC= Social capital, PS= Project size.

Note 2: Critical t-values for a two-tailed test are 1.65 [†] (significant level = 10%), 1.96 * (significant level = 5%), 2.58 ** (significant level = 1%), and 3.29 *** (significant level = 0.1%).

RESULTS

In this section, we analyze the impact of formal contracts, social capital, and social exchange on project and relationships performance. H1 predicts the positive association between using formal contracts and project performance. This hypothesis is rejected, because p-value is insignificant ($p > 0.1$). In H2, we hypothesize that using formal contracts have negative effect on relationship performance. Based on the results, H2 is supported ($p < 0.05$). Consistent with H3, the results in table 4 show that the level of social capital in client-contractor relationships is positively associated with project performance ($p < 0.1$). Therefore, H3 is supported. H4 postulates the positive association between the level of social capital among partners and relationship performance. Based on the results shown in table 4, the association is significant and as a result, the hypothesis is supported ($p < 0.1$). H5 postulates the positive association between the use of social exchange and project performance. The results do not show any significant relationship ($p > 0.1$). Thus, H5 is rejected. Finally, the results support H6 indicating significant association between the use of

social exchange and relationship performance ($p < 0.05$). Figure 2 shows the validated model.

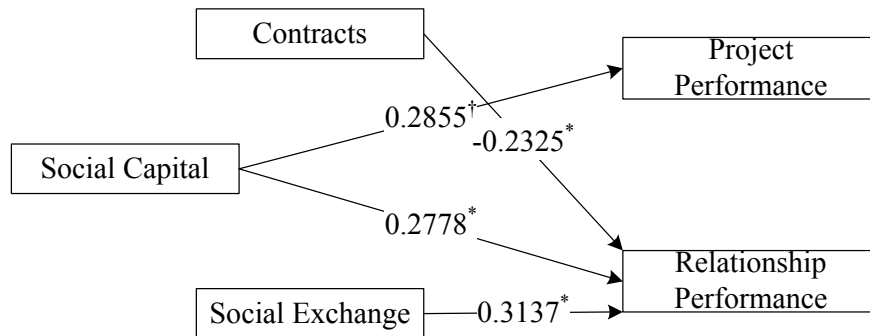


Figure 2. Validated model.

DISCUSSIONS

In this section, we discuss about theoretical and managerial implications of the research findings. Then, research limitations are highlighted and some future research directions are suggested.

Theoretical implications. Although there have been some calls for investigating the effect of contractual enforceability and practicability in evaluating the applicability of formal contracts (Poppo and Zenger 2002), previous studies have not explored the topic. Addressing the gap, this study provides empirical support for incapability of formal contracts in fulfilling project objectives under unstable and risky conditions and suggests the substitutive role of social capital in these conditions. That is, under uncertain conditions in which partners cannot precisely and timely fulfill their promises, if the partners share high level of social capital, their relationships would no longer be based on reciprocal transactions, but it would noticeably be trust-based. In other words, if one of the partners could not fulfill its promises, the other party keeps doing its work, because he is confident about his partner and knows that sooner or later he would accomplish his allocated task. Consequently, interruptions in project work would considerably decrease and project objectives would be less affected.

Moreover, the study shows that social capital and social exchange are two distinctive types of relational governance mechanisms that play different roles in explaining exchange performance. While social capital plays unique role in improving project performance, both social capital and social exchange contribute to relationships performance indicating their complementary function. In one hand, with higher levels of trust and shared norms among partners, particularly in unreliable conditions, partners feel more comfortable to communicate with each other. Additionally, the trustful environment may provide access to more information and promote more knowledge sharing opportunities and consequently, it may result in more creative work and new competitive advantages for the partners. Through these benefits, more satisfaction would be expected. On the other hand, more

socializations and joint actions may reconfirm and extend social bonds and also improve mutual understandings and reduce the disputes and conflicts in the project. Further, constant communications and joint decision makings and problem solving may mitigate the risk of opportunistic behavior.

Finally, the study provides support for previous findings about negative effects of formal contracts on relationship performance (Cannon et al. 2000). As noted by Gundlach and Achrol (1993), strict adherence to contractual mechanisms may impede the required flexibility in an exchange and enhance distrust among partners, and consequently lead to adversarial relationships.

Managerial implications. Applying inappropriate governance arrangements may incur excessive costs or promote adversarial relationships and consequently lead to project failure. As the findings revealed, formal contracts are inappropriate and insufficient mechanisms under unstable conditions. Relying on detailed contracts in such environments, not only imposes unnecessary costs on both parties, but also signals mistrust and promotes self-interest feelings. In addition, high uncertain conditions make it impossible to have a complete contract. As a result, relational mechanisms become effective alternative options.

In one hand, selecting partners with embedded relationships may provide access to some benefits which weren't available in the absence of social capital and reduce the transaction costs such as negotiation costs, contract writing, and monitoring costs.

On the other hand, the partners should extend their social interactions via information exchange, knowledge sharing, joint problem solving, and joint decision making. Using these mechanisms can promote solidarity that shifts the partners' views from self-centered behavior towards "we-ness" feelings. Information exchange, on the other hand, reduces asymmetries through communication that leads to harmonization of conflict and honesty in the project. Finally, social exchange enables the partners to share common decisions and establish or revise the project objectives (Liu et al. 2009). All these advantages can help the partners to control the opportunism and promote coordination in project activities.

Limitations and future research. This study contains some limitations that suggest some directions for future research. First, the findings are based on a sample in the construction industry in Iran. Further studies are needed to validate the findings in other countries with the same context. Additionally, caution needs to be exercised when generalizing the findings from this study across other industries.

Secondly, governance mechanisms are treated as static concepts that have a constant value throughout the project life cycle. Past research has suggested that social capital evolves over ongoing social interactions among partners, and terms of contract also change. Considering the evolution of social capital and changes in social exchanges and contractual provisions and their effect on cooperative performance could be a useful extension of this research.

Finally, though we studied the client-contractor relationships, our data has been entirely collected from contractors. Although there is evidence about consistency of perceptions across exchange partners (Zaheer et al. 1998), future

research could extend this work by including a wider sample of participants from both sides of partnerships.

CONCLUSIONS

Our research contributes to IORs governance theories and has particular implications for project governance theory in high uncertain and unstable environments without enforceable legal systems. Drawing on TCE, social capital theory, and social exchange theory, this study proposed a conceptual model for predicting the impact of formal contracts, social capital, and social exchange as governance mechanisms on project and relationship performance. For testing the research hypotheses and validating the conceptual framework, a survey of 84 Iranian large construction projects was conducted. Overall, we found support for 4 out of 6 hypotheses in our conceptual model. The research results show that both social capital and social exchange have contribution to relationship performance indicating complementary role of ex-ante and ex-post relational mechanisms. Despite this positive effect of social capital and social exchange, formal contracts deteriorate relationship performance suggesting the substitute role of relational mechanisms to contractual mechanisms. Further, the study reveals that in such unstable environments with ineffective legal systems, contractual arrangements do not have any significant effects on project performance, and social capital may be the sole contributor to achieving project objectives.

REFERENCES

- Adler, P.S. and Kwon, S.W. (2002). "Social capital: Prospects for a new concept." *Academy of Management Review*, 27(1), 17-40.
- Bagozzi, R.P. and Yi, Y. (1988). "On the evaluation of structural equation models." *Journal of the Academy of Marketing Science*, 16(1), 74-94.
- Banihashemi, S.Y. and Liu, L. (2014). "Differentiating the role of ex-ante and ex-post relational governance mechanisms in regulating client-contractor relationships." *PICMET 2014*, Kanazawa, Japan, 25-36.
- Buckley, P.J. and Casson, M. (1976). *The future of the multinational enterprise*, Macmillan, London.
- Cannon, J.P., Achrol, R. S. and Gundlach, G.T. (2000). "Contracts, norms, and plural form governance." *Journal of the Academy of Marketing Science*, 28(2), 180-194.
- Daft, R.L. and Lengel, R.H. (1986). "Organizational information requirements, media richness and structural design." *Management Science*, 32(5), 554-571.
- Ferguson, R.J., Paulin, M. and Bergeron, J. (2005). "Contractual governance, relational governance and the performance of interfirm service exchanges: The influence of boundary-spanner closeness." *Journal of the Academy of Marketing Science*, 33(2), 217-234.
- Fichman, M. and Levinthal, D.A. (1991). "Honeymoons and the liability of adolescence: A new perspective on duration dependence in social and

- organizational relationships.” *Academy of Management Review*, 16(2), 442-468.
- Fornell, C. and Larcker, D.F. (1981). “Evaluating structural equation models with unobservable variables and measurement error.” *Journal of Marketing Research (JMR)*, 18(1), 39-50.
- Gundlach, G.T. and Achrol, R.S. (1993). “Governance in exchange: Contract law and its alternatives.” *Journal of Public Policy and Marketing*, 12(2), 141-155.
- Hair, J.F., Hult, G.T.M., Ringle, C.M. and Sarstedt, M. (2014). *A Primer on Partial Least Squares Structural Equation Modelling (PLS-SEM)*, SAGE Publications. U.S.
- Heide, J.B. and John, G. (1992). “Do norms matter in marketing relationships?” *The Journal of Marketing*, 56(4), 32-44.
- Inkpen, A.C. and Tsang, E.W. (2005). “Social capital, networks, and knowledge transfer.” *Academy of Management Review*, 30(1), 146-165.
- Krause, D.R., Handfield, R.B. and Tyler, B.B. (2007). “The relationships between supplier development, commitment, social capital accumulation and performance improvement.” *Journal of Operations Management*, 25(2), 528-545.
- Li, J.J., Poppo, L. and Zhou, K.Z. (2010). “Relational mechanisms, formal contracts, and local knowledge acquisition by international subsidiaries.” *Strategic Management Journal*, 31(4), 349-370.
- Li, Y., Xie, E., Teo, H.H. and Peng, M.W. (2010). “Formal control and social control in domestic and international buyer–supplier relationships.” *Journal of Operations Management*, 28(4), 333-344.
- Ling, F.Y., Ning, Y., Ke, Y. and Kumaraswamy, M.M. (2013). “Modeling relational transaction and relationship quality among team members in public projects in Hong Kong.” *Automation in Construction*, 36, 16-24.
- Liu, Y., Luo, Y. and Liu, T. (2009). “Governing buyer-supplier relationships through transactional and relational mechanisms: Evidence from China.” *Journal of Operations Management*, 27(4), 294-309.
- Luo, Y., Liu, Y., Zhang, L. and Huang, Y. (2011). “A taxonomy of control mechanisms and effects on channel cooperation in China.” *Journal of the Academy of Marketing Science*, 39(2), 307-326.
- Lyons, B. and Mehta, J. (1997). “Contracts, opportunism and trust: Self-interest and social orientation.” *Cambridge journal of economics*, 21(2), 239-257.
- Macneil, I.R. (1980). *The new social contract: An inquiry into modern contractual relations*, Yale University Press, New Haven, CT.
- Nunnally, J.C. and Bernstein, I.H. (1994). *Psychometric theory (3rd edition ed.)*, McGraw-Hill, New York.
- Poppo, L. and Zenger, T. (2002). “Do formal contracts and relational governance function as substitutes or complements?” *Strategic Management Journal*, 23(8), 707-725.
- Ringle, C.M., Wende, S. and Will, A. (2005). *SmartPLS 2.0 (beta)*, University of Hamburg, Germany.
- Saxton, T. (1997). “The effects of partner and relationship characteristics on alliance outcomes.” *Academy of Management Journal*, 40(2), 443-461.

- Selnes, F. and Sallis, J. (2003). "Promoting relationship learning." *Journal of Marketing*, 67(3), 80-95.
- Şengün, A.E. and Wasti, S.N. (2009). "Revisiting trust and control effects on perceived relationship performance." *International Small Business Journal*, 27(1), 39-69.
- Sicotte, H. and Langley, A. (2000). "Integration mechanisms and rand project performance." *Journal of Engineering and technology management*, 17(1), 1-37.
- Stuart, I., Deckert, P., McCutcheon, D. and Kunst, R. (1998). "A leveraged learning network." *Sloan Management Review*, 39(4), 81-94.
- Williamson, O.E. (1985). *The economic institutions of capitalism*, Free Press, New York.
- Yang, Z., Zhou, C. and Jiang, L. (2011). "When do formal control and trust matter? A context-based analysis of the effects on marketing channel relationships in China." *Industrial Marketing Management*, 40(1), 86-96.
- Zaheer, A., McEvily, B. and Perrone, V. (1998). "Does trust matter? Exploring the effects of interorganizational and interpersonal trust on performance." *Organization Science*, 9(2), 141-159.
- Zhang, Z., Wan, D., Jia, M. and Gu, L. (2009). "Prior ties, shared values and cooperation in public-private partnerships." *Management and Organization Review*, 5(3), 353-374.