

IMPACT OF RISKS ON IJV PERFORMANCE IN PAKISTAN: MEDIATING ROLE OF EMC

Faisal Zaman Khan

MS Project Management, SZABIST, Islamabad

faisalzamankhan16@yahoo.com

Kamran Iftikhar

MS (Finance), Riphah International University, Islamabad

kamran_3483@hotmail.com

Hina Gull Durrani

MPhil Physics

hinadurrani88@gmail.com

Ujala Siddiq

Lecturer, National Defence University, Islamabad. Pakistan

ujala.emails@gmail.com

Abstract

The ongoing growth of the infrastructure development and construction industry in Pakistan in recent years has attracted foreign investors and firms to undertake Joint Ventures (JVs) in this emerging market, especially in the context of CPEC. The IJV paradigm is however quite complex and it is a general perception that usually the performance of JVs remains below the desired expectations. International construction businesses usually embody grave social, economic, and political implications in developing countries like Pakistan, where the problems of IJVs become more accentuated due to a host of other external as well as internal factors. Besides being an emerging trend, very few studies are available with regards to IJVs performance in Pakistan.

This research is hence aimed at (1) Exploring the impact of Environment, Project and Partner's Risks on IJVs performance (2) Develop a matrix for explaining the impact of risk factors and mediating role of Effective Management Control in IJV paradigm (3) To test the postulated hypothesis through quantitative methods. For this, a questionnaire-based survey has been conducted in which the feedback and perceptions from local and foreign firms and professionals have been recorded and analyzed using SPSS software. The study finds out that there are negative effects of Risks on IJV performance however, with Effective Management Control, the impact of risks are mitigated.

Key Words: Management, Business, Pakistan, Effects

INTRODUCTION

Internationally, the construction sector has become an important part of the global economy (Chen, 2007). There is a massive increase in the number of IJVs due to the highly globalized world economy, the opening of new markets in developing countries, and the increased intricacies of mega construction projects. The enormous changes in the global economy have led to enhanced business opportunities for construction and engineering firms throughout the world (Hastak and 3 Shaked, 2000).

'Risk is the price firms pay for the opportunity. This aspect is more applicable for the International Joint Ventures (IJV), as the firms undertake a journey in uncharted waters for the sake of enhancing their outreach and maintaining a competitive edge. Such IJVs in construction projects in developing countries like Pakistan offer opportunities as well challenges for the organizations undertaking them. Such ventures in the construction industry especially involve political, economic, cultural, and natural risks, which eventually hamper the project's success (Al-Sabah, 2012). The growing misunderstandings, delays, and increase in the costs resulting from unfamiliar locations and different Institutions with diverse partners are critical factors (Will and Levitt, 2010)

The success of International Joint Venture in construction projects is quite an elusive term, especially in developing countries. International construction projects perpetually involve economic, political, cultural, and natural risks, which ultimately affect project success (Al-Sabah, (2012). Beamish (1985) compared the joint ventures in developing countries and developed countries and finds that the performance of over 60% of the joint ventures in developing countries is unsatisfactory as against 36 % unsatisfactory rate in developed countries. As per Harvard Business Study 2003, almost 50% of the IJVs fail or perform below satisfactory levels.

Earlier works by researchers have highlighted that the instability rate for JVs range from 28.8% to 70% (Kale and Anand, 2001; Meschi, 2005; Meschi and Ricco, 2008;). Additionally, a study by Kent (1991) also suggested that JVs do possess a significant advantage in market power, but on the whole, the performance of JVs is considerably lower than that of non-JVs projects. Janakiraman et al, (2004) argue that joint ventures have their advantages as well as problems such as high failure rates, especially when undertaken in developing countries.

The role of the construction industry in the socio-economic development of Pakistan is pivotal. The industry complements the efforts of the government and social sector in attaining the socio-economic development goals by providing infrastructure, as well as employment. It includes roads, highways, hospitals, schools, townships, urban infrastructure, railways, airports; power systems; irrigation and agriculture systems; telecommunications, etc. As per the Economic Survey of Pakistan 2016-17, Construction is considered as one of the potential components of the industrial sector in the economy of Pakistan which has seen a growth of 9-14 percent in the last two years or so. In an exclusive study, Raza Ali Khan (2008) presented the strong causal relationship between the aggregate economy and the construction sector of Pakistan and concluded that the construction industry greatly influenced Pakistan's aggregate economy.

Muhammad Imran and Javeria Niazi (Institute of Public Policy, BNU), in a study, identified that in Pakistan, infrastructure stock accumulation does have a positive impact on economic growth. Infrastructure development in electricity, telecommunication, transport, and water supply sectors has positive effects on Pakistan's economic growth. The study also highlighted the enhanced demand for infrastructure services in cities due to rapid urbanization to keep them viable and avoid congestion, environmental degradation, and other impediments to productivity. The Pakistani construction sector has been gradually growing in size and stature. In the past, the major infrastructure development has been in the Public sector, primarily managed by the state-owned organization, like the construction of Highways, Mangla dam, Tarbela dam, etc. Since the late 90s, the private sector and international firms have also entered the arena in mega projects like the construction of motorways, roads, hydropower plants, mega malls, and high rise buildings, etc. In the last decade or so, the mushroom growth of housing and commercial buildings has further enhanced the important role of the construction industry in Pakistan. Important highlights of the Pakistan Economic Survey 2016-17 with regards to the construction industry are:-

- Construction as a sub-sector contributes 13.13 percent in the industrial sector and in GDP its share is 2.74 percent.
- The share in GDP has increased by 2.65 percent from last year.
- The construction industry absorbs 7.31 percent of the labor force in the country.
- The total length of roads in Pakistan including GB and AJK is 264.401 thousand kilometers. NHA is undertaking 50 ongoing projects costing Rs 1.6 billion.

Research Objectives

- To identify and explore the various Risk factors (General Environment, Project Level, and Partner Risks) associated with IJVs in Pakistan.
- To find out the impact of these risks on IJV performance.
- To explore the influence of Effective Management Control on IJV performance and how much it can mitigate the impact of risk factors on key performance elements of cost, quality, time, and safety in IJV projects.

Research Question

Do General Environment Risks affect the IJV performance in Pakistan?

Do Project Level Risks affect the IJV performance in Pakistan?

Do Partner's Risks affect the IJV performance in Pakistan?

Does Effective Management Control have a mediating effect on the bivariate relationship between other Risk variables and IJV performance in Pakistan?

LITERATURE REVIEW

A strategic alliance can be defined as an arrangement between two companies, firms, or associations that agree to share resources to undertake a particular and mutually advantageous project jointly. In essence, a strategic alliance is less involved and intricate than a joint venture.

A joint venture (JV) can be explained as a type of strategic alliance that is affected when two or more organizations or firms or parents create an independent firm or entity to pool portion of their resources (material as well as human) and capabilities to develop a competitive advantage (Hitt et al., 2005; Kogut, 1988).

A joint venture (JV) is a business entity formed by two or more parties or firms having shared management, ownership, profits and loss, and risks. International Joint Ventures are a form of JV in which at least one parent firm is headquartered outside the IJV's country of operation, or if the venture has a major level of operations in more than one country (Geringer and Hebert, 1989). International construction can be referred to as construction projects where one company or firm of a particular country undertakes construction works in another country (Mawhinney, 2001).

Risk is a multi-facet concept and often refers to different meanings in everyday life and professional literature; its meaning must first be clarified. For example, As per the Oxford English Dictionary (OED, 1991), Risk is a situation involving exposure to danger', or the possibility that something unpleasant 'will happen' Merriam-Webster's Online Dictionary provides similar meanings, such as, "the possibility of loss or injury", and "someone or something that creates or suggests a hazard". Different meanings of risk have also appeared in the professional literature. It may refer to 'the combination of the probability of an event and its consequence' (BSI, 1996; ISO/IEC, 2002); Within the scope of management and decision theory, research in construction and project risk management began in the 1960s (Guilin et al., 2004). Risk management is defined as a set of methods and activities designed to reduce the disturbances occurring during project delivery (Skorupka, 2003). According to Gray (2000), risk management is a proactive approach rather than a reactive one. It is a preventive process designed to reduce surprises and minimize negative consequences associated with undesirable events.

Given the complex nature of operations and management, IJV projects are exposed to a high degree of risk. These exposures tend to result in financial losses and even project failure (Bon-Gang et al., 2017). This is more apparent for IJVs in developing countries, where government policies are likely to change and more differences exist between partners (Pangarkar and Klein, 2004). Risk categorization, as an integrative part of risk identification, structures the risks that affect a project. Hastak and Shaked (2000) categorized international construction risks into three levels: country, market, and project levels. The categorization approach was also adopted by Wang et al. (2004) to assess risks in construction projects in developing countries. Previous studies on the mechanics of management of projects and ventures have proposed a variety of important factors like management structure, technology, control, management, social and organizational culture, leadership, etc as one of the core internal areas necessary for success. It would be naive to ignore one or a few such factors and focus on a single or group of other factors to obtain a true perspective of success and underlying essential factors. The analysis or a single systemic framework to explain the complete paradigm would remain elusive as each factor in itself is quite vast and dependent on a host of subfactors and operates in varied dimensions with rather conflicting assumptions. The intra and interrelationships are also

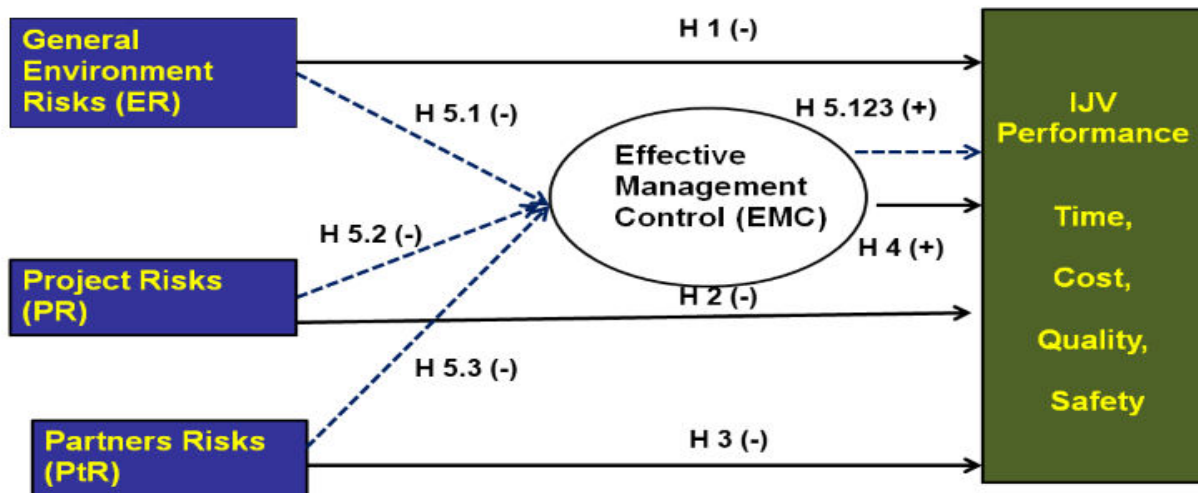
quite intricate and complex. International Joint ventures and Construction projects present a host of challenges and problems, as both have peculiar characteristics, needs, demands, and associated risks. Both are considered to be one of the most dynamic, peculiar, and difficult subjects of management sciences. The IJVs in construction and infrastructure development not only deal with the problems associated with construction, which in itself present a host of conflicting and influencing factors, but it also addresses the needs and complexities of the joint venture environment, As such ventures entail the joining of several partners and parties jointly undertaking various facets of project management, the overall complexity is enhanced. As far as exercising control in such ventures is concerned, In such Ventures, several firms or parents, or partners would jointly exercise control over all the aspects related to the project management.

Besides the growing amount of literature for IJVs, the success factors for IJVs for developing countries have been given cursory attention in the research. More so for Pakistan, there is almost a drought-like situation. Only a few publications are found in the domain of external environment Risks in Joint ventures in Pakistan. The important aspect of projects and parties and clients risks has not been studied primarily due to the difficulties in obtaining data from private and public sectors companies due to lack of transparency and avoiding sharing of information culture prevailing in the business sector. The need for more research in identifying the risks associated with CJVs especially in Pakistani culture has been highlighted in the recent study (Razzaq et al., 2016). The requirement of systematic risk assessment and management methodology in Pakistan has also been identified by Rafique and Khurram (2013).

THEORETICAL & CONCEPTUAL FRAMEWORK

Research Model

Sr. No.	Dependent Variables	Mediator Effective Management Control (EMC)	Independent Variables
1.	General Enviroment Risks (ER)		IJV Performance
2.	Project Riskd (PR)		Time, cost
3.	Partners Risks(PtR)		Quality, safety



Hypothesis

Based on literature review and discussion, the following hypothesis has been constructed:-

H 1: There is a negative relationship between General Environment Risks and IJV performance.

H 2: There is a negative relationship between Project Level Risks and IJV performance.

H 3: There is a negative relationship between Partner's Risks and IJV performance.

H4: There is a positive relationship between effective management Control and IJV Performance

H5: Effective management control has a mediation effect on the bivariate relationships between other variables (General Environment Risks, Project Risks, and Partner's Risks) and IJV performance.

Hypothesis 5 could be elaborated by the following three sub-hypotheses:

H 5.1: Effective management control has a mediation effect on the relationship between General Environment Risks and IJV performance.

H 5.2: Effective management control has a mediation effect on the relationship between Project Level Risks and IJV performance.

H 5.3: Effective management control has a mediation effect on the relationship between Partners risks and IJV performance.

RESEARCH METHODOLOGY

As the quantitative approach adopts a systematic way to discover the generalisability and reliability of research findings through questionnaires, surveys, and statistical inference, hence the same will be adopted for the conduct of this research study. The sample included private and public firms and companies engaged in IJVs related to construction projects (both local and foreign) from the following sectors:-

- Roads, highway, metros construction.
- Shopping malls, high-rise buildings, housing societies.
- Power Generation / Hydropower Plants construction.

Table 4.2, Factor Analysis

Table 4.2, Factor Analysis

<i>Factor Analysis</i>		
Instrument	No. of Items	Factor Analysis
General Environment Risks (ER)	12	.652
Projects Risks (PR)	4	0.630
Partner's Risks (PtR)	5	0.786

Effective Management Control (EMC)	14	0.668
IJV Performance (IJV)	5	.730

Table 4-3, Reliability Analysis*Reliability Analysis*

Instrument	No. of Items	Cronbach Alpha
General Environment Risks (ER)	12	..921
Projects Risks (PR)	4	0.72
Partner's Risks (PtR)	5	0.796
Effective Management Control (EMC)	14	0.93
IJV Performance (IJV)	5	.83

5.2. IJV Project Information

Table 5.1 Distribution of IJV Projects in the sample by Various Groups

		Distribution			
		Frequency	Percent	Valid Percent	Cumulative Percent
Nationality	Local	34	26.4	26.4	26.4
	Foreign	95	73.6	73.6	100.0
	Total	129	100.0	100.0	
Position	Executive	12	9.3	9.3	9.3
	Director	36	27.9	27.9	37.2
	Manager	54	41.9	41.9	79.1
	Consultant	19	14.7	14.7	93.8
	Contractor	8	6.2	6.2	100.0
	Total	129	100.0	100.0	
Budget	> \$ 10 Mn	55	42.6	42.6	42.6
	\$ 10-50 Mn	34	26.4	26.4	69.0
	< \$ 50 Mn	40	31.0	31.0	100.0
	Total	129	100.0	100.0	
Type	Roads	50	38.8	38.8	38.8
	Buildings	30	23.3	23.3	62.0

Power Projects	49	38.0	38.0	100.0
Total	129	100.0	100.0	

5.3. Descriptives

Table 5-4 shows the descriptive information of all variables

Variables	N	Mean	Standard Deviation	Skewness	Kurtosis
General Environment Risks (ER)	129	2.96	.915	-.494	-.871
Project Risks (PR)	129	2.91	.896	.273	-.769
Partner's Risks	129	2.55	.807	-.533	-.506
Effective Management Control (EMC)	129	3.88	.647	.044	-1.08
IJV Performance (IJV)	129	3.77	.817	-.509	-.479

The Pearson correlation test is used to test the strength of the relationship between two variables. Hypothesis 1,2,3, 4 have been supported.

Hypothesis 5 hypothesizes the mediating effect of Effective management Control on the bivariate relationship between Risk factors (IVs) and IJV Performance. As the mediation effect cannot be tested through correlation, hence the same will be tested through regression.

Table 5-3 Correlation Table

	MeanER	MeanPR	MeanPtR	MeanEMC	MeanIJV
MeanER	1				
MeanPR	.536**	1			
MeanPtR	.544**	.512**	1		
MeanEMC	-.258**	-.343**	-.427**	1	
MeanIJV	-.294**	-.313**	-.405**	.843**	1

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

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

Preacher and Hayse technique has been used for regression analysis of the model. The same is explained in Table 5-4,5-5 and 5-6.

Hypothesis 1, 2, and 3 have been validated

Hypothesis 4,

Table 5-4: Regression/ Mediation Analysis for Hypothesis 1 and 5.1

Mediation 5.1 General Environment Risks (ER)	Coeff	Se	T	P	Lower r Level	Upper r Level	R²	Adj R²	F
Step 1 (path a) ER to EMC	-	0.060	-	.003					
Step 2 (path b) EMC to IJV	.1824	.0619	3.007	.000					
Step 3 (path c) ER on IJV	1.037	.0757	16.77	.000					
Step 4 (path c') ER on IJV	-.097	.0438	-1.671	.097					
							0.717	.712	159.90
					-.3270	.0634			8

p= 0.000, p < 0.05, **p < 0.01

A path represents the relationship of ER with EMC which is negative and significant. b path shows the relationship of EMC with IJV which is Positive and significant. c path shows the relation between ER and IJV without mediators and it is also Negative and significant. c' path shows the mediating effect of EMC between ER and IJV. The nonsignificant value of the

Table 5-5: Mediation Analysis for Mediation Hypothesis 2 and 5.2

Project Risks (PR)	Coeff	Se	T	P	Lower r Level	Upper r Level	R²	Adj R²	F
Step 1 (path a) PtR to EMC	-	.0602	-	.000					
Step 2 (path b) EMC to IJV	.2476	.0643	4.112	.000					
Step 3 (path c) PR on IJV	1.052	.0768	16.37	.000					
Step 4 (path c') PR on IJV	-.097	.0464	-1.5403	.097					
							0.711	.707	155.57
					-.3936	.1457			6

coefficient shows that mediation exists.

a path represents the relationship of PtR with EMC which is negative and significant. b path shows the relationship of EMC with IJV which is Positive and significant. c path shows the relation between PtR and IJV without a mediator and it is also Negative and significant. c' path shows the mediating effect of EMC between PtR and IJV. The non-significant value of the coefficient shows that mediation exists.

The mediation hypothesis as postulated in H5.1, H5.2, and H5.3, was tested through the Regression analysis of Preacher and Hayse (2008). The results are shown in Tables 5.4, 5.5, and 5.6.

a path represents the relationship of PR with EMC which is negative and significant. b path shows the relationship of EMC with IJV which is Positive and significant. c path shows the relation between PR and IJV without a mediator and it is also Negative and significant. c' path shows the mediating effect of EMC between PR and IJV. The non-significant value of the

Table 5-6: Regression and Mediation Analysis for Mediation Hypothesis 3 and 5.3

Partner's Risks (PtR)	Coeff	Se	T	P	Lower Level	Upper Level	R ²	Adj R ²	F
Step 1 (path a)	-	.0643	-	.000					
PtR to EMC	.3417		5.314	0					
Step 2 (path b)	1.034	.0665	15.55	.000					
EMC to IJV	8		0	0					
Step 3 (path c)	-	.0820	-	.000					
PtR on IJV	.4094		4.990	0					
Step 4 (path c')	-	.0533	-	.296					
PtR on IJV	.0559		1.048	5					
					-	-	.7136	.709	156.97
					.4933	.2193		1	3

coefficient shows that mediation exists.

a path represents the relationship of PtR with EMC which is negative and significant.

b path shows relationship of EMC with IJV which is Positive and significant.

c path shows the relation between PtRand IJV without mediator and it is also Negative and significant.

p= 0.000, p < 0.05, **p < 0.01

c' path shows the mediating effect of EMC between PtR and IJV. The non significant value of coefficient shows that mediation exists.

Hypothesis 5: Hypothesis 5 posits that Effective Management Control (EMC) has a mediation effect on the relationship between General Environment Risks (ER), Project Risks (PR), Partner's Risks (PtR), and IJV Performance. Thus the mediation effects of EMC on the association between all IVs have been estimated.

Hypothesis 5.1 Hypothesis 5.1 postulates that Effective Management Control (EMC) has a mediation effect on the relationship between General environment risks and IJV Performance. As per the values of table 5-4, mediation exists, and the hypothesis is validated.

Hypothesis 5.2 Hypothesis 5.2 postulates that Effective Management Control (EMC) has a mediation effect on the relationship between Project Risks (PR) and IJV Performance. As per the values of table 5-5, mediation exists, and the hypothesis is validated.

Hypothesis 5.3 Hypothesis 5.3 postulates that Effective Management Control (EMC) has a mediation effect on the relationship between Partner's Risks (PtR) and IJV Performance. As per the values of table 5-6, mediation does exist and the hypothesis is hence validated

CONCLUSIONS & RECOMMENDATIONS

- Response to First Objective, "To identify and explore the various risks factors associated with IJVs in Pakistan".

Various external and internal risk factors impacting the IJV performance have been explored in the research paper. The key factors were grouped in General Environment, Project, and Partner's Risks with appropriate items selected for each through the available literature and studies published by previous researchers

- Response to the second Objective, To find out the impact of Risks on IJV performance, The impact of the selected risk factors as postulated in the model was tested using SPSS software. It has been observed through the statistical modeling and interpretations that these risks do have a negative and significant effect on IJV performance.

- Response to the third Objective, To explore the influence of Effective Management Control on IJV performance and how much it can mitigate the impact of risk factors on key performance elements of cost, quality, time, and safety in IJV projects.

Through the research model and statistical analysis, the mediating role of effective management control in the IJV paradigm was tested through the research model. The findings point out the mediating role of Effective Management Control on all the risk factors posited in the model.

Recommendations

Government and related ministries (Ministry of Finance, Ministry of Water and Power, Alternative DCB, Ministry of Law, SECP, state bank of Pakistan, Ministry of communication, etc) should devise specific policies to encourage the foreign firms to undertake Joint ventures in the emerging Pakistani market.

Local Pakistani firms undertaking joint ventures should articulate and prepare comprehensive documentation at the start of the venture, encompassing all major hurdles and potential risks and their mitigation techniques to avoid unnecessary conflicts and hurdles later.

SECP along with the Engineering Council of Pakistan (ECP) and the corporate sector may institutionalize and issue a risk matrix for the local and foreign firms interested in undertaking projects in Pakistan.

Conclusion

The study has at large presented a systemic view of the IJV paradigm in Pakistan, a developing economy that is promising and emerging with huge growth potential after the onset of CPEC and being part of OBOR, an international initiative of communication and connectivity. Alongside the risks of doing business in a rather politically and economically unstable environment, lack of reliable partners and inadequate legal infrastructure also poses serious problems and challenges.

References

- Alexander T. Mohr, Jonas F. Puck, Managing Functional Diversity to Improve the Performance of International Joint Ventures, In Long Range Planning, Volume 38, Issue 2, 2005, Pages 163-182, ISSN 0024-6301, <https://doi.org/10.1016/j.lrp.2005.02.004>. (<http://www.sciencedirect.com/science/article/pii/S0024630105000233>).
- Bon-Gang Hwang, (2017), International Construction Joint Venture Between Singapore and Developing Countries, Engineering, Construction and Management Vol 7, PP 208-228.
- Chen, H.. (2006). Exploring the relationships between influencing factors and performance for construction joint ventures. (Thesis). University of Hong Kong, Pokfulam, Hong Kong SAR. Retrieved from http://dx.doi.org/10.5353/th_b3773191.
- Craig C. Julian, Aron O'Cass, Examining the Internal-External Determinants of International Joint Venture (IJV) Marketing Performance in Thailand, In Australasian Marketing Journal (AMJ), Volume 10, Issue 2, 2002, Pages 55-71, ISSN 1441-3582, [https://doi.org/10.1016/S1441-3582\(02\)70150-X](https://doi.org/10.1016/S1441-3582(02)70150-X).
- Geringer, J. & Hebert, L. J Int Bus Stud (1989) 20: 235. <https://doi.org/10.1057/palgrave.jibs.8490359>.
- Godfrey, Stephen Espinosa, Ramon - A Practical Approach To Calculating Costs Of Equity For Investments In Emerging Markets Journal of Applied Corporate Finance Blackwell Publishing Ltd UR - <http://dx.doi.org/10.1111/j.1745-6622.1996.tb00300.x> DO - 10.1111/j.1745-6622.1996.tb00300.x PY - 1996.
- Google, https://www.google.com.pk/search?q=OBOR+maps&dcr=0&source=lnms&tbn=isch&sa=X&ved=0ahUKEwjWuNOEqKXYAhUCKHYpdBRgQ_AUICigB&biw=1366&bih=588#imgrc=jETtCIC6Nc8FOM:
- Herbert A. Simon Administrative Behavior, 4th Edition Simon and Schuster, 1997 – Business Economics - 368 pages.
- Hitt, M. A., Li, H. and Worthington, W. J. (2005), Emerging Markets as Learning Laboratories: Learning Behaviors of Local Firms and Foreign Entrants in Different Institutional Contexts. Management and Organization Review, 1: 353–380. doi:10.1111/j.1740- 8784.2005.0019a.x

- Jane W. Lu, Paul W. Beamish, Partnering strategies and performance of SMEs' international joint ventures, In Journal of Business Venturing, Volume 21, Issue 4, 2006, Pages 461-486, ISSN 0883-9026, <https://doi.org/10.1016/j.jbusvent.2005.02.002>. (<http://www.sciencedirect.com/science/article/pii/S0883902605000236>).
- Joan Y. Chiao, Reginald B. Adams, Peter U. Tse, William T. Lowenthal, Jennifer A. Richeson, Nalini Ambady Knowing Who's Boss: fMRI and ERP Investigations of Social Dominance Perception. First Published April 25, 2008, Research Article.
- Kogut, B. (1988), Joint ventures: Theoretical and empirical perspectives. *Start. Mgmt. J.*, 9: 319–332. doi:10.1002/smj.4250090403.
- Lasserre, P. *Asia Pacific Journal of Management* (1999) 16: 1. <https://doi.org/10.1023/A:1015453301540>.
- M Jamaluddin and Afia R (2016), Critical External Risks in IJV for Construction Industry in Pakistan in *International Journal of Civil Engineering*.
- Moses Acquah, International joint venture partner origin, strategic choice, and performance: comparative analysis in an emerging economy in Africa, In *Journal of International Management*, Volume 15, Issue 1, 2009, Pages 46-60, ISSN 1075-4253, <https://doi.org/10.1016/j.intman.2008.06.001>.
- Muhammad Imran and Javeria Niazi (Institute of Public Policy, BNU).
- N. Nisan Seleklér-Gökşen, S. Hande Uysal-Tezölmez, Control and Performance in International Joint Ventures in Turkey, In *European Management Journal*, Volume 25, Issue 5, 2007, Pages 384-394, ISSN 0263-2373, <https://doi.org/10.1016/j.emj.2007.07.002>.
- Riaz Haq: Pakistan's Decade of Urban Middle-Class Growth, 1999-2009.
- Sillars David N. Kangari Roozbeh Predicting Organizational Success within a Project-Based Joint Venture Alliance 2004/08/01- 2004 2004/08/01 – doi 0.1061/(ASCE)0733-9364(2004)130:4(500)10.1061/(ASCE)0733-364(2004)130:4(500) - *Journal of Construction Engineering and Management* - 500 – 508 vol 130.
- Yong-Hong Fan and Lin-Lin Wang, "Permanence for a Discrete Model with Feedback Control and Delay," *Discrete Dynamics in Nature and Society*, vol. 2008, Article ID 945109, 8 pages, 2008. doi:10.1155/2008/945109.