

## **Impact of Partnering on Construction Projects - A Review**

**Vikas R Nadig<sup>1</sup>, Sanjith J<sup>2</sup>, Irfan Khan<sup>3</sup>, Sumkha R A<sup>4</sup>**

<sup>1</sup>*Department of Civil Engineering, Adichunchanagiri Institute of Technology, Chikmagalur, Karnataka, India  
(Post Graduate Student)*

<sup>2</sup>*Department of Civil Engineering, Adichunchanagiri Institute of Technology, Chikmagalur, Karnataka, India  
(Assistant Professor)*

<sup>3</sup>*Department of Civil Engineering, Jawaharlal Nehru National College of Engineering, Shimoga, Karnataka,  
India (Assistant Professor)*

<sup>4</sup>*Department of Civil Engineering, Shri Dharmasthala Manjunatheshwara College of Engineering and  
Technology, Dharwad, Karnataka, India (Post Graduate Student)*

### **ABSTRACT**

To meet the challenges engendered by the increasingly involute and fragmented state of today's construction industry, project actors need to habituate their way of working. The techniques of acclimating to the transmuting industry are numerous and it can often be arduous to identify the felicitous technique. More intricate projects with many actors involve an abundance of peril and partnering can be one way of managing such jeopardies. According to literature, partnering reduces adversarial cognations between project stakeholders, it increments collaboration, it spreads the jeopardy between stakeholders and it inspirits them to align their goals. This study reviews the effects of partnering on various aspects of construction activities. Twenty six different research papers and thesis are being reviewed.

**Keywords:** Partnering, Construction, Stakeholders, Collaboration

### **INTRODUCTION**

The construction industry is transmuting to be more intricate, with an incremented instability and higher time pressure [21]. To face difficulties like this the customer's customary aggressive attitude is no longer opportune. The projects require cooperation centered competition which has stood out industry to be more keen on the idea of partnering and its future improvement.

Partnering is about building up substratum for collaboration between opponents in good time afore quandaries may arise [3]. This is done by group building sessions, early involution of key actors from distinctive divisions of the projects, workshops and so on. In partnering, partners ought to be driven by the same arrangement of objectives and understandings for their projects. All the organizations involved should be disposed to utilize feedback in order to amend the collaboration [5].

Partnering can be visually perceived from several perspectives, some argue that it is an ethical framework; others verbalize that it is a acquisition methodology while some view it as a toolbox for overseeing relationships [19]. Partnering can be verbalized to fortify all of these views depending on how partnering is implemented, utilized and characterized by the organization. When reading about partnering it is pellucid that different authors perceive partnering differently. Some define partnering more stringently while others visually perceive it as a flexible concept.

Numerous authors have fixated on different aspects of partnering. Some investigate how partnering can diminish the adversarial relationships [19][4][20], others fixate on discovering the prosperity factors of partnering [11][15], the applicability of partnering [18] or investigate quantitatively and qualitatively if partnering is benign [25][1][9].

The reason why partnering is newsworthy is because Josephson [25] published an investigation of the caliber of productivity in the Swedish construction industry. The investigation consisted of 444

**\*Address for correspondence:**

vikasnadig@yahoo.in

projects where 70 of these were partnering projects. The conclusion regarding partnering in the study was that clients are less slaked with both the quality of the product and the collaboration in partnering projects.

Authors like Josephson [25] and Gadde & Dubois [23] have found many quandaries in achieving the desired outcomes of partnering. Josephson [25] suggests that it may be due to erroneous prospects that the clients are less satiated in partnering projects. The parties might additionally be lured into an erroneous feeling of security, due to partnering, albeit the project is not going very well. Furthermore Josephson suggests that it is paramount to study why the clients are less satiated by investigating concrete projects and explore how partnering was implemented and how that is connected to the project result.

Other literature has found many opportunities cognate to partnering. For example benefits from incremented productivity and reduced costs, reduced project time due to early supplier participation and team integration, more opportunities for innovation, better cost control, perpetual quality ameliorations and ameliorated client contentment due to more expeditious replications to changes [23][16][2]. Partnering facilitates amended communication and conflict resolution. This can affect both the duration of the project and the efficiency within the work environment [14]. Larson [1] performed a study of 280 construction projects and reached the conclusion that partnering projects achieved better results considering controlling costs, technical performance and gratifying customers compared to projects managed with a different strategy.

## LITERATURE REVIEW

Many papers have concluded that the construction industry is highly fragmented and conflict-ridden due to this substantial amount of more diminutive companies [10]. Projects are organized by many parties with different cognizance and skills such as architects, engineers, suppliers etc. Because they are so diverse they might have different goals and objectives in a project which can engender conflicts and induce adversarial cognations.

Partnering is optically discerned by many in the public sector as a way of moving away from the adversarial relationships in construction projects and approach a more collaborative method of managing projects [19]. Khalfan & Swan [19] conclude that the drivers for public bodies, at least in the UK, to adopt partnering has been because they have been authoritatively mandated to do so by articles, reports, panels and national strategies.

Slaked customers is one of the critical prosperity factors of partnering and one of the reasons why partnering is a concept that might be of a paramountcy to the industry. Larson [1] empirically tested the relationship between the partnering dimensions and customer gratification on low-bid awarded contracts. The result showed that adversarial relationships lead to low customer gratification, and cooperative parties, as in partnering, has a higher chance of slaking the customers' requisites. Eriksson and Westerberg [24] have in later years engendered a framework for cooperative procurement processes that they propose will have a positive influence on many aspects of the project performance.

The partnering method was designed to manage sizably voluminous, involute, customized projects with long duration [13][22]. These kind of projects are becoming more prevalent in today's developed construction industry. According to transaction cost economics, the cost of utilizing partnering in minuscule, one-off and less involute projects is too high compared to the benefits. The projects size and involution have led the traditional procurement methods to fail in satiating clients criteria. Because of this, partnering has commenced to evolve. In order to achieve good project Naoum [13] accentuates on the paramountcy of all stakeholders, top down, to be involved in the process of the transmuted mindset.

Construction projects are all different in their own way. When it comes to culling the felicitous procurement form, clients need to evaluate the most opportune strategy that fits to their project's needs. What is thought to be a paramount factor when it comes to culling a congruous procurement method is suggested to be the peril [7]. This is one of the reasons why partnering is paramount to discuss. Partnering has a different way of allocating risks than most other governance forms. The client and the contractor share the peril to a more astronomically immense extent than in a mundane project. If an incipient procurement form is to be accepted by the industry the clients have to ken how to utilize it and what effect the procurement form will have on the project outcome [24].

Evelina Widén and Kristján Ari Úlfarsson [26] in Master's thesis have studied two major infrastructure projects namely Norrström Tunnel and Söderström Tunnel which have implemented partnering. The former project implemented partnering at the beginning and continued till the end, whereas the latter one implemented partnering at the middle. A Qualitative approach was used which involved in-depth and semi-structured interviews. A model was developed in order to describe the effects that partnering has on construction projects. During the analysis, three categories of practical implications from partnering were recognized. These categories were characterized by changes in the contractual, collaborative and cultural aspect of projects.

From 2006 there has been visually perceived an incremented interest in the cooperative concepts such as partnering [20]. Bresnen and Marshall [9] express a paramount issue about partnering; they found that it was evident that people and relationship was the core of collaboration but that the lack of continuity of relationships undermined endeavors to plenary secure the benefits of collaboration.

The discussion about the construction industry being adversarial and competitive has been leading the focus towards promoting non-adversarial relationships which engenders the impression that collaborative methods are a solution for the sector [20][4]. It is still debated if a collaborative way of working can engender prosperity, incipient collaborative organization needs to be maintained and nurtured in order to be prosperous. It additionally needs to be decided to what degree the collaboration should be established in order to reach a collaborative prosperity within a construction project.

Trust is often verbally expressed to be essential in partnering and trust between stakeholders can take a long time to establish. Ingirige and Sexton [17] point out that the degree of cooperation within the project teams' increase with time. That being verbalized, they believe that long term partnerships is a better option when it comes to achieving the goals, objectives and sustainable advantages.

Sharing culture and sharing erudition is thought to be the main drivers of partnering [17]. Sharing erudition within the collaborative culture is a way of achieving cost reduction targets of the project. If the contractor is able to hand over a project with great cost savings, the client is more liable to offer the contractor perpetual workload which forms the substratum for a win-win relationship. The collaborative method additionally stimulates expeditious resolutions of conditions which can be found at lowest ascendancy level.

### **Prosperity Elements**

Some partnering prosperity factors found in earlier research are trust, communication, commitment, clear goals, understanding of roles, consistency, flexible posture etc. [11]. One of the factors that escalate better partnering projects is the early involution of the contractor and the supplier [21]. Work and cognizance sharing increases and with the early involution, the peril of these partners splitting up due to difficulties during projects are minimized.

According to Slater et al. [6] Some of the benefits accomplished when utilizing partnering for the contractor include Incremented opportunity for profit, Heightened productivity, Amended decision/reaction time, Less risk for cost overruns or delays, Reduced exposure to litigation, etc.

Benefits for the client include Reduced exposure to claims and litigation, Enhanced quality of construction, Lower exposure to cost escalations, Efficient resolution of situations, Reduced overall project cost, etc.

### **Execution**

Implementation of partnering can involve several steps and different factors. Factors that may amend cooperation in partnering is early involution of contractors in joint designation, direct negotiation with only one bidder, bid evaluation predicated on soft parameters, joint subcontractor cull, incentive predicated emolument, collaborative implements and joint activities [21]. Depending on if the client wants a more competitive or cooperative environment, he may opt to utilize more or less of the antecedently designated factors.

The majority of the attendees at the partnering workshops in public construction projects are the contractor's project manager, contractor's senior manager, the client's project manager and the client's senior manager [19]. It is compulsory to utilize systematic assessment of partnering afore the procurement. Assessment that can evaluate if partnering is subsidiary for a given situation [18]. Lu and Yan [18] have developed an applicability assessment model for partnering that fixates on factors

cognate to management implements, organizations and project parameters. First thing is to identify the project parameters and secondly to compare the gains from partnering with the prospect of the project. Thirdly the recommendation is to cull partners conscientiously in order to understand the partner's potentials, capabilities and prospects of the project.

The implementation of partnering goes through different steps as can be seen here below suggested by Li et al [10].

1. The prelude of partnering to organization
2. The identification of the desiderata for partnering
3. The selection of the partnering companions
4. The organization of the partnering workshop
5. The development of the partnering value/culture during the workshop
6. The mobilization of the internal work process
7. The execution of the project
8. The repetition of the cycle

### **Riddles and opprobrium**

Quandaries that often occur in partnering projects are; not understanding partnering, relationship issues, trust quandaries ,trouble of sharing jeopardy, over dependency on each other, cultural barriers, inefficient quandary solving, communicational quandaries, insufficient efforts to keep partnering peregrinated, inadequate training and not involving key parties [14].

Josephson's [25] reveals some of the concrete quandaries of partnering. He additionally identifies factors in partnering projects that clients are more or less gratified with.

Josephson [25] found that clients in commercial partnering projects are less slaked with the quality of the product, the value for money and the distribution dependability. At the same time he found that the collaboration in commercial partnering projects was perceived to work virtually as well as in a mundane non-partnering project.

When studying housing projects Josephson found that collaboration, distribution dependability and value for money was worse in partnering than in non-partnering project. He additionally found that the products quality was more or less the same in both partnering and non-partnering projects.

Summarizing some of the difficulties with partnering it is possible to identify nine groups of problems [14]:

1. Misunderstanding of the partnering concept
2. Relationship problems
3. Cultural barriers
4. Uneven commitments
5. Communication problems
6. Lack of perpetual improvements
7. Inefficient problem solving
8. Insufficient efforts to keep partnering going
9. Discreditable relationship

Li et al. [10] state that subcontractors are infrequently vigilant of partnering acquiescents in the contract when they accept the terms of the project. That is mainly because of them being trepidacious of losing the chance to work for the contractor if they relucted the contract. An astronomically immense group of professionals suggest benefits of partnering for construction projects in a client-contractor relationship. It must be acknowledged that partnering relationship might not last throughout the whole project [10]. It is withal paramount to acknowledge that partnering is only a management technique and its prosperity depends on the individuals that utilize it [14].

One of the barriers to implement partnering is the adversarial culture which stimulates win-lose situations in the industry [21]. In these cases, stakeholders aim at obtaining their own objectives rather than collaborating. This situation is caused by low commitment of partners. A way to solve this is to involve as many stakeholders as possible in order to accomplish a prosperous collaboration.

Though partnering has shown many benefits for construction projects, it has been found that actors lack the construal of both the concept and its benefits [21]. This is thought to be causing an arduousness within the industry to accept partnering.

There is an immensely colossal desideratum of cultural transmutation in order to achieve this collaborative climate within a organization. The labor actors have a sizably voluminous influence on the culture [12]. The labor cumulations are thought to be antediluvian and conservative engendering a challenge to achieve a cultural change [21].

There are many occasions when companies enter a partnering collaboration without transmuting their traditional procedures which increases the jeopardy of failing the partnering implementation [12]. In order to achieve prosperous partnering project, companies need to make fundamental changes on their authentic processes.

Collaborative strategies and processes are thought to become very costly, leading the collaboration relationship into a low trust and high cost conflict relationship [12]. Trust is engendered predicated on cooperative departments and not through costly strategies. It is trust that underpins the client-contractor relationship. Trust is more consequential than the system of incentives since the system is not indispensably engendering trust [8]. In fact, incentive systems incline to represent lack of trust in lieu of promotion of trust.

The design-construction process is recommended to involve the key stakeholders such as clients, contractors and suppliers. The quandary is when the contractor is omitted; it can leave dramatic consequence for the process leading to quandaries in the project performance [9].

## CONCLUSION

Following Conclusions are drawn after the brief review of the references

1. Project partnering is a positive development in the construction industry which has the potential to amend the performance of the international industry.
2. There is a sufficient theoretical and practical evidence to denote that efficaciously implemented project partnering amends the performance of the participating organizations.
3. The possibilities of mutual transfer of experiences will be best exploited if the compulsory arrangements are made.
4. Partnering can be valuable for participants, if some supplemental factors, such as trust, good faith, perpetuating amelioration, collaboration, and well set up communication subsist and property is maintained between parties involved into partnering.
5. Partnering seems to engender flexibility and the possibility for the client to make changes during the process.
6. Partnering is optically discerned as a way to spread the jeopardy in an involute project.

## REFERENCES

- [1] Erik Larson, "Project Partnering: Results of Study of 280 Construction Projects", *Journal of Management in Engineering*, 11(2), March 1995, pp. 30-35.
- [2] Construction Industry Institute (Australia) (CII), "Partnering: Models for success", Partnering Task force, Construction Industry Institute, Australia, 1996.
- [3] Erik Larson, "Partnering on Construction Projects: A study of the relationship between partnering activities and project success", *IEEE transaction on Engineering Management*, 44(2), May 1997, pp.188-195.
- [4] Andrew Cox and Ian Thompson, "'Fit for purpose' contractual relations: determining a theoretical framework for construction project", *European Journal of Purchasing and Supply Management*, 3(3), September 1997, pp. 127-135.
- [5] John Bennett and S. Jayes. *The seven pillars of partnering*. London: Thomas Telford, 1998.
- [6] Thomas S. Slater, " Partnering: Agreeing to agree", *Journal of management in engineering*, 14(6), November/December 1998, pp. 48-50.



- [7] Peter E.D. Love, Martin Skitmore and George Earl, "Selecting a suitable procurement method for a building project", *Construction Management & Economics*, 16(2), March 1998, pp.221-233.
- [8] Mike Bresnen and Nick Marshall, "Motivation, Commitment and the use of incentives in partnerships and alliances", *Construction Management and Economics*, 18(5), 2000, pp. 587-598.
- [9] Mike Bresnen and Nick Marshall, "Building partnerships: Case Studies of Client-Contractor Collaboration in the UK Construction Industry", *Construction Management and Economics*, 18(7), 2000, pp. 229-237.
- [10] Heng Li, Eddie W.L. Cheng and Peter E.D. Love, " Partnering research in construction", *Engineering, Construction and Architectural Management*, 7(1), January 2000, pp.76-92.
- [11]Carolynn Black, Akintola Akintove and Eamon Fitzgerald, "An analysis of success factors and benefits of partnering in construction", *International Journal of Project Management*, 18(6), December 2000, pp.423-434.
- [12] David C. Brown, Melanie J. Ashleigh, Michael J. Riley and Reuben D. Shaw, "New Project Procurement Process", *Journal of Management in Engineering*, 17(4), October 2001, pp.192-201.
- [13] Shamil Naoum, "An overview into the concept of partnering", *International Journal of Project Management*, 21(1), January 2003, pp. 71-76.
- [14] Albert P.C. Chan, Daniel W.M. Chan and Kathy S.K. Ho, " Partnering in Construction: Critical study of problems for implementation", *Journal of Management in Engineering*, 19(3), July 2003, pp.126-135.
- [15] Albert P.C. Chan and Ada P.L. Chan, "Key performance indicators for measuring construction success", *Benchmarking: An International Journal*, 11(2), 2004, pp. 203-221.
- [16] Albert P.C. Chan, Daniel W.M. Chan, Y.H. Chiang, B.S. Tang, Edwin H.W. Chan and Kathy S.K. Ho, " Exploring critical success factors for partnering in construction projects", *Journal of construction engineering and management*, 130(2), April 2004, pp.188-198.
- [17] Bingunath Ingirige and Martin Sexton, "Alliances in construction. Investigating initiatives and barriers for long-term collaboration", *Engineering, Construction and Architectural Management*, 13(5), September 2006, pp. 521-535.
- [18] Shaokai Lu and Hong Yan, "A model for evaluating the applicability of partnering in construction", *International Journal of Project Management*, 25(2), February 2007, pp. 164-170.
- [19] Will Swan and Malik M.A. Khalfan, "Mutual objective setting for partnering projects in the public sector", *Engineering, Construction and Architectural Management*, 14(2), March 2007, pp.119-130.
- [20] Per Erik Eriksson, " Procurement effects on cooperation in client-contractor relationships", *Journal of construction Engineering and Management*, 134(2), February 2008, pp.103-111.
- [21] Per Erik Eriksson, TorBjörn Nilsson and Brian Atkin, "Client perceptions of barriers to partnering", *Engineering, Construction and Architectural Management*, 15(6), November 2008, pp. 527-539.
- [22] Per Erik Eriksson, "Partnering; what it is, when should it be used and how should it be implemented", *Construction Management and Economics*, 28(9), September 2010, pp. 905-917.
- [23] Lars-Erik Gadde and Anna Dubois, "Partnering in the construction industry - Problems and opportunities", *Journal of Purchasing & Supply Management*, 16(4), December 2010, pp. 254-263.
- [24] Per Erik Eriksson and Mats Westerberg, "Effects of cooperative procurement procedures on construction project performance: A conceptual framework", *International Journal of Project Management*, 29(2), February 2011, pp.197-208
- [25] Per-Erik Josephson, "Productivity Mode in Swedish Building 2013; New Construction apartment buildings and offices", *Swedish Construction Federation*, June 2013.
- [26] Evelina Widén Kristján and Ari Úlfarsson (2014). *Effects of partnering on construction projects The cultural, collaborative and contractual aspects* (Master of Science Thesis), Department of Real Estate and Construction Management, Royal Institute of Technology, Stockholm, Kingdom of Sweden.

## AUTHORS' BIOGRAPHY



**Vikas R Nadig**, pursuing final year Post Graduate Programme in Structural Engineering at Adichunchanagiri Institute of Technology, Chikmagalur. His research interests include Structural Concrete, Construction Management etc.



**Sanjith J**, is an Assistant Professor at Adichunchanagiri Institute of Technology, Chikmagalur from the past 5 years. Holds M.Tech (Structural Engineering) from M.S. Ramaiah Institute of Technology, Bangalore. He is currently pursuing Ph.D from VTU, Belgaum with a wide experience in the field of Structural Engineering in both academic and research. He has published over 21 technical papers in National, International journals and Conferences. His research interests includes Structural Concrete, Soil Structure Interaction, Seismic Analysis etc. He has eight professional memberships in technical bodies.



**Irfan Khan**, is an Assistant Professor at J.N.N College of Engineering, Shimoga from the past 5 years. Holds B.E from J.N.N College of Engineering, Shimoga & M.Tech from IIT, Kharagpur. His Research Interests include River flow processes, Stream flow Analysis etc.



**Sumukha R A**, is pursuing final year Post Graduate Programme in Computer Aided Design of Structures at S.D.M College of Engineering, Dharwad.