


Research Article

Project Management and Organisational Transformation in Delhi NCR Construction Firms

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Abstract

The construction industry is critical to India's development as it makes a substantial contribution to capital formation and employment generation. Within this industry, one needs to consider the special significance of the Delhi NCR region, which occupies a key place in terms of economics and administration. Construction businesses in this region are faced with a challenging environment characterized by frequent changes in regulations, high level of competition, and peculiarities of labour relations. This paper considers the impact of project management practices on organizational structure, corporate culture, and performance of construction businesses in the Delhi NCR region. It posits that the essence of project management goes beyond a mere process to become a strategic tool of decision-making and efficient organizational operation. The research identifies several factors characterizing construction companies implementing project management systems and their positive influence on performance of these organizations.

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1. INTRODUCTION

The construction sector globally is defined by a fundamental conflict between the temporary, project-based nature of work and the need for continued organisational competence. By definition projects are temporary with a defined budget, limited scope and finite timeline. And yet the organisations delivering these projects are anticipated to acquire knowledge, to build reputational capital and to develop ever greater competence.¹ This conundrum is especially pronounced in the Indian construction sector, which is a key medium for the state to fulfil its growth aspirations. The Twelfth Five Year Plan and subsequent National Infrastructure Pipeline identify trillions of rupees to be spent on infrastructure building, which is a huge challenge for construction firms to execute in terms of cost, time, and quality. Delhi NCR, an aggregation of the National Capital Territory of Delhi and surrounding districts in the states of Haryana, Rajasthan and Uttar Pradesh, is one of Asia's biggest and busiest construction markets. The region is home to a mix of construction enterprises from small and medium sized proprietorships to some of the largest listed conglomerates. Construction in the region encompasses everything from residential and commercial buildings to metro rail and expressway roads, smart cities and government institutional buildings.² It is this diversity that makes Delhi NCR the perfect place for the investigation of the dynamics of the adoption of project management at various levels of organizational complexity and different types of projects. The interrelationship between project management and organizational structures has been the subject of extensive research since the 1960s when the matrix form of organizations began to be used to reconcile functional specialization and project management. Yet there is not enough information regarding the specific dynamic interaction between project management and organizational structures in Indian construction firms, and in Delhi NCR in particular. The cultural elements of project management, such as the influence of Indian cultural values related to hierarchy, collectivism, and long-term orientation on project outcomes, have been investigated empirically but never critically analysed.³

2. Theoretical Framework and Literature Review

Project management is the application of knowledge, skills, tools, and techniques to project activities in order to meet the project requirements as formalized in the globally recognized body of knowledge maintained by the Project Management Institute. The conceptual evolution of project management from

a technical, schedule-oriented discipline to a complete governance framework has been one of the most significant intellectual developments in management science in the last half-century. Describing the project as a temporary organization, Turner and Muller explain it was created to achieve a particular result and then dissolve.⁴ Such an approach has great significance for the following reason: it puts greater emphasis on the organizational context of projects, taking into account how the project management techniques like Gantt charting, critical path method, or earned value management are actually applied. Kerzner developed the idea further, integrating project management in a system context where project process, organization structure, and environment were interdependent.⁵ Traditional views, based on the engineering perspective, defined success in terms of the iron triangle of quality, cost and time. Shenhar and Dvir expanded this definition to include multifaceted measures of project success that include project efficiency, customer impact, business success, and future readiness. This broader concept of success is especially pertinent in India, where projects often have a range of stakeholders and political considerations, as well as long-term social effects that are not reflected in a cost-time-quality paradigm. Organisational structure is the formal arrangement of jobs, responsibilities, power and communication flows within a business. The classic typology of organisational structures devised by Mintzberg distinguished five primary forms: the simple structure, the machine bureaucracy, the professional bureaucracy, the divisional form and the adhocracy. The contingency view of Galbraith suggests that there is no one best organisational structure but rather one that is suited to the tasks being performed, environment in which the enterprise operates and its strategy.⁶ The early classification of organizational types developed by Burns and Stalker is just as enlightening. Organizational structures that are highly formalized, centrally controlled, and have clearly demarcated roles been best suited for situations where conditions are relatively stable and predictable. Conversely, structures that are flexible, encourage lateral communication, and have decentralized decision-making processes are more suited to complex and unpredictable environments.⁷ Construction projects, particularly those of a large magnitude carried out in urban settings like Delhi NCR, certainly fall into the second group, implying that organic or semi-organic structural arrangements are better suited for project success. Empirical

⁴ Turner JR and Muller R, 'On the Nature of the Project as a Temporary Organization' (2003) 21(1) International Journal of Project Management 1.

⁵ Harold Kerzner, Project Management: A Systems Approach to Planning, Scheduling, and Controlling (12th edn, John Wiley and Sons 2017) 2.

⁶ Galbraith JR, Designing Organizations: An Executive Guide to Strategy, Structure, and Process (Jossey-Bass 2002) 9.

⁷ Burns T and Stalker GM, The Management of Innovation (Tavistock 1961) 96.

¹ Planning Commission of India, 'Twelfth Five Year Plan (2012-2017): Faster, More Inclusive and Sustainable Growth' (Government of India 2013) vol 1, 37.

² KPMG, 'Project Management in India: Surveying the Current Landscape' (KPMG India 2015) 12.

³ Geert Hofstede, Gert Jan Hofstede and Michael Minkov, Cultures and Organizations: Software of the Mind (3rd edn, McGraw-Hill 2010) 53.

research by Larson and Gobeli on the connection between project management structure and developmental success found that project matrix and project team were the two structures most highly correlated with project performance.⁸ Later research has largely confirmed their findings, but with important qualifications about context-specificity. However, the major structural form in Indian construction enterprises continues to be the functional hierarchy usually supported by deeply entrenched cultural norms of authority and deference.⁹

3. Structural Implications of Project Management Adoption in Delhi NCR Construction Enterprises

1. The Current Structural Landscape

The construction industry in Delhi NCR encompasses a wide variety of enterprise types. At one end of the spectrum are large, publicly listed construction conglomerates such as L&T, DLF, Shapoorji Pallonji, Sobha Developers, and NBCC, which operate sophisticated project management offices, employ certified project managers, and maintain elaborate governance structures.¹⁰ On the other side of the spectrum are the many small and mid-sized contractors, who have their numbers as an advantage in that they perform most of the construction that gets subcontracted by large companies to build residences and civil works. The small firms usually use non-institutional forms of organization where major decisions are left to one individual owner or a family circle, and where project management becomes an intuitive act, not a structured process. A structural issue emerges in the case of Delhi NCR as projects here become complicated because of multiple construction regulation authorities in place. Such projects could be handled either by the Delhi Development Authority, Municipal Corporation of Delhi, Haryana Urban Development Authority, National Highways Authority of India, or any number of other central or state authorities, each with its own procedures for approvals and enforcement. In a situation like this, flexibility is highly valued in organizations, and those able to form teams that specialize in interfacing with such agencies, as part of their overall organizational design, prove to be much more effective.¹¹

2. Structural Transformation Through Project Management

The implementation of formal project management practices usually leads to some structural changes in construction

enterprises. Research on Indian construction companies indicates that companies that shift from purely functional to projectized or matrix organizations realize substantial increases in project schedule compliance, responsiveness to client needs and cross-functional coordination.¹² The adoption of a matrix organisational design, in which project managers have authority over functions, leads to conflicting power dynamics with the hierarchy (particularly in settings with high power distance, where authority is very personal and precedence-oriented). One key structural innovation that has made significant gains in the last ten years among firms in Delhi NCR's construction industry is the creation of Project Management Offices (PMOs). A PMO is a separate organisational entity that sets and enforces project management standards, tracks project performance across the portfolio, provides support to project managers in terms of processes and tools, and helps learn from past projects. Based on empirical research in Indian construction firms, it is clear that firms with operational PMOs have substantially better performance in terms of portfolio performance (cost and schedule overrun) than firms that lack PMOs. But the efficacy of a PMO depends on its organisational structure. The PMOs that report to the top management and have the power to sanction noncompliance with project management standards are significantly more effective than advisory PMOs with no sanctioning power.¹³ The firms that have been successful in BIM adoption have typically implemented structural changes such as introducing BIM coordination roles, creating interdisciplinary design-construction teams, and developing shared data environments that go beyond traditional departmental boundaries.

3. Structural Misalignments and Their Consequences

However, despite the proven advantages of structure adaptation, a number of construction companies located in Delhi NCR still show some structural misalignments which adversely affect their operations. Some of these are as follows. Firstly, there are problems associated with the ambiguity of authority in the case of matrix structures, wherein project managers do not have any formal authority over functional resources leading to conflict and delay. Secondly, there is the issue of structural inertia which implies the persistence of existing lines of reporting and role definition even when the external environment in which the structure developed changes. This is common in family-run businesses as well as those belonging to the public sector. Thirdly, and importantly, there is the issue of separation between formal structure and informal structures. In a number of construction companies in Delhi NCR, the formal organisational structure may present an ideal

⁸ Larson EW and Gobeli DH, 'Significance of Project Management Structure on Development Success' (1989) 20(2) IEEE Transactions on Engineering Management 119.

⁹ Ministry of Statistics and Programme Implementation, 'Flash Report on Central Sector Projects' (Government of India 2022) 3.

¹⁰ Confederation of Indian Industry and KPMG, 'Indian Construction Industry Report 2021' (CII-KPMG 2021) 7.

¹¹ Delhi Development Authority, 'Delhi Master Plan 2041: Draft' (DDA 2021) 19.

¹² Subramanian K and others, 'Organizational Culture and Project Management Effectiveness in Indian Organizations' (2019) 10(3) International Journal of Civil Engineering and Technology 567.

¹³ Ahuja V, Yang J and Shankar R, 'Benefits of Collaborative ICT Adoption for Building Project Management' (2009) 27(3) Construction Innovation 324.

picture but the decision-making process takes place within informal networks of individuals. Such informal dynamics are often not recognized in project management frameworks that depend on formal role definitions and documented processes, leading to implementation gaps that can severely compromise project outcomes. Perhaps the most persistent and significant structural problem facing the Indian construction industry is the disconnect between formal project administration and informal operational reality.¹⁴

4. Cultural Dimensions of Project Management in Delhi NCR Construction Enterprises

a. Power Distance and Hierarchical Authority

Amongst the different cultural dimensions discovered by Hofstede, among other researches, power distance is perhaps one of the most important ones when considering its implications on project management in construction firms in Delhi NCR. In high power distance culture, there is general acceptance of hierarchy; people tend not to question superiors; and it is expected that decisions will be made by people occupying upper organizational echelons. Within the context of construction firms, such cultural dimension manifests itself by having junior members of the project team avoiding the need to alert the project manager about issues in the project, while project managers, in turn, may avoid opposing directions issued by the senior managers of the firm. Furthermore, the senior management is protected from any incorrect data about the projects within the company through several levels of filtering. Such situation poses a serious risk when it comes to managing project risks because risk management requires honest assessment of risks faced by the project and the timely communication of these risks to the project manager.¹⁵ However, it may be simple to characterize high power distance as uniformly dysfunctional. Where fast select-design is important, as is often the case in manufacturing environments where online states can exchange without warning, the inherent authority of a senior mission manager or website engineer can be a decisive advantage, enabling fast one-sided motion. Many researchers have argued, it is the cultivation of a management style that combines decisiveness associated with hierarchical authority with openness and accessibility that encourages upward communication.

b. Collectivism, Relationship Networks, and Stakeholder Dynamics

Collectivism is one of the prominent features of Indian society, and this has immense implications for the interpersonal relationship that prevails within construction companies in Delhi NCR region while managing projects. This is because collectivism refers to prioritization of group needs over

personal needs, relationship orientation and not contractual approach towards building trust, as well as use of social networking, known as *jugaad* and references in Indian society, as the main approach towards solving problems and acquiring resources.¹⁶ In construction firms, collectivist attitudes lead to strong in-group identification in work groups, which can enable high levels of informal coordination and support. The relational nature of these norms may be a great boon to construction projects, which demand extensive coordination among highly interdependent work groups. Studies on construction group performance in Indian firms suggest that work groups that are characterised by strong relational relationships have better on-site coordination, lower conflict and more willingness to exert discretionary effort compared to work groups that are characterised by transactional relationships. At the same time, collectivism in construction poses challenges for project management practices. Mercantile procurement practices like tendering on merit may be confounded by relational bias. Risk management practices based on contractual rather than relational forms of accountability may not lead to the predicted behaviours. Such conflicts between formal project management systems and collectivist cultures are a feature of empirical studies of Indian construction management.

c. Uncertainty Avoidance and Risk Management

The relatively low scores India achieves on uncertainty avoidance within the framework of Hofstede's model might seem contradictory to an observer acquainted with the high level of proceduralism typical of Indian organizations, both public and private. Uncertainty avoidance refers to cultures tolerant of ambiguity, where people accept the need to deal with lack of clarity in procedures, have a casual attitude towards risk and novelty and show flexibility in dealing with unforeseen circumstances. This implies an ability to react flexibly to changing circumstances on-site and continue projects despite missing information, as well as a culture that allows for renegotiating contracts and specifications.

On the one hand, this improvisational approach can give construction companies a competitive edge in unpredictable project environments. On the other hand, this can hinder attempts at implementing sophisticated risk management processes. A risk register, risk analysis, and risk response strategies that are integral to modern project management practices imply a pro-active approach to managing uncertainty, which can contradict the prevailing approach to risk mitigation. The end result is an operational model in which formal hazard control approaches are adopted as compliance requirements but not truly integrated into operational decision-making, a phenomenon described by many researchers as the 'ritualistic adoption' of operational management practices.¹⁷

¹⁴ Prashant Palvia and others, 'Information Systems in India: Academic Research Status and Future Directions' (2020) 65 Information and Management 103278, 4.

¹⁵ National Highways Authority of India, 'Annual Report 2022-23' (NHAI 2023) 8.

¹⁶ Triandis HC, Individualism and Collectivism (Westview Press 1995) 43.

¹⁷ Standish Group, 'CHAOS Report 2020: Beyond Infinity' (Standish Group International 2020) 5.

d. Time Orientation and Project Planning

India scores moderately high on Hofstede's long-term orientation dimension, reflecting cultural disposition towards thrift, perseverance and deferred gratification. In a challenge management context, but, this long-term orientation works in tension with inherent urgency to ship and patrons' expectations about agenda adherence.¹⁸ Construction projects in Delhi-NCR often tend to overrun their schedules by far too much than the anticipated time, and this tendency has become prevalent enough to lead to a form of acceptance of sorts among the stakeholders in such construction projects. According to the Ministry of Statistics and Programme Implementation, it has been reported that the vast majority of the centrally sponsored projects in India have time overruns averaging between 40% and 60% of original planned times. Not all sectors have remained culturally tolerant of schedule extension practices, and there has been a shift towards tighter schedule management due to foreign partners in these ventures and Indian clients operating in the private sector. One such success story of Indian construction management is that of the Delhi Metro, which has always been considered the best-managed infrastructure project in India ever. The unique feature of this project lies in its schedule management which, being a combination of strong hierarchy and stringent schedule management, demonstrated the possibility of excellence in Indian culture.¹⁹

5. Performance of Delhi NCR Construction Enterprises: An Evaluative Framework

A. Performance Data from Delhi NCR Construction Projects

It is not easy to get systematic performance data regarding construction projects in Delhi NCR due to the fragmented nature of the construction industry, lack of mandatory reporting of performance data for projects of the private sector, and the general tendency of firms to withhold unflattering information about their performance in terms of cost and schedule. However, the most comprehensive data on the topic comes from public sector projects overseen by the Ministry of Statistics and Programme Implementation. According to the Ministry's flash reports, over the last few years, the number of central sector projects that had reported cost overruns was more than 40 percent, while those reporting schedule overruns was even larger. In the private sector, data on the performance of projects can be obtained through industry surveys and anecdotes. For instance, the KPMG survey on project management practices in India reveals that only about one-third of the construction projects had been completed within the budget, and only about a quarter of them had been completed on time. It is worth noting that organizations with certified

project management systems and PMOs performed considerably better than their peers, which proves empirically that institutionalized project management can be highly beneficial for organizations. Delhi Metro Rail Corporation is a key outlier organization that serves as a benchmark. The organization has successfully executed various phases of its metro projects without deviating much from its initial plan and budget estimates. This level of performance contrasts sharply with that of most Indian organizations. There have been several studies on the project management system of the organization, and these studies have linked the success of the organization to a number of elements: high commitment levels, meticulous planning and monitoring, successful stakeholder management, limited political influence, and most importantly, the ability to defy organizational culture.²⁰

B. The Project Management-Performance Nexus

The connection between project management maturity and performance in Indian construction firms in Delhi NCR displays characteristics that are generally in line with findings elsewhere, but with some specific variations based on culture. The literature on Indian construction organizations indicates a positive correlation between formal project management implementation and improved organizational performance; however, this correlation is not linear and depends on various contextual factors. The performance effects from project management implementation tend to be greatest in situations characterized by certain conditions. First, there needs to be proper alignment between the firm's structure and the requirements of project-oriented operations, such that the project manager has sufficient power and information. Second, there should be an atmosphere within the organization that facilitates the kinds of behaviours required for effective project management, such as honest risk communication and proactive problem solving. Third, project management needs to be seen as part of organizational strategy, not just a compliance issue for management.²¹ Under such circumstances, it is likely that adopting formalized project management practices results in what can be called 'compliance theatre,' where the form but not the substance of project management practices changes. Specific attention needs to be paid to the interaction effects of the two variables - structural and cultural - on performance. The paper proposes that structural changes alone, such as the use of a matrix structure or the creation of a Project Management Office, will have no effect on the improvement in performance if they are not coupled with cultural changes. On the other hand, cultural changes that aim at fostering an open culture and the desire for continuous improvement will prove to

¹⁸ Deshpande R and Farley JU, 'Organizational Culture, Market Orientation, Innovativeness, and Firm Performance: An International Research Odyssey' (2004) 21(1) International Journal of Research in Marketing 3.

¹⁹ Delhi Metro Rail Corporation, 'Annual Report 2022-23' (DMRC 2023) 6.

²⁰ Ministry of Housing and Urban Affairs, 'Smart Cities Mission: Annual Report 2022' (Government of India 2022) 14.

²¹ Meredith JR and Mantel SJ, Project Management: A Managerial Approach (8th edn, John Wiley and Sons 2012) 133.

be futile if they do not have structural enablers.²² The most effective performance improvement trajectories in Delhi NCR construction enterprises are those that simultaneously address structural and cultural dimensions in a coordinated manner.

6. Critical Discussion

A. The Limits of Universalist Project Management Frameworks

One of the main critiques put forth by this paper is that the popular project management models, which have been developed mainly within Western, English-speaking environments and have been codified into guidelines such as the PMBOK Guide, the PRINCE2 approach, and the ISO 21500 guideline, cannot be viewed as universal and culturally neutral methods that are applicable equally in any environment. The frameworks carry inherent assumptions regarding authority, communication, decision-making, and accountability that are grounded in the values of the culture in which they were developed. In their application in India, if not critically analyzed and adapted, the models would create friction rather than harmony. However, this does not mean that the models would not benefit the Indian construction industry. On the contrary, there is considerable evidence to support the notion that when properly adapted, international frameworks of project management could yield significant gains in performance for Indian construction organizations. The emphasis here lies on the term 'properly.' Proper adaptation entails, at the very least, an awareness of the interplay between Indian cultural values and project management practices, along with an attempt to adapt the practices accordingly.

For example, the collectivist orientation of Indian creation people and experts can be mobilized as a resource for team consensus and collaborative trouble shooting if enterprise control methods are designed to appreciate the organization as opposed to individual achievement. The highly electrophonic feature of Indian manufacturing businesses can be channelled productively if leaders spend money developing private recognition of technical competence and equity, thereby bringing them respect as hierarchical role assignments and using it to compel rigorous challenge execution.²³ The improvisational capacity associated with low uncertainty avoidance can be systematically captured through established 'training-invented' processes that convert tacit adaptive expertise into codified organizational learning.

B. The Emerging Generational Divide

An important phenomenon which has been overlooked in the academic discussion on Indian construction management is the emergence of an intergenerational split, where on the one hand there is an older generation of managers who have been

indoctrinated in a traditional culture of hierarchical management and on the other hand, a younger generation of managers who have been exposed to international management practices.²⁴ The age disparity between the two groups thus presents both chances and problems for those involved in construction projects in Delhi NCR. For the former, the younger generation can act as a change agent within the organization, promoting better project management practices through their use of different techniques, questioning outdated methods, and demonstrating proper behaviour associated with successful project management. In terms of the latter, the presence of two separate generational groups, each operating on different premises of organizational behavior, may lead to poor communication and conflict.²⁵

C. Regulatory Complexity and Its Structural Consequences

The regulatory regime for construction operations within the Delhi NCR region constitutes one of the most complicated in the nation, considering the fragmented nature of its jurisdictional authority between various state and national agencies. This compliance complexity bears substantial structural ramifications for construction organizations. Companies without their own regulatory affairs departments face the risk of delays, suspensions, and litigation which can jeopardize even the best-run projects. The structural response taken by some of the best companies in the field involves setting up specialized government liaison offices or even appointing a high-ranking executive with strong connections within the regulatory community. While this structural adaptation addresses the situation efficiently, it does raise serious concerns over whether or not such actions have crossed the line between proper stakeholder engagement and corruption. The current regulatory reforms agenda implemented by the Government of India through programs like the Real Estate (Regulation and Development) Act 2016 and the Ease of Doing Business project has the capacity to make the regulatory environment easier for construction organizations. However, the pace of implementation in Delhi NCR has been uneven, with improved structural adaptations remaining essential to deal with regulatory complexity.

7. Recommendations

• For Construction Enterprise Leaders

It is important for the enterprise leaders in Delhi NCR construction organizations to understand that project management is a strategic competency and not a technical one. These considerations need to be considered when assigning seniority and authority to project management personnel, investing in project management education and training, and

²² Schein EH, *Organizational Culture and Leadership* (4th edn, Jossey-Bass 2010) 17.

²³ Pant I and Baroudi B, 'Project Management Education: The Human Skills Imperative' (2008) 26(2) *International Journal of Project Management* 124.

²⁴ Luthans F, *Organizational Behaviour: An Evidence-Based Approach* (13th edn, McGraw-Hill 2015) 62.

²⁵ Reserve Bank of India, 'Report on Currency and Finance 2021-22: Reviving and Reconstructing MSMEs' (RBI 2022) 41.

focusing on project performance metrics in the reporting and incentive system for executives. In terms of structure, organizations must evolve from a purely functional hierarchy to more sophisticated organizational structures, which include balanced matrix organizations, and for organizations with enough projects in their portfolio, projectized organizations supported by functional service organizations. Project Management Offices (PMOs) must be created at a hierarchical level that gives them significant oversight powers and direct communication channels with senior managers. The governance structure needs to define roles and responsibilities explicitly and delineate authorities of project managers versus functional managers to eliminate ambiguity, which is a key reason behind coordination problems in matrix organizations. From a cultural perspective, leaders should be able to set the example by behaving the way they want their people to behave – that is, by being willing to speak openly about any problems facing their projects, accepting any challenge thrown at them, and being accountable for the performance commitments made by them. Where cultural practices such as deference prevent the upward flow of negative information, organizational systems like project health checks can be effective alternatives.

• For Industry Bodies and Professional Associations

Indian industry associations like the Confederation of Indian Industry, Builders Association of India, and Construction Federation of India must put in money to create project management standards and certification programs that suit the culture of the Indian society. It is not enough for them just to adopt foreign standards blindly without criticism. What they need is a critical approach toward synthesis of standards that maintains analytical rigor and procedural discipline while at the same time accommodating the Indian construction management culture.²⁶ The industry should additionally advise our bodies on regulatory reforms that reduce the compliance burden on production organizations and create a more transparent, merit-primarily based regulatory environment. A simplified regulatory framework can reduce the structural resources that companies have to devote to regulatory management and redirect them closer to actual appointment and control functionality.

8. CONCLUSION

In conclusion, this paper has made an effort to conduct a critical evaluation of the nexus between project management practices and the organisation structure, culture, and performance in construction firms of Delhi NCR. As can be seen, there exists an intimate relationship among all three aspects. While the project management practices influence the organisation's structure, the structure influences the cultural aspect, and then the culture impacts the actual process of

project management itself. All these factors exist dynamically and interact within a certain context of the nation, region, and sector where they occur and operate. It would appear that the major lesson from this analysis for project management in Delhi NCR is that its success depends on the strategic integration of structural, cultural, and procedural elements. It may be necessary to adapt the organisational structure to become more organic and flexible. It might be essential to change the corporate culture to become more open, responsible, and performance-driven. It might be vital to formalise project management procedures by developing tools and implementing appropriate governance structures. However, none of these steps alone is enough. From the evidence presented in this paper, it can be said that the construction enterprises in Delhi NCR that manage to achieve some degree of integration perform much better both in quantitative aspects like following the budget and timelines as well as qualitative aspects such as stakeholder satisfaction and innovation capability. The disparity between the best-in-class enterprises and the rest is large and poses both an urgent problem and a great opportunity. India's National Infrastructure Pipeline as well as its Smart Cities Mission require that India builds up its construction capabilities to a level which the average performance of its construction enterprises does not currently possess. To achieve that would necessitate a concerted effort on part of the enterprise managers, industry organizations, scholars, regulatory agencies, and policy makers to develop a project management culture that is both technically and culturally sophisticated. This paper has tried to make a contribution towards that goal by carrying out a critical review of literature as well as making evidence-based recommendations.

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²⁶ Ofori G, 'Frameworks for Analysing International Construction' (2003) 20(1) *Construction Management and Economics* 77.

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