OPTIMISING STAKEHOLDER COOPERATION IN INFRASTRUCTURE DEVELOPMENT

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ABSTRACT

Built projects are levers that drive economic growth. Correspondingly, with the economy under pressure, the need for infrastructure investment in South Africa is more apparent now. Provision of infrastructure has been considered the responsibility of government, with projects often financed by the government, from local to national level and constructed by private contractors – an arm's length relationship. Performance of these projects has been suboptimal. For a long time, the sector has witnessed an increase in the promotion of more cooperation between the public and private sectors in infrastructure development and operation. Public–private partnerships (PPPs) provide alternative ways to involve private sector in more meaningful ways in public infrastructure delivery. PPPs are not only a financing tool in government investment, but an effective project management approach that public and private sectors could employ in developing infrastructure, jointly sharing risks, costs, and resources. However, despite known PPP benefits, there is limited cooperation between the public and the private sector. There remain some reservations with the private sector on how South Africa will fair under the current leadership – leading to the private sector being shy to invest and openly collaborate with government. Partnership arrangements at strategic level are still difficult, failing to instil confidence at a tactical level where projects are controlled. The private sector needs stability in order to feel confident about investing and joining forces with public sector. This paper looks at innovative approaches to improve cooperative partnerships in public infrastructure development.
Keywords: infrastructure, private sector, South Africa, stakeholder cooperation.

1 INTRODUCTION

While investing in mega capital projects brings forth considerable benefits, getting the act right is not always easy. As is normal with infrastructure delivery, mega projects have so many ends to integrate for success. In particular, achieving optimal project delivery requires that the different levels and types of interests as well as the needs of critical stakeholders be looked into, understood, and leveraged. But the construction industry is fragmented and complex [1], eschewing collaboration and strategic vision [2]. The lack of common understanding among various stakeholders in projects is often considered as the primary cause for project failure [3]. To overcome these complexities and challenges, planners and project implementers need to leverage the benefits of multi-stakeholder involvement and their diverse inputs. This paper explores strategic opportunities to optimise stakeholder cooperation in project development for more impactful and resilient infrastructure. It reviews five critical optimization drivers, concluding that, while the key factors are important when considered individually, they are better considered in combination for synergy and improved effectiveness.

2 BACKGROUND

The South African government has, for years, prioritized infrastructure development to stimulate economic recovery and development. Lately, as part of a national economic recovery plan, the government set aside over R790bn for infrastructure in the medium term. In the same vein, the government has set-up several infrastructure development supporting structures such as the Presidential Infrastructure Coordination Committee (PICC),

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Infrastructure South Africa (ISA), and the Infrastructure Fund (IF). The IF is strategically housed within the Development Bank of Southern Africa (DBSA), a development finance institution owned by the South African government. These initiatives are supported by an enabling Act of Parliament, the Infrastructure Development Act (IDA) of 2014 and a National Infrastructure Plan. Government has been actively driving infrastructure investment, hosting investment conferences and seminars, and inviting private sector participation.

Over 2020/2021, South Africa spent over R220bn on infrastructure [4]; this represents a significant portion of the national budget. For more significant impact, infrastructure expenditure should have been more – South Africa is targeting infrastructure spend to be 30% of GDP [5]. These statistics underscore the depth of government's commitment to successful infrastructure delivery and economic recovery. While South Africa has made some tangible progress in providing socio-economic infrastructure, there remain some clear gaps. These gaps indicate that successful infrastructure delivery is not a linear function that solely depends on funding provision. Among other factors, infrastructure delivery depends on the nature or health of the relations and interactions among project implementing partners. Stakeholders pursue influence on projects through their expectation of project value [6]. Partners to an infrastructure development project, both public and private, must cooperate for synergistic benefits. More tangible results can only be realised through constructive public and private sector partnerships. This article explores the opportunities for optimising cooperation between public and private sector players in the infrastructure development arena, with a special focus on South Africa.

3 METHODOLOGY

This research followed a qualitative approach involving desk top literature review for data collection. Data was collected from program progress reports, technical reports and scientific papers and articles. This information was supported and verified through a half-day workshop convened with stakeholders and project partners in the local infrastructure development sector. The data was also analysed qualitatively.

4 SETTING AND CONTEXT

There is a growing narrative underscoring the importance and influence of infrastructure development in driving or catalysing economic growth. Globally, several governments use targeted infrastructure investment and development as props for socio-economic development. This has become common place, particularly in response to economic downturns. However, it has been observed that sheer infrastructure investment is no panacea to economic growth; such initiatives require careful planning and resolve in execution as there are reported high levels of infrastructure projects failure [7]. Some studies estimate project failure to range between 50% and 70% [8]. Research also shows that a high proportion (more than 90%) of public projects suffer from cost escalation and time delays [9]. Thus, careful attention to project detail is required if infrastructure investment is to yield the desired economic growth catalysis.

In light of potential project failure challenges, we suggest that sound partnering of the private and public sectors can help improve project delivery. Several contracting models on the market emphasise increased private sector involvement in public infrastructure projects. This can involve using various forms of partnering. Notably, these contracting models differ from the engineering, procurement, and construction (EPC) model that public projects traditionally use. However, in both the traditional EPC and public–private partnership infrastructure delivery models, success is influenced by, among other things, the quality of

cooperation relationships inherent in the project. The next section briefly outlines common project partnering arrangements.

5 PROJECT DELIVERY PARTNERSHIP OR COOPERATION ARRANGEMENTS

A partnership is an agreement to do something together that will benefit all involved, bringing results that could not be achieved by a partner operating alone and reducing duplication of efforts. A successful partnership enhances the impact and effectiveness of action through combined and more efficient use of resources, shares risks, promotes innovation, and is distinguished by strong commitment from each partner [10].

Several forms of partnerships have emerged over the years. For a long time, public infrastructure has used the engineering, procurement, and construction (EPC) form of contract. The EPC form of contract has defined the nature of relations and cooperation between the public sector/state and the private sector represented by consultants and the contractor. EPC projects consist of the design, procurement, construction, and commissioning of physical assets. Intended to create a clear and objective competitive environment, avoid problems of influence, collusion, corruption and/or bid rigging, the EPC intent is to provide taxpayers with the project at the lowest price that responsible, competitive bidders can offer [11]. In the EPC contracting, assets are transferred to the end-user or owner as a complete functioning unit. Notably, in the EPC model, the public sector purchases assets from the private sector consultants and contractors, with liability limited to asset design and construction, respectively. In the main, financial, and operational risks remain with the public sector. Historically, the majority of infrastructure projects have been implemented using the EPC model, with a significant proportion successfully delivered [12].

Despite widespread use, the EPC form of cooperation has been criticised for being inadequate to ensure successful delivery of projects, resulting, at times, in poor infrastructure delivery performance. Scope, timeline, materials, resource requirements as well as corrupt practices have been considered as key contributors to EPC projects failure [13]. In addition, the balancing of risk between the customer and the contractor is significantly negatively impacting EPC project arrangements. When contract terms are not in place to address uncertainty in duration and cost, there is a fundamental risk imbalance created in these agreements. Each additional level of uncertainty placed upon the contractor comes at a price to the client. In addition, the EPC form of contract is increasingly under pressure from lack of productivity, low or negative profit margins for investors, and the poor adoption of necessary innovations and digitalization [14]. The form of contract has suffered significant deprivation of business and competitiveness – from engineering activities through operations and maintenance to decommissioning. Other criticism of the EPC form of partnership include:

- It is time consuming when savings.
- Suffers from pressures from the low-bid environment, resulting in substantial cost and schedule increases leading to claims, disputes, and costly litigation.
- In order to manage unfair advantage to one contractor, design work is performed without contractor input – therefore missing the opportunity for the contractor to shape and contribute to the design – with practical suggestions and use of construction methods that can add value.
- The contractor's non-involvement in the design contributes to the adversarial nature of the construction process [11].

Over the years, and in response to the shortcomings of the EPC model, alternative contract or partnership or cooperation forms, designed to share risk among partners, have emerged and now exist. These approaches generally work to create a better team approach and to establish an atmosphere of trust – leading to increased innovation to add value and to allocate risk more appropriately [15]. Amongst the alternative contracting forms include PPPs which became more prominent from the 1990s. For these forms of cooperation to work well, constructive relationships between public and private parties are pivotal and should be prioritised. Several types of PPPs are available, each type informed by the risks or responsibilities assigned to the project organisation. Some of these cooperation arrangements include the build, operate and transfer (BTO); build, transfer and operate (BTO); build, own and operate (BOO); design, build, operate, and maintain (DBOM); and, the design, build, finance, and operate (DBFO).

6 PARTNERSHIPS OPTIMISATION OPPORTUNITIES

With the emergence of several partnering arrangements, there exist several optimisation opportunities among stakeholders in infrastructure development. Some of these opportunities are proposed and outlined in the following sections.

6.1 Building of trust among project partners

Trust is an elusive concept. It is defined in several ways by different researchers in different contexts. Trust "involves a recognition of one's vulnerability to the actions and choices of the trustee, involves importantly 'retaining this vulnerability' by not attempting to erect barriers to protect one's interests" [16]. Usually, the interests of partnership members are different, and making oneself vulnerable to others is difficult.

Trust is pivotal in construction partnerships. However, it was observed that the construction industry had been plagued by issues of trust for long, leading the sector to be characterised as having too little trust among partners [17]. Lack of trust usually leads to multiple problems in projects. Trust is crucial in achieving personal and organisational objectives, among people working together. The session learnt that trust is required whenever risk, uncertainty, or interdependence exists – situations that characterise infrastructure projects. As such, trust is important for increasing cooperation between parties to overcome risk and engage in assistive actions in environments characterised by uncertainty. From the above, it is opined that parties to public–private partnerships in infrastructure should invest a lot of energy and resources towards entrenching and building a culture of trust.

6.2 Ensure dedication to common goals

Strong commitment from partnership parties is reflected when partner organisations are equally present and represented by senior and experienced persons who have influence within their parent organisations. Partners must show determination and accept the practicalities of their responsibilities. As noted previously, the objectives and goals of the private and public sectors may not always be well-aligned, with the public sector moved by social service delivery and the private being profit driven. This manifests a chalk and cheese setting. It is essential that synergies and common goals are identified and that these undergird the foundations of the project partnership.

6.3 Ensure strategic fit among partners

The session also underscored the need for public and private partners in an infrastructure project to ensure strategic fit. Strategic fit expresses the degree to which an organisation matches its resources and capabilities with the opportunities in the external environment. In this instance, it implies that both parties match their inherently unique and often different resources and capabilities with their common infrastructure project initiative. This is not an easy assignment to accomplish. The underlying concept of a strategic fit is the achievement of synergies through the use of complementary assets and competencies [18]. In addition, in assessing strategic fit, it is essential for parties to ascertain whether a joint value chain will achieve sustainable advantages for the parties [19]. Key elements to consider when engendering strategic fit include common goals, committed senior management, interdependency, willingness to invest in the relationship, and agreement on joint decision making. In its assessment, supported by submissions from Marshall [20], the session concluded that the notion of strategic fit receives very little attention at the start of the collaborative arrangements in infrastructure projects.

6.4 Delegation of executive power

If infrastructure delivery is to succeed, it is essential that, in all circumstances and at all times, project leadership should be delegated sufficient power to make strategic decisions. This, often, is not the case and failure to do so creates a weak institution, resulting in project leadership always deferring to parent partners for key decisions. This curtails the project organisation's agility, leading to long turnaround times for critical decisions and often project delays. It was agreed that the project organisation should be given executive powers to function and resourced by human capital with the experience and expertise to do so.

6.5 Other optimisation opportunities

Several other key factors for successful infrastructure projects were proposed during the session. Additional key success factors identified in the session include:

- Understanding each other's individual expectations and values.
- Instituting regular and transparent communication.
- Ensuring continuous and transparent communication among stakeholder parties.
- Simplifying and accelerating procurement processes.
- Rationalising project selection processes.

7 CONCLUSIONS

Several partnering arrangements in infrastructure development have emerged over the years. Each of these arrangements have their strengths and weaknesses, with project clients having to select the best possible option. This article contends and concludes that there are tangible possibilities to optimise existing partnering arrangements to best implement infrastructure development. The optimisation opportunities have been well articulated in this paper. It is important to note that, while these key success factors are important when considered individually, they are better considered in combination for improved efficacy. Joint consideration of these partnership optimisation brings to the fore more synergistic value-addition to stakeholder interaction in infrastructure development.

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