

A desk review of preconstruction project development planning delays in South Africa: A case for improvements

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Abstract:

This paper identifies policy issues in construction management that cause preconstruction planning delays in South Africa; and proposes solutions for improvements. Relying on literature review, the paper highlights preliminary results from an ongoing research project. Such results include among other discrepancies in building regulations; planning laws; and numerous factors related to spheres of government. The researchers acknowledge that the research on which the paper is based is still ongoing. Going forward, data will be collected through the administration of 100 questionnaires to different construction operatives and planning operatives. These will include professional engineers, architects, surveyors, contractors, physical planners, and academics in the built environment. The collected data will be analysed using statistical scales. Thus far, however, the preliminary findings are that in South Africa the delay in pre-construction development planning seem to arise largely from gaps in the South African building regulations and planning laws which result in planning delays in construction project development. It is indeed proposed that there is a need to increase efficiency and bring harmony in the regulatory processes to enhance speedy construction project development planning in South Africa.

Keywords:

Policy, pre-construction, planning, building regulations, delays, government spheres

1 Introduction

The causes of construction development planning delay observed around the world, are due to environmental, political, managerial, economic, and financial factors (Van Wyk, 2013). This paper looks at rules, agreements, standards, regulations, and arrangements that oversee land use the broad and the spatial element of the pre-construction planning of developments in South Africa. The paper seeks to identify policy issues in construction such as gaps in building regulations; planning laws; the spheres of government and other factors that cause preconstruction planning delays with a view to proposing solutions for improvements.

It is contended that the rules that oversee land arrangements should be extended and made clearer and easier to use. Such rules and standards should explicitly manage the similarity of land use the broad and the spatial element of the integrated development plans (IDP) (Heyns, 1995). As per Nkosi (1998) there is need for the standards to stipulate the land use and infrastructure frameworks that are pertinent to the whole of South Africa. It is for this reason that this research proposes to investigate the delays on pre-construction project development planning caused by building regulations and planning law in South Africa. The Draft Green Paper on planning and development depicts and surveys the authentic foundation to spatial arranging in South Africa and the way it has been created since 1994 from a legitimate, strategy and procedural perspective.

2 Ongoing delays despite the green draft paper and development facilitation act: A literature overview

Mobilisation and construction to practical completion; and use which consist only of post practical completion activities. Whilst project appraisal is done in the first stage, the design stage entails concept development, design development and technical design.

To effectively examine the causes of the delays in preconstruction of projects, it is important to examine the country's planning systems. According to the green paper on development planning (1999), democratic South Africa inherited an unequal, incoherent and fragmented planning systems that were developed under apartheid (Bouillon, 2000: Kanyane and Koma, 2006: Koma, 2012: Van Wyk, 2013). The passing of the Development Facilitation Act no. 67 of 1995 (DFA) was meant to usher in "a coherent framework for land development based on a set of binding principles. It was also supposed to speed up the approval of development projects, and to provide for the overhaul of the existing planning framework."

According to the Green draft paper (1999), the South African post-apartheid government took the following processes of transforming planning to meet the needs of the new democracy: The new government passed the Development Facilitation Act no. 67 of 1995 (DFA), to begin the process of transforming planning to meet the needs of the new democracy.

It is little marvel therefore that the Draft Green Paper on Development and Planning describes and assesses the historic history to spatial planning in South Africa and the way it has developed considering 1994 from a legal, procedural and policy point of view. A key element is the Constitution's emphasis on co-operative governance between national, provincial, and local spheres of government. While the advent of the DFA and new regulation in several provinces is informed by means of a new method to planning, many troubles remain. These consist of a lack of shared imaginative and prescient about what spatial improvement must be; a lack of co-ordination between exceptional spheres of government and between distinctive departments; a lack of capacity; a high diploma of felony and procedural complexity; and a very slow tempo of land improvement approvals. It is, furthermore, argued that the standards that govern planning want to be accelerated and made clearer and user friendly.

Heyns (1995) is of the view that, if planning that promotes speedy construction project development must be achieved, the Draft green paper (1999) argues for the need for policies and laws that regulate both the spatial and land development aspects of policy planning laws in broad terms. If this is done it will enable provinces to take the provisions further in their own laws and regulations. Apart from the above, policies and enacted planning laws need to: Clearly spell out issues related to spatial and land-related factor of IDPs at local council, metropolitan council, and district council scales. Provide all main local authorities, metropolitan and district councils, and provinces spatial coverage plans as a factor of their IDP aspects (Royston, 1998; Heyns, 1995).

The revised Development Facilitation Act (DFA) should aim to clarify the decision-making process for land development. It should allow for local governments to make decisions about land development proposals. It should stipulate that local decision-making bodies be comprised of experts and officials who are obligated to make choices in accordance with politically authorised policies and plans (Royston, 1998).

3 Research Methodology

The literature review/desk review was an important element of the research process for the paper, and it helped with practically every step. It provided the theoretical background to a study, it helped establish the links between what the researchers were proposing to examine and what has already been studied (Fink 2010; Kumar 2011; Booth, Papaioounnou & Sutton 2012). The value of a literature review was that it provided the researchers with ways to avoid duplicating past research by providing vital facts and background information about the subject under examination (Welman, Kruger & Mitchell 2010; Neuman 2012). During the literature review, a number of sources were consulted. Peer-reviewed journal publications, books, online sources, and other sources were included. These sources were used to acquire up-to-date information on the reasons of construction project delays in South Africa. (Maree 2016; Kumar 2011).

To date, research has focused on construction projects in South Africa to regulate and keep as uniform as possible potential variances owing to the national context, and to guarantee that the findings mirrored the overall trend across the country. The research population was initially sampled as part of the article's writing, and it comprised of reports from construction workers in South Africa. The target demographic for the next phase of the study will be 100 people, including contractors, consulting experts, academics, local and national government officials, government-built environment professionals, and construction employees.

It entails gathering data and converting it into numerical models that can be evaluated and altered to arrive at conclusions about a data set. It emphasises objectivity to a great extent. A mixed research design will be used for reminder of this study since it allows the researchers to collect data and use statistical analysis to achieve the study's goals.

The research will be strengthened with case study analysis based the researchers' experience. A case study approach will be adopted for 90 basic primary education schools. Data will be gathered and fed into numerical models, which will be evaluated

and adjusted to arrive at findings. Objectivity will be emphasised heavily. Because it objectively measured social constructs with the goal of testing study objectives based on statistical analyses of a set of theoretical variables, the mixed method research was chosen for future work.

For the reminder of the research, data analyses will be carried out by using descriptive statistics, correlation analysis, and regression analysis are all examples of statistical methods. Statistical Packages for Social Sciences (SPSS), version 24.0 for Windows, will be used to analyse the collected data. Tables will be used to provide summaries of the data. Regression analyses will be undertaken to examine the connections between the constructions under investigation. The researcher will utilise the services of various universities' statistical department to assist with analysis of the data. The data will be analysed using descriptive statistics (e.g., means, standard deviations, range, skewness, and kurtosis) as well as inferential statistics. Based on the data from the questionnaire, inferential statistical analysis will be performed to investigate the relationship between the variables using independent t-tests and Spearman rank correlations. A focus group discussion will be carried out as well to target high level data collection and analysis.

4 Findings and Discussions

4.1 Preconstruction development planning delay observed around the world

As earlier mention in section 1.0, the causes of construction development planning delay observed around the world, are due to environmental, political, managerial, economic, and financial factors and are shown and expanded in table 2 below.

Table 2: Various causes of construction development planning around the world

Ref	Category	Causes
1	Environmental	Lack of policy coherence
2	Political	Limited internal Government Implementation capacity.
3	Managerial	Client changes, design changes, specification changes client slow decisions, late reviews and approvals, mistakes and discrepancies, lack of communications
4	Economical	Project viability
5	Financial	Lack of finances, lack of payments

In Malaysia the construction planning delays seem to be connected to governance problems. According to Amri and Marey-Pérez, (2020); Kassa, (2020); Sambasvan and Soon, (2007) in Malaysia the delay in construction development planning seem to arise from improper planning, inadequate clients' a lack of funding and payment for finished work, as well as a breakdown in communication between parties.

In Africa generally the delay in construction project development planning seem to arise from slow planning, project viability, limited internal government implementation capacity, lack of policy incoherence, corruption, lack of skills, lack of funding, and design specification changes (Al Amria and Marey-Pérezb, 2020; Mittal, Paul, Rostami, Riley, and Sawhney, 2020; Pettang, Manjia, and Abanda, 2020; PwC 2014; Coleman, Nooni, Fianko, Dadzie, Neequaye, Owusu-Agyemang, and Ansa-

Asare, 2020).

The problem of building project development planning delays in South Africa appears to be mostly related to the legislation that control land development. These are related to various sectors, are controlled by various entities, and operate within several government areas. Planning and the environment are two important fields. Land development activities in these two regions are regulated in a variety of ways by laws in these two sectors: Obtaining approvals or authorisations from decision-making authorities with a mandate to accept, consider, and rule on the merits of land development applications. Both planning and the environment have traditionally functioned in parallel, with few successful attempts at integration (Kihato, 2012; Nkosi, 1998; & Royston, 1998). This appears to demonstrate a lack of vision and coordination among South Africa's numerous construction standards and planning legislation. Several issues arise because of the current circumstance. In a nutshell, plans are made and implemented in silos. Land development decision-making is also not streamlined, and there is a significant risk of legal confrontation. This is due to the two areas' differing approaches to reading laws. The various permissions may also be perplexing to all parties involved. The documentation associated with two different development proposals, for example, is frequently confusing, overwhelming, and duplicitous to public participants. Objectors frequently use this duplication to stymie socially driven growth. Furthermore, parallel systems reduce system efficiency by lengthening and increasing the cost of land development (Kihato, 2012). The foregoing also appears to illustrate a lack of coordination between different levels of government and ministries when it comes to the application of building regulations and planning legislation in South Africa.

The integrated development plans (IDP) are crucial papers, according to Heyns (1995). The IDPs' principles address the compatibility of land use management and the spatial dimension of the districts, and hence the province. According to Nkosi (1998), concepts are needed to specify land use management systems that are applicable throughout the country. Because the existing national framework allows land use systems to develop specific codes for locations like informal settlements or former homeland territories, this is the case. Land division and prejudice are encouraged because of this. It's also worth noting that, while the modified DFA promotes policy-led planning, it ignores the spatial and land aspects of integrated development plans.

Land use management is concerned with the processes through which land is developed, land uses are defined, and land activities are managed. Berrisford and Kihato (2008) propose that 'the broad idea of planning' (2008) comprises two parts: those activities that are 'geared toward development through time,' such as IDPs, and those that implement strategic plans (emphasis added). Various legislative and regulatory processes used to regulate land development and land uses, including zoning schemes, are included in these implementing and monitoring tools, which are also known as land use management systems (Berrisford & Kihato 2008).

Town planning plans, according to Berrisford and Kihato (2008), "are employed for the purposes of land use management on a daily basis." Each scheme also lays out the legal foundations and criteria for the rights to develop and utilise any parcel of property

within a municipality in accordance with the zonings in place. These rights, in turn, serve as the foundation for determining property values, making them an important component of the municipal property rating system (Berrisford & Kihato 2008).

Land use management may be a critical, but weak link, in the transformative effort pursued by the whole land management system and planning activities in general in contemporary South Africa. Land use management is becoming more recognised as a neglected area of engagement, with substantial repercussions. For example, according to the researchers' own experience, the delays being experienced in the educational infrastructure project, have attributed to the backlogs currently existing in the delivery of basic education infrastructure. This is despite the following:

- The Political will by the African National Congress (ANC) Government to address the various challenges within the sector, as can be seen through the policies & laws put in place, such as the Standards for School Infrastructure and National Minimum Uniform Norms, which provides guidelines when designing schools.
- The Budgetary allocation of funds for the implementation of various programs such as building additional classrooms, replacing latrine toilets with flushable toilets etc.
- Availability of expertise, professionals, and contractors to carry out the works.
- Availability of land in most cases (Berrisford and Kihato, 2008; Kihato, 2012; Nkosi, 1998 & Royston, 1998).

The National Development and Planning Commission (NDPC) was established under the DFA of Act No.67 of 1995 to provide planning and development advice to the Ministers of Land Affairs and Housing. This means that the NDPC mission provides effective, proactive, and informed oversight of all regulated entities so that these entities can effectively perform and serve the public safely, reliably, efficiently, and fairly, while at the same time making sure that addressing the goals and future needs and goals of the country are addressed in the most economical manner.

The NDPC's goal is to unite the country not only around a single set of goals and priorities, but also around a common set of values but also to ensure in this context that construction project development over the longer term is sustained. In this regard, it advises with regards to issues that positively impact on the development of the country, including preconstruction project development planning. It is important that to ensure that the NDPC executes its work effectively; By consulting with and drawing on the skills and expertise of multiple stakeholders to build consensus and find concrete solutions to key challenges faced within the country's building and planning laws, the 24 part-time external commissioners, along with a chairperson and a deputy chairperson, take a broad, independent, and critical view of South Africa. It is through such rallying of the nation towards common development objectives and the commissioners critical view of the country's planning laws that the country will realise economic development (Nkosi, 1998; Royston, 1998).

According to Nkosi (1998) the NDPC is also required to continuously put forth to carry out/do research on important cross-cutting, multi-sectoral topics to solve the South African's building and planning laws on construction project development. Nkosi (1998) adds that such economic development may not be realised if the country's planning policies and laws impede construction project development. What this means is that there is a need for South African building and planning laws on construction project development to for long-term economic and social growth, well-researched, evidence-based input into policy processes is essential.

4.2 Preconstruction delays in South Africa

Building regulations and planning laws in South Africa seem to be largely the causes of delays of construction project planning and implementation, there seems to be other causes which are also evident in other countries. For example, (Glyptis, Christofi, Vrontis, Del Giudice, Dimitriou. and Michael, 2020; Provenzano and Iddas, 2020: Sinha and Jha, 2020 and Yang and Wei, 2010) state that in Taiwan construction project planning delays are caused by: by client requirement changes, and legislative issues. Pourrostan and Ismail (2012), state that in Iran, the recurring causes of delay during planning phase are: delay in payment by client, changes in design, slowness in decision making process by client, lateness in reviewing and approving design documents by client, mistakes, and discrepancies in design development.

In South Africa construction project development is usually carried out in six work stages: Project initiation and briefing, Concept and feasibility, Design development, Tender documentation and procurement, Construction document and management, and Project Closeout are the steps involved. In project initiation and briefing, these activities take place: a clear project brief development is facilitated, procurement policy is established, different consultants for different tasks are appointed, site information together with statutory requirement for design is established, an initial viability assessment of the project is made, project initiation program is made, and the client is facilitated to agree and approve all the activities of initiation and briefing. In the concept and feasibility work stage, these activities take place: more different consultants for different tasks are appointed, health and safety consultant is appointed including identification of other planning statutory requirements, all the consultants are given the project brief, the concept design and viability assessment is made, cost management plan is made, project initial cost estimate is made, initial design and construction programme is made, and integration of the concept and viability solutions for the clients' acceptance and approval of all the activities of this work stage is facilitated (SACPCMP, 2006).

In the design development work stage, these activities take place: all the remaining different consultants for different tasks are appointed, communication channels are established, documentation development programme is made, design documents are integrated to match quality and accepted programme, facilitation of all planning laws and building regulations in line with statutory compliances are achieved, facilitation and the integration of health and safety requirements in design, and improvement of cost estimates and confirmation of project budget for clients acceptance and approval of all the activities of this work stage is achieved. The above activities are mostly linked to the

planning phase of construction project development where this research focusses and as shown in the table 3 below (SACPCMP, 2006).

Table 3: Planning phase of construction project development (SACPCMP/SACAP, 2006)

Work stages	Description	Activities
1	Project Initiation and briefing	The activities will include: a clear project brief development is facilitated, procurement policy is established, different consultants for different tasks are appointed, site information together with statutory requirement for design is established, an initial viability assessment of the project is made, project initiation program is made, and the client is facilitated to agree and approve all the activities of initiation and briefing.
2	Project Concept and Feasibility	The activities will include more different consultants for different tasks are appointed, health and safety consultant is appointed including identification of other statutory planning requirements, all the consultants are given the project brief, the concept design and viability assessment is made, cost management plan is made, project initial cost estimate is made, initial design and construction programme is made, and integration of the concept and viability solutions for the clients' acceptance and approval of all the activities in this work stage is facilitated.
3	Project design development	The activities will include: all the remaining different consultants for different tasks are appointed, communication channels are established, documentation development programme is made, design documents are integrated to match quality and accepted programme, facilitation of all planning laws and building regulations in line with statutory compliances is achieved, facilitation and the integration of health and safety requirements in design, and improvement of cost estimates and confirmation of project budget for clients' acceptance and approval of all the activities of this work stage is achieved.

During commencement and briefing of the project, idea and feasibility studies, and design development stages of construction project development are considered, there seems to be little research carried out regarding design delays in these phases.

In the three construction work stages namely: commencement and briefing, concept and feasibility assessments, and design development, the use of land for development should be in environmentally friendly and efficient manner. The land use plan, the environment and all the statutory requirements will have to be efficiently complied with in the above three work stages. This is contrary to what happens in South Africa as the construction project development planning approvals are extremely slow.

The South African government constitutes of three (3) arms, namely, national, provincial, and local government (Du Plessis, 2020). The provincial government is mandated to implement service delivery programmes such as infrastructure development of primary healthcare and basic education facilities. According to Kihato (2012) these different spheres of government slow down the process of infrastructure development in South Africa. Delivery of such infrastructure is taking an average of 2 - 5 years to complete Pre – Contract working stages, when in fact it would take less than a

year.

It is against the above backdrop that this paper was structured to investigate the causes of pre-construction development planning delays in South Africa. In doing so, the paper has explored the processes, the practices, the regulations, the policies, the laws, the spheres of government regarding the planning and implementation of preconstruction projects development on the land. The secondary data from the above investigation, also provides solutions to the construction project planning delays in South Africa. It is envisaged that the identified solutions and recommended amendments will help increase efficiency and bring harmony in the regulatory processes and enhance a speedy construction project development implementation in South Africa.

5 Conclusion and Further Research

Finally, if anything is to be accomplished, these modifications will necessitate a rewrite of Chapter IV of the DFA, which deals with land development objectives (LDOs), to provide better clarity in the new planning system. The land development objective (LDO) should be recast as a spatial component of integrated development planning (IDPs). If the above literature is sufficiently expanded and researched, it will identify the factors in the building regulations and planning South African laws which influence construction project development so that solutions are proposed, and recommendations of further research work are made.

The paper's objective has been to determine the planning law causes of construction project planning delays in South Africa. Secondly it has also determined the land planning processes, practices, policies and regulations which delay construction development planning in South Africa. Thirdly it has determined the identities, operations of the spheres of government that manage the processes, the practices, the regulations, the policies, the laws of the planning and implementation of construction projects development approvals on the land in South Africa. Fourthly the paper has made a recommendation on how to minimise the delays in the approvals of development preplanning in South Africa. The most appropriate research design will be mostly a mixed methods study. This methodology will be used to check the validity of secondary data which is significant. The researchers welcome any comments and feedback on their going investigation/research.

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