

Keynote Address Delivered at the 10th CIDB Postgraduate Conference at the Nelson Mandela University of on Monday 26 February 2018

Mr Tjiamogale Eric Manchidi, Pr. CPM

Conference theme: Towards a better route to enhanced productivity, performance, and transformation of construction

Introduction

Programme Director, Professor Andrew Leech - DVC Research and Engagement, Professor John Smallwood, Professor Fedelis Emuze, Professor David Roodt, authors of conference papers, students, ladies and gentlemen.

It is truly a great honour to be here and to have been asked to deliver a keynote address at the **10th cidb Postgraduate Conference**. My task is to give a key note address, in line with the 10th cidb postgraduate conference theme: "*Towards a better route to enhanced productivity, performance, and transformation of construction*". As a keynote speaker, unlike the authors of academic papers to be presented later in this conference, I am at liberty to be critical, constructive, reflective; and at the same time raise questions without giving answers. This also gives me an opportunity to be controversial. While doing so, I need remind myself that, although I consider myself as an activist in construction industry development, I am a sitting cidb board member. It therefore, compels me to speak like a board member.

I would like to focus my keynote address around human capacity issues in advancing construction industry development. My emphasis will be on illustrating how human capacity issues form an integral part of the construction industry development and enhances *productivity, performance, and transformation*.

The cidb' s mandate is to promote best practice; defined in the cidb Act as "a desirable and appropriate standard, process, procedure, method or system in relation to the delivery process and the life cycle of fixed assets". It is for that reason that I would also like to outline how best practice schemes drive can drive national contractor development programmes.

Before delving deeper into the theme of the conference, it will be appropriate for me to deal with the role of universities in advancing best practice schemes. The issue of creating and supporting centres of excellence deserve our careful reflection, as we move towards promoting best practice in the South African construction industry. The schools of construction management and economics, alongside other built environment disciplines; play an important role in informing construction industry development, in particular on issues of best practice. It is for this reason that I would like to commend our universities for supporting the repositioning of construction education.

The cidb has implemented an initiative around supporting centres of excellence, the merits of which however are not the scope of this address. I must however congratulate the cidb for having had a vision and courage to form partnerships with universities. Furthermore, I thank my predecessors in the cidb boards for having endorsed the postgraduate conference concept and hope that the current and future boards will continue to support it. Encouraging both postgraduate and post-doctoral research is very critical towards addressing construction industry development.

Review of Previous Conference theme

I have been asked to reflect on theme of the conference with a slant celebrating the achievement of the tenth postgraduate conference. This I propose to do by looking at the past nine conferences only briefly in order to offer broad reflections.

Programme Director, it is important to invite scholars, post graduate students and practitioners to look back on the past nine conferences in order to give a prognostic analysis. I do not intend to venture into this terrain myself, as I believe that the distinguished scholars and other academics in our mist will be able to give a detailed analysis of such in the next conference. As academics, scholars and postgraduate students, you are better suited to address this task than I am.

Some of the previous themes include the following: *Emerging Trends in Construction Organisational Practices and Project Management Knowledge Areas*” (9th conference); *Advancing construction industry development through innovative*

research and new thinking (8th conference); Adding value to the built environment (7th conference); Sustainable construction through quality and innovation Beyond 2010 (6th conference); Construction as a cornerstone for economic growth and development (5th conference); and Construction as a pillar for growth (4th conference)

The keywords I pick from the past themes include *growth, development, sustainable construction, adding value, organisational practice and innovation*. A brief glance on the conference proceedings, confirms the importance of these conferences to the developmental mandate of the cidb. Judging by the increasing number of papers and topics covered over the past nine conferences, it shows that participants are keeping abreast with issues affecting our industry. These papers should also contribute to the cidb' s mandate as outlined in the cidb Act 38 of 2000, i.e. that of implementing an integrated strategy for the reconstruction, growth and development of the construction industry. I have some reservations on this, however, which I will address later in this address.

At the same time, I notice that some of the topics covered in the past conferences have found expression in the relevant regulatory tools adopted by the cidb. While the degree to which they have influenced best practice is not always clear, what matters is that they enjoy the attention of our postgraduate students, scholars and regulators alike.

Productivity, performance and transformation

Though the theme for this conference identifies three elements, i.e. productivity, performance and transformation, the issue most at stake is the transformation of the construction industry. *How has the RSA construction industry responded to the national call for transformation? What kind of transformation discourse did, and still does, the cidb support and how does such affect productivity and performance?*

For the sake of clarity let me indicate that the term 'transformation' is broader than and not synonymous with black economic empowerment. Transformation goes beyond overcoming racial and gender skewedness in the construction industry. It also addresses the shape, size and composition of the construction industry in order to

address the socio-economic and economic growth challenges of our country. It addresses the capability of the construction industry towards addressing our National Infrastructure and National Development Plans.

It is therefore important to show why transformation should form the DNA of the cidb's blueprint. In order to do so; it is perhaps critical to remind ourselves as to what construction industry development is and how does it address the structure of the construction industry.

The structure of the construction industry

The construction industry is known to deliver its products and services through horizontally and vertically fragmented structures. Fragmentation, a phenomenon related failure to integrate and coordinate small discrete activities growing out of specialisation and division of labour, is blamed for the relative inefficiencies, ineffectiveness and poor performance in the construction industry ([reference](#)). This is because in an ideal setting specialisation and division of labour is supposed to lead to efficiencies, but the opposite is experienced in the construction industry.

Fragmentation literally means the breaking or disintegration of a whole into bits and pieces or units commonly called fragments, where a fragment is a comparatively small detached portion of the whole (OED 2010; Alashwal & Abdul-Rahman, 2013; Zürn & Faude, 2013). It occurs at industry level, where firms segregate into a large number of small enterprises; multiple professions, occupations, etc. It also occurs at *project level* where the production process disintegrates as a result of specialisation in terms of the geographical spread of project activities (i.e. spatial or longitudinal fragmentation): and the intermittent and project-based team arrangements of specialist to deliver the project.

In a practical sense, as Oranje *et al.* (2005:131) observed, "*fragmentation means that the ownership and control of separate functions ...resides in the hands of separate organisations with their own distinctive cultures and working practices*" (Oranje *et al.*, 2005:131). It is a phenomenon caused by the proliferation of specialists, each acting independently and having separate identities. The many disciplines involved become

territorially defensive of their various professional institutions and want to maintain their independence (Fairclough, 2002).

As an organisational phenomenon, fragmentation creates hierarchical boundaries between different functional units within the organisation. It results in situations where projects become vertically fragmented according to project life cycle stages (i.e. planning, design, construction, commissioning, operations and maintenance); or horizontally fragmented into trades and disciplines (e.g. civil, electrical, etc.)

This results in construction becoming a complex and dynamic process that delivers value to clients through temporary production systems (Bertelsen 2003; Bertelsen & Emmitt, 2005). It also means that construction value is created through project-based organisations where roles in the division of labour are structured based on specialisation (Lawrence and Lorsch 1967; Freidson 1976; Bechky 2006). Construction, however is known to be inefficient, ineffective and sub-optimal in its performance. Its performance improvement is crucial in order to meet the much-needed infrastructure and facilities required to develop the society and support economic growth (Gann and Salter, 2000).

The structure is such that there are many small contractors at the base of the pyramids while the apex is made of few but large contractors. The cidb registers have shown that disproportionate percentage of work opportunities go to a small number of contractors at the apex. It goes without saying that there are many problems associated with the structure of our industry which must be addressed by the cidb and its equivalents around the world.

While similar challenges of lack of opportunities and limited access to resources plague the many small large contractors at the bottom of the pyramid across the world, the unique nature of the construction industry in South Africa means that black, youth and female owned entities are mainly at that bottom of the pyramid, with the associated ownership and performance challenges. In addition, the large contractors at the apex of the pyramid structure are likely to grow faster than the rate at which small contractors graduate at the bottom. This is because the large contractors have assets, finance and other resources which enhance their access to opportunities and

ultimately their opportunities to grow. While this is an international phenomenon, the predominance of black contractors at the bottom of the pyramid in South Africa, largely due to historical injustices, complicates the situation further.

The only way in which economic inequalities can be addressed is if the expansion of opportunities at the base of pyramid is coupled with either regulating access to opportunities at the apex or ensuring that opportunities for contractors at the bottom of the pyramid grow faster than the top. At the same time horizontal growth is critical, where contractors improved their performance and profitability within their grades.

As such, any construction industry development agenda should recognise a need to channel efforts towards the two key aspects of inclusive growth and development within such structure:

- a. Growing across the pyramid thus allowing graduation from the base to the apex (in our case growth from cidb grade 1 to grade 9); and
- b. Horizontal growth thus becoming best performing, productive and profitable contractor within the grade.

Any construction industry development strategy and regulations should therefore be focused on establishing balance between growing the base and stewarding it in an inclusive direction while at the same time recognising that there is a need to have a single construction industry that is made of contractors of different sizes and shapes.

What is construction industry development and why is relevant?

Going back to the question of what construction industry development is, the CIB Task Group TG29 on the Construction Industry in Developing Countries defines it as:

“a deliberate process to improve the capacity and effectiveness of the construction industry in order to meet the demand for building and civil engineering products, and to support sustained national economic and social development objectives (CIB, 1999)”.

While the definition given above does not specifically mention developing countries, the capacity challenges mentioned are most evident in developing countries.

At the same time, the rhetoric of construction reform, improvement and sometimes revaluing, are often utilised to raise awareness of the much-needed change across the construction industry irrespective of the economic classification of the country

(Ofori, 2011). This is reflected Task Group TG84 on Construction Reform whose overarching aim is:

“to generate research activity around which (and how) influential drivers shape and reinforce construction sector policies regarding reform within different countries and regions.” (CIB undated).

One can safely say that the two task groups address similar concern relevant to construction industries in least developed, developing and developed countries, though TG29 places emphasis on capacity issues while TG84 focuses on construction sector reform.

Both construction industry capacity development and reform are of concern to scholar and policy developers alike because in countries around the world, South Africa included, the industry faces enormous problems of inefficiency, ineffectiveness and sub-optimal performance. At the same time, it is the very same construction industry that delivers infrastructure and facilities that form a crucial part of the built environment, sustain life and economic development.

Governments across developed and developing countries and stakeholders, together with multilateral agencies such as the International Labour Organisation (ILO) and the World Bank, continue to make attempts to improve construction productivity, quality of products and services; and innovation (Fox, 2003, Ofori, 2011, Hermans, van Zoest, and Volker, 2016).

In response, there has been an elicited call for bold action over the last sixty years in order to reverse the situation. Popular initiatives include the Emmerson (1962); Latham (1994); Egan (1998); and Construction Industry Review Committee (2001) reports in the UK. Similar initiatives take place in developing economies where the challenges are even bigger and compounded by lack of human resources and institutional capacity (Ofori 2000, 2011, van Wyk, 2006). The difference being that in developing countries, it is government policy that devices and leads the “machinery and mechanisms put in place to achieve reform” (CIB, 2011; page #). The reform often leads to the (re)formulation of public policy and change in legislation.

Why do governments lead construction industry development?

At this point it might be asked as to why governments (especially those in developing countries) have, ought to have, any interest in the construction industry reform and change; why not simply leave it to the market? In my opinion, notwithstanding the commonly propagated idea of a dichotomy between state and market represented in the mainstream economic literature, construction industry development is more likely to occur in the so called 'state-centred intervention' or 'developmental state' than in a 'market led intervention' that aims to emulate a perfectly competitive market.

Economic theory asserts that there is no perfect market, and this is clearly demonstrated in the construction industry in South Africa through market imperfections such as bid rigging as seen with the World Cup stadium projects and the continuing skewed allocation of projects (in terms of rand value) to few apex contractors.

For a free market to occur, it will require a strong state to enforce the market solution through legislation, licensing and other regulatory tool so as to protect the institutions of markets. (Luiz 2000). In other words, markets exist, and function effectively, when there is an active engagement in the economy by the state. This is because in the absence of a pure competition, markets are reliant upon the state to provide an enabling institutional environment, hence the need of a capacitated state to formulate and implement policy, given its environment (Luiz 2000).

The government interest in the construction industry development, especially in developing countries, is a possible remedy for such market failure (Scott, 2006). One important reason stems from the fact that the interest of the state in regulation arises from its obligation to remedy market failure in the public's interest (Noll, 1989). By market failure I refer to the situation in which the market does not allocate resources in the most efficient way to achieve public.

Market failure therefore, is a central tenet in traditional regulatory philosophy. As such, regulation becomes one of the key levers of state power in shaping the welfare of economies and society (OECD, 2010:1). Its justification is considered as prescribed (positive) behaviour (Den Hertog, 2010; Kogan and Unt, 2008) and improving the efficiency of markets in delivering goods and services. The state also has the ability to

use regulation as the best vehicles to curb private abuse and protect the vulnerable, the poor in particular.

The function of a government consists in large part the regulation and coordination of the industry; largely by way of legislation. Government regulates the economic system and does so largely by way of enforceable legislation. It then becomes a pivotal institution influencing the process of development by allowing permeation between the state and market function within a socio-political environment (Luiz 2000). As observed by **Karl Polanyi** in *The Great Transformation*, where he opposes traditional separation of duties of state being responsible for politics and markets being responsible for the economies, the state intervention is seen as the state's deliberate way of instituting the market.

In theory government intervention is justified where competitive markets fail to provide the conditions required to enable efficiency in the production, consumption, allocation and exchange of goods and services. Such government intervention is supposed to result in an efficiency and welfare improvement in instances of market failure. However, the positive intention of government intervention in achieving the desired change, is not always achieved. I share the view articulated by Luiz (2000) that

Misdirected state intervention is possibly worse than no intervention, and it may be better to simply accept the status quo whilst hoping for the 'magic of markets' to set in. However, sound state intervention is possible within the appropriate socio-economic and political environment (luiz 2000, p?).

One of the reasons for such failures may be associated with state failure to properly regulate and provide the necessary leadership to the stakeholders involved in construction reform and change.

In the case of construction industry regulation, the question is not whether the state intervention through institutions such as our cidb is desired or not but the quality of regulations driven by such institutions. In determining the quality of state intervention and its capacity to implement its policy, the question asked is then what is the institutional capacity of the cidb to regulate? This is a question I believe we can only answer once we have fully looked into the human capital capacity of our country and that of our industry particular.

Development of Best practice schemes

Programme director, I now turn to look at the issue of fast tracking best practice schemes (also called phase 2 of the registers) as one of the developmental tools the cidb would do well to introduce in its national Emerging Contractor Development Programme. We understand that in some quarters, best practice schemes are being opposed and labelled anti-development. Let us look at what they generically aim to achieve so that we can understand the reasons for their resistance.

Firstly, best practice schemes are intended to strengthen the performance of the contractors within each grade or bundle of grades, thus ensuring what I call horizontal growth, while the focus on contractor development programmes tends to be on moving contractors up the grades (graduating from one grade to the other). Best practice schemes only make contractors performance better and productive, increase their capabilities and their ability to achieve sustainable growth, but do not necessarily focus on graduating contractors from one grade to a higher one. However, it is likely that best practice schemes will also contribute to both horizontal and vertical growth amongst contractors too.

Secondly, best practice schemes are resource-intensive while contractors at lower grades tend not to have or invest in such resources. It is therefore important that best practice schemes inform national contractor development programmes and guide their resource requirements.

Thirdly, due to the fewer opportunities available to contractors within lower grades there are less incentives for them to invest in growth at those grades.

The critical question is whether our National Contractor Development Programme (NCDP) has achieved has been informed by best practice schemes. Although much has been done, the answer in my view is that the programme does not seem to have been informed and benchmarked by contractor recognition schemes. Sadly, our NCDP seems not to have been mainstreamed in the broader contractor development programmes but rather seem to be streaming a parallel contractor development programme. Hence today there is an inherent tension between transformative goals

based on national contractor development programmes and contractor best practice schemes.

Human Capital Development

In my inputs, therefore I will reflect on the role and importance of human capital development in advancing and informing construction industry development. I put it in that way simply because improved performance and productivity are factors of human capital development but underlying such is transformation.

As mentioned earlier on, the limited human capacity development features in the catalogue of problems facing the construction industries in developing countries; and therefore form part of their policies and strategies (Ofori,2000; Fox and Skitmore 2001; Kululanga, 2012). With exception of few countries, there is lack of appropriate policies and strategies to address human capital development, especially built environment professional development within these policies and strategies.

Let me inject a touch of patriotism at this point. South Africa is one of the exceptions to this blind spot. The discourses of human capital development in the construction industry development agenda in South Africa did not develop in isolation. As the macro-discourses of reforms within the development agenda of the country, the Reconstruction and Development Programme (RDP) then and the National Development Plan inform the human capital development of the industry. The National Planning Commission's (NPC) ideal of producing more than 5 000 PhD graduates every year by 2030 is one example.

“The NPC proposes that by 2030 over 25% of university enrolments should be at postgraduate level and emphasises that the number of science, technology, engineering and mathematics graduates should increase significantly. More specifically, by 2030, there should be more than 5 000 doctoral graduates a year and most of these doctorates should be in science, engineering, technology and mathematics.”

Turning to the academic environment, the absence of strategies for human capital development, especially for developing built environment professions, has also been accorded much less recognition on the construction reform agenda. Despite the challenges brought up by the professions on project organisation, they have been

overlooked in construction industry research when studying the inefficiencies, ineffectiveness and sub-optimal performance of the industry. Construction industry reform literature is replete with methods and tools to achieve cooperation and bridge horizontal fragmentation mainly in project procurement, however it ignores change in institutionalisation of expertise as a source of construction industry development.

Equally, deficiencies in the regulation of the built environment professions feature among the problems facing the construction industry but do not seem to be high on the academic research agenda (Ofori 2011, 2016, Fox and Skitmore, 2001). It is unclear as to why the professions have not featured strongly on construction reform literature. For example, the so-called “the reform movement initiatives” (see Fernie, Leiringer & Thorpe, 2006; Smiley, Dainty & Fernie, 2013) do not engage with professions in an industry which is described as ‘ill and in need for change’. This is asked because the construction industry does not fully enjoy the benefits of professionalism as the product of division of expert labour and specialisation. Instead, it suffers from lack of integration of professional functions arising out of horizontal fragmentation (Alashwal and Abdul-Rahman, 2013; Hoffman and Henn, 2008; Hindle, 2015). A befitting question then about built environment professions is “...whether they are part of the industry’s economic problems” (Eccles 2009:68).

Though the seminal work on construction industry development (as reported by Ofori 2007), reviews the history of the profession and its influence on the current roles of built environment practitioners, built environment professions do not seem to form body of knowledge nor feature high on the construction industry development research agenda. Studies seem to be limited to sustainable human capital development models without looking into professionalisation processes (see Debrah and Ofori, 2006; Ene, Goulding, John, 2016).

Concluding remarks

We have not found a satisfactory solution to our construction industry development problems. As a nation, we must be disturbed that up to now we have not learned how

to shape and cut it into size our industry to meet our socio-economic and economic growth challenges.

Like the President of our country, Mr Cyril Ramaphosa, let me seek final refuge in words of the late Bro Hugh Masekela and say “thuma mina” (send me) to be the agent of construction industry development.

I thank you