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Perceptions of Key Construction and Development Challenges Facing the Construction Industry in South Africa

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ABSTRACT AND KEYWORDS

Purpose of this paper

The aim of this research is to identify the key challenges facing South Africa's construction industry particularly residential building construction in order to proffer solutions and its implications for development of the construction industry.

Design/methodology/approach

A descriptive survey of randomly selected construction industry participants based in Cape Town was conducted in order to find out their perceptions of the key construction industry challenges. Interviews were carried out with the use of an eighteen-item questionnaire, which had open and closed-ended questions.

Findings

It was found out that the key challenges in order of magnitude perceived to affect the Construction Industry in South Africa include: increase in the cost of building materials, insufficient mortgage markets, high interest rates and high rate of enterprise failure/delivery capacity and performance.

Research limitations/implications

The research was limited by the fact that some of the respondents viewed some questions as being sensitive and therefore did not want to comment on them. The fact that the research was based on the perceptions of only

the construction industry practitioners in Cape Town also limited the possible generalization of the findings of the study.

Practical implications

The research has practical implications for both the study of property and construction studies in higher institutions and also practice of the profession in the industry. The research shows that cheaper alternative materials have to be developed specified and accepted by research institutions, construction industry participants and end-users.

What is original/value of paper?

The paper is of value to the South African government, construction industry practitioners and construction and property studies students because it highlights the challenge currently facing the construction industry.

Keywords

Construction Industry Development and Perceptions.

1. INTRODUCTION

The construction industry plays a vital role in South Africa's economy, being a significant contributor to economic growth accounting for 3.7% of the GDP in 2009 (Stats SA, 2010). This however does not take into account the finance and real estate sector of the economy, which contributed 24.5% to the GDP in the same period (Stats SA, 2010). The industry employs a significant proportion of the working population both formal and informal providing about 3.3% compensation of all formal employees (Stats SA, 2010). Furthermore, it creates many economic opportunities for enterprises, its products have an extraordinary long life span and the construction industry contributes directly to improving the quality of life of all users (Ofori, 2007).

The construction industry tends to be a very volatile sector of the economy because investment spending in construction often has a strong correlation to economic growth and future prospects. When growth is high, there would be a rise in demand for construction products and when there is a downward trend and the economy heads towards a recession, firms and the government invariably cut back on new construction projects and the industry can be hard hit by a slow down (Green, 2008).

As a result of the global economic recession, higher interest rates and tougher lending criteria, there has been a large drop in the property development industry in South Africa, as well as in the rest of the world. Currently, the sector is experiencing the worst downturn of all sectors with building activity in steady decline.

Selected building statistics of the private sector, indicated that the value of recorded building plans passed by the bigger municipalities from January to the end of May 2009 decreased by 24.4%. In the first four months of 2009, the annualized decrease was 30.4%. The largest decrease was reported for residential buildings, followed by additions and alterations and non-residential buildings. The real value of buildings as reported as completed to the bigger municipalities from the same period decreased by 3.2% compared with figures for the same period (January to May) in 2008. This was attributed to a decrease in the real value of residential buildings completed. However, increases were reported for additions and alterations along with non-residential buildings (Ndaba, 2009; Mpofo 2008).

The substantial weakening in the construction sector has had negative effects on material manufacturers, suppliers and contractors involved in the industry. Manufacturers and contractors have reported declines in sales and profit margins. As a result, the construction industry is unable to meet the socio-economic and environmental challenges and demand particularly of the lower income groups (CSIR, 2009)

The image of the construction industry differs between individuals. According to Van Wyk (2004), the industry has a low-tech image and deteriorating profitability. According to him, these two factors have been discouraging bright young people from entering the built environment professions. Also, the construction industry faces several challenges worldwide and in South Africa, these have been identified by Van Wyk (2004) and SA Construction Industry Status Report (Stats SA) (2004) to include: high rate of contracting enterprise failure/delivery capacity and performance, high interest rates, increase in the cost of building materials, external influences ~ the role of government and public sector financial and human capacity, mismatch between available skills and required skills, procurement practices/capacity for sustainable empowerment, globalization, poverty, technology levels, availability of suitable land, availability of infrastructure and insufficient mortgage markets.

According to Ofori (2007), the catalogue of problems, which face the construction industry in developing countries, is well known. However, the aim of this article is to identify the key challenges that are perceived to affect South Africa's construction industry, particularly residential building construction, in order to proffer solutions and identify implications for construction and property studies education and research.

The importance of the construction industry in the economy of any nation, its ability to provide jobs and to consume materials (both basic and finished) and its significance as a factor of development, has made it justifiable to study the challenges facing it and proffer solutions for its viability. Moreover, since construction has a multiplier effect on the economy of any nation, a well-structured construction industry will be useful in South Africa's drive for poverty alleviation.

The paper therefore undertakes a review of the challenges facing the South African construction industry, a survey of the perception of

construction industry participants as to the key challenges affecting the construction industry.

2. REVIEWS OF THE CHALLENGES FACING THE SOUTH AFRICAN CONSTRUCTION INDUSTRY

This topic will discuss the following:

2.1 High rate of enterprise failure/delivery capacity and performance

According to Stats SA (2004), liquidation is one indicator of poor sustainability and the failure rate is unacceptably high. It is evident from the findings of industry performance by the Van Wyk (2004) that the high rate of failure reflects demand volatility and high levels of non-completion. According to this report there has been a long-term decline in profitability in the industry and many companies confirm profit levels as low as 1%.

StatsSA (2004) shows that there was 532 liquidations of construction companies in 2004, 554 in 2001 and 371 in 2002 and over 1400 could not remain viable over the past 2002 – 2004 period. The reasons given for some of these failures included current lack of profitability in contracting, poor management and management expertise and lack of skills at the middle management level. Van Wyk (2003) attributed the cause of enterprise failure to poor management and low productivity. According to him, compared to seven other countries, which were not disclosed, South Africa's productivity remains the lowest.

2.2 High Interest Rates

High interest rates was identified by Van Wyk (2003) as the cause of the difference between the notable increase in the number of building plans submitted and the lower levels of building completions.

2.3 Increase in the Cost of Building Materials

Materials contribute as much as 60% of total project costs. South Africa produces all its own strategic materials and relies on imported plant and equipment. Therefore, increases in material costs manifesting within the industry are a cause of concern. In 2003, it was reported by Stats SA (2004) that increases in material costs exceeded that of inflation with some increases reaching up to 20 %.

According to Van Wyk (2003), significant growth in the construction industry is dependent upon price stability in material costs, which have experienced increases exceeding the inflation rate. Certain building material prices were identified as having risen way in excess of even the average building material increases, such as cement building blocks (up

20.5%), ordinary and extended cement (up 14.9%), aggregated crushed stone (up 22.1%), SA pine kiln-dried (up 19.5%), stock bricks (up 15.9%) and galvanized roofing sheet metal (up 31.9%). He stated that the result of these high increases was an average 15.7% in the BER Building Cost Index for year 2002.

2.4 External Influences ~ the Role of Government

Stats SA (2004) reports that since 1994, the South African Government has passed more than 1000 pieces of legislation, which has in turn spawned numerous regulations giving the impression of over-regulation. These laws impact on: tender procedures and procurement, employment and labour practices, Black Economic Empowerment (BEE), planning permissions and controls, skill development and training and business practices.

As a result, the development approvals and zoning processes of local authorities take too long and lead to unnecessary holding costs for developers (Stats SA, 2004)

2.5 Public Capacity both in terms of Financial and Human Capital

According to Stats SA (2004), the construction industry has been affected by the ongoing and necessary overhaul of the public service by the government and loss of knowledgeable personnel during the transition. These factors have led to a reduction in management and technical skills. Also, government's Ten-Year Review recognises that this process has been uneven, resulting in unintended dislocation and delivery constraints that have affected a wide range of services including infrastructure. The public sector capacity was identified as a key constraint to the delivery of current volumes of infrastructure delivery and sustainable industry growth.

Van Wyk (2003) stated that the public sector capacity is evident in its inability to spend allocations received and inability to evaluate PPP schemes submitted to it for much needed infrastructure.

2.6 Mismatch between available Skills and required Skills

The report by Stats SA (2004) suggests that the skill supplied to the market through the Further Education and Training (FET) System were in many cases not appropriate to the needs of the construction industry, resulting in a skills gap and a decline in the capacity of the professional sector within the construction industry. According to Van Wyk (2003), the high number of industry participants who have no education, let alone a qualification, is a serious impediment to construction industry development.

An example of poor quality construction can be found in North West and Sweet Water in the Eastern Cape Province of South Africa. It was

reported that about 500 houses there were destroyed due to inferior workmanship (BEE News, 2009).

2.7 Procurement Practices/Capacity for Sustainable Empowerment

Stats SA (2004) reports that, the current approach to preferential procurement environment is perceived to be a challenge as it promotes historically disadvantaged professionals to establish their own firms rather than join established companies. This fragmentation according to the report has reduced the depth and breadth of expertise that can be consolidated within medium to larger companies through access and experience on specialized and diverse projects.

This method of procurement according to Van Wyk (2004) has reached a threshold in its ability to drive more meaningful empowerment because, small enterprise capability and sustainability is impeded by a continuous inflow of new entrants, resulting in unhealthy levels of competition and undermining the consolidation possible through continuous work flow and performance improvement.

It is anticipated however, that unless measures are taken to retain professional skills in the industry and fast track the growth of new capacity, South Africa may experience a lack of professional capability in the medium-term and the need to import skills.

2.8 Critical Global Issues/Globalization

The current global economic recession and its effect on the world economy are posing a challenge to the performance of the construction industry. According to Van Wyk (2004), global issues such as sustainability, global warming (level of CO₂ emissions by buildings under construction and in use), use of water and other natural resources also come with requirements which might be difficult for the construction sector participants to comply with. Lewis (2007) highlighted the impact of globalization on the construction industries in the developing countries and the areas in which global trade perpetuates economic underdevelopment, constituting a challenge to the development of the construction industries.

2.9 Poverty

At first glance, one could wonder what poverty alleviation has to do with the construction industry however, according to Van Wyk (2004), poverty alleviation has been identified as one of the Millenium Development Goals (MDG) precisely because it has the ability to destabilise the world economy and lead to global unrest. Also, poverty is a result of high unemployment levels in South Africa, which put housing on a slow growth track.

The construction industry is being (forced)/asked to resolve political and social problems, empowerment criteria, housing, local labour targets etc., which tend to have a negative impact on the construction industry..

2.10 Technology

South Africa has reasonable access to the latest technology however, the prevailing level of technology both within the country and overseas tend to limit the scope of the project that can be undertaken at any time, with the material, equipment and personnel available.

There is also a big problem with end-users perceptions about viable alternative building methods/innovative building systems especially in the low cost housing market and, there is also a juggle between technology and labour. Construction companies are encouraged by government policy to employ more labour and uplift the economy/alleviate poverty (CIDB, 2007).

2.11 Availability of Suitable Land for Construction

Builders and developers in Cape Town are limited by two major factors namely the ocean and Table Mountains and because of this, there is not a lot of land left close to its Central Business District. According to Merwe and Hendrik (1997), a large part of Cape Town encompasses the scenic mountains, delineating the eastern proximity of the Cape Town outer metropolitan area containing ecosystems which have outstanding aesthetic value and are reservoirs of biodiversity or rare species.

Also, there are lots of land claim issues in the courts, zoning issues and heritage sites all, which add up to make prices of the available land inhibitive.

2.12 Availability of Infrastructure

Human settlements require infrastructure to sustain it. An area cannot be developed without infrastructure such as electricity, pipe-borne water, roads, streetlights and sewage disposal systems. South Africa's infrastructure is old and depreciated and the government is currently spending a lot of money on the improvement of both urban and rural infrastructure CIDB (2007). Currently, there is a huge challenge with regards to limitations on electrical capacity and water, according to reports, is also increasingly going to become a problem.

In certain cases such as high-ended housing estate development in new areas, property developers are required by government to pay for the infrastructure as an added cost on the development.

2.13 Insufficient Mortgage Markets

Since the global economic crisis started in late 2007, banks have been very stringent in their lending criteria, compared to the access to easy credit that as shown by Luus (2003) epitomised 2001 to 2003. Funds available for lending have shrunk significantly, which directly influences the number of developments.

The developers need the banks to finance the building process and the purchaser needs to access a mortgage to finance the purchase of a house/apartment. Banks due to new and more stringent lending criteria are increasingly turning down the developer and consumer. In most cases today, the banks require the developer or purchaser to put down equity of up to 50% and not less than 20% of the cost of development/house price, which very few people can afford.

According to Luus (2003), over the past decade in South Africa, nominal mortgage rates, which are linked to short-term rates, have fluctuated between 13% and 24% and have at times caused substantial problems, with households finding it difficult to afford higher interest payments. Access to affordable credit is probably the single most significant challenge facing both the construction industry and the consumer.

3. RESEARCH METHOD

The research is based on a descriptive survey of randomly selected construction industry participants in Cape Town. The construction industry participants for this research are made up of contractors, building professionals such as architects, quantity surveyors, construction managers, project managers etc, property developers, finance and leasing companies. Respondents were selected based on involvement in the construction industry.

The research was conducted by means of interviews and questionnaire survey. A total of 120 questionnaires were distributed from which 78 usable questionnaires were gathered representing a response rate of 65%. The questionnaire was grouped into two sections. The first section solicited general information about the respondent and the organization while the second section required the respondents to rate their perception of 13 challenges affecting the construction industry. The respondents were requested to rate the effect of each challenge on a 5-point Likert scale of very high effect, high, average, low and very low. These were given nominal values of 5, 4, 3, 2, and 1 respectively.

The research prepared and made use of a data analysis sheet to collect data extracted from the questionnaires filled by the respondents and the challenges were rated using the Mean Item Score (MIS) method of descriptive analysis.

$$MIS = \frac{5M_5 + 4M_4 + 3M_3 + 2M_2 + 1M_1}{5 \times (M_5 + M_4 + M_3 + M_2 + M_1)}$$

Where M5, M4, M3, M2 and M1 are frequencies of the rating responses given to each challenge variable.

4. DATA PRESENTATION AND ANALYSIS

The data gathered in the field survey are presented as follows:

4.1 Sector in the Construction Industry

Table 4.1 presents the classification of the respondents according to the sector in which they are based in the construction industry.

Table 4.1 Classification of respondents according to sector in the construction industry.

| Sector | Frequency | Percentage (%) |
|---------------------------------------|-----------|----------------|
| Professional Services | 28 | 36 |
| Contracting | 25 | 32 |
| Property Development & Investment | 21 | 27 |
| Equipment Manufacturer, Supply & Hire | 2 | 2.5 |
| Not Available | 2 | 2.5 |
| Total | 78 | 100 |

Table 4.1 shows that 35% of the respondents are in the professional services sector, 32% are in contracting, 28% are in property development and investment whilst 2.5% are in the equipment supply and hire sector of the construction industry.

4.2 Classification of the Professional Services Sector

The classification of the professional services sector is presented in Table 4.2.

Table 4.2 Classification of respondents in the professional services sector.

| Type of Professional Service | Frequency | Percentage (%) |
|---|-----------|----------------|
| Project Manager | 6 | 21 |
| Estate Agent | 5 | 18 |
| Combination of Project & Construction Managers/QS | 5 | 18 |
| Architects | 4 | 14 |
| Quantity Surveyor | 3 | 11 |
| Engineers | 3 | 11 |
| Town Planner | 1 | 3.5 |
| Land Surveyor | 1 | 3.5 |
| Total | 28 | 100 |

It can be seen from Table 4.2 that 21% of the respondents in the professional services sector were project managers, 18% were estate agents another 18% were both project and construction managers/QS, 14% were architects, 11% were quantity surveyors, another 11% were engineers and 3.5% were town planners and 3.5% land surveyors.

4.3 Perception of Impact of Key Challenges on the Performance of the Construction Industry

Table 4.3 shows the perception of the respondents as to the impact of the stated challenges on the performance of the construction industry.

Table 4.3 Perception of Impact of Challenges on Construction Industry Performance.

| Description of Challenge | Impact of Challenge | | | | | Total Respsns | Total Score | MIS Score | Rank |
|---|---------------------|------|---------|-----|----------|---------------|-------------|-----------|------|
| | Very High | High | Average | Low | Very Low | | | | |
| Increase in the cost of building materials | 32 | 29 | 10 | 3 | 0 | 74 | 312 | 0.843 | 1 |
| Insufficient Mortgage Markets | 26 | 27 | 11 | 7 | 2 | 73 | 287 | 0.786 | 2 |
| High interest rates | 21 | 38 | 12 | 6 | 1 | 78 | 306 | 0.785 | 3 |
| High rate of enterprise failure/delivery capacity and performance | 19 | 36 | 21 | 1 | 1 | 78 | 305 | 0.782 | 4 |
| Mismatch between available skills and required skills | 24 | 30 | 16 | 6 | 2 | 78 | 302 | 0.774 | 5 |
| Availability of Infrastructure | 25 | 23 | 18 | 8 | 2 | 76 | 289 | 0.760 | 6 |
| External influences such as government legislations | 20 | 28 | 19 | 7 | 3 | 77 | 286 | 0.743 | 7 |
| Availability of suitable land | 22 | 24 | 15 | 11 | 5 | 77 | 278 | 0.722 | 8 |
| Public sector capacity in terms of financial and human capital | 18 | 22 | 25 | 5 | 4 | 74 | 267 | 0.722 | 8 |
| Poverty | 12 | 25 | 20 | 14 | 6 | 77 | 254 | 0.660 | 10 |
| Critical Global issues/Globalization | 11 | 27 | 18 | 13 | 7 | 76 | 250 | 0.658 | 11 |
| Procurement practices/capacity for sustainable empowerment | 9 | 15 | 28 | 16 | 6 | 72 | 225 | 0.625 | 12 |
| Technology | 6 | 20 | 28 | 18 | 5 | 77 | 235 | 0.610 | 13 |

Table 4.3 reveals that the respondents' perceived increase in the cost of building materials as the key construction and development challenge affecting construction industry performance in South Africa followed by insufficient mortgage markets and high interest rates. Technology, government procurement practices and critical global issues/globalization were perceived by the respondents' to be of least importance.

4.4 Perception of Professional Services Sector Respondents on Key Challenges that Impact on the Performance of the Construction Industry

The study sought to find out the perception of the professional services respondents cohort on key challenges that impact on the performance of the construction industry and this is presented in Table 4.4.

Table 4.4 Perception of Professional Services Respondents on Key Challenges that Impact on Construction industry performance.

| Description of Challenge | Impact of Challenge | | | | | Total Respsns | MIS Score | Rank |
|---|---------------------|------|---------|-----|----------|---------------|-----------|------|
| | Very High | High | Average | Low | Very Low | | | |
| Increase in the cost of building materials | 11 | 12 | 2 | 1 | 0 | 26 | 0.854 | 1 |
| High interest rates | 7 | 17 | 2 | 2 | 0 | 28 | 0.807 | 2 |
| Availability of Infrastructure | 9 | 10 | 4 | 4 | 0 | 27 | 0.778 | 3 |
| Public sector capacity in terms of financial and human capital | 9 | 7 | 9 | 1 | 0 | 26 | 0.777 | 4 |
| Insufficient Mortgage Markets | 7 | 13 | 4 | 2 | 1 | 27 | 0.770 | 5 |
| Mismatch between available skills and required skills | 7 | 13 | 5 | 2 | 1 | 28 | 0.764 | 6 |
| External influences such as government legislations | 9 | 7 | 7 | 2 | 2 | 27 | 0.741 | 7 |
| High rate of enterprise failure/delivery capacity and performance | 4 | 12 | 11 | 0 | 0 | 28 | 0.729 | 8 |
| Availability of suitable land | 9 | 5 | 8 | 6 | 0 | 28 | 0.721 | 9 |
| Poverty | 4 | 12 | 5 | 5 | 1 | 27 | 0.696 | 10 |
| Procurement practices/capacity for sustainable empowerment | 3 | 6 | 11 | 3 | 1 | 24 | 0.683 | 11 |
| Critical Global issues/Globalization | 2 | 11 | 6 | 6 | 2 | 27 | 0.652 | 12 |
| Technology | 0 | 10 | 11 | 7 | 0 | 28 | 0.621 | 13 |

It can be seen from Table 4.4 that the professional services sector respondents' perceived increase in the cost of building materials, high interest rates and availability of infrastructure in that order as the key construction and development challenge affecting construction industry performance in South Africa. Technology, critical global issues/globalization and government procurement practices were perceived by the professional services sector respondents' to be of least importance.

4.5 Perception of Contractors on Key Challenges that Impact on the Performance of the Construction Industry

The study sought to find out the perception of contractors on key challenges that impact on the performance of the construction industry and this is presented in Table 4.5.

Table 4.5 Perception of Contractors on Key Challenges that Impact on Construction industry performance.

| Description of Challenge | Impact of Challenge | | | | | Total Respsns | MIS Score | Rank |
|---|---------------------|------|---------|-----|----------|---------------|-----------|------|
| | Very High | High | Average | Low | Very Low | | | |
| Mismatch between available skills and required skills | 9 | 11 | 5 | 0 | 0 | 25 | 0.832 | 1 |
| Increase in the cost of building materials | 10 | 9 | 3 | 2 | 0 | 24 | 0.825 | 2 |
| High rate of enterprise failure/delivery capacity and performance | 8 | 10 | 6 | 1 | 0 | 25 | 0.792 | 3 |
| Insufficient Mortgage Markets | 12 | 4 | 2 | 4 | 1 | 23 | 0.791 | 4 |
| High interest rates | 5 | 12 | 6 | 1 | 1 | 25 | 0.744 | 5 |
| External influences such as government legislations | 4 | 15 | 2 | 3 | 1 | 25 | 0.744 | 5 |
| Availability of suitable land | 7 | 8 | 5 | 3 | 2 | 25 | 0.720 | 7 |
| Availability of Infrastructure | 8 | 5 | 6 | 3 | 2 | 24 | 0.717 | 8 |
| Poverty | 6 | 7 | 7 | 5 | 0 | 25 | 0.712 | 9 |
| Public sector capacity in terms of financial and human capital | 5 | 8 | 6 | 2 | 3 | 24 | 0.683 | 10 |
| Procurement practices/capacity for sustainable empowerment | 3 | 7 | 8 | 4 | 2 | 24 | 0.641 | 11 |
| Technology | 4 | 7 | 7 | 4 | 3 | 25 | 0.640 | 12 |
| Critical Global issues/Globalization | 4 | 5 | 7 | 4 | 4 | 24 | 0.608 | 13 |

Table 4.5 shows that the contractors perceived mismatch in available skills and required skills, increase in cost of building materials and high rate of enterprise failure/delivery capacity and performance in that order as the key construction and development challenge affecting construction industry performance in South Africa. Critical global issues/globalization, technology and government procurement practices were perceived by the contractors to be of least importance.

4.6 Perception of Property Development and Investment Sector Respondents on Key Challenges that Impact on the Performance of the Construction Industry

The perception of property development and investment sector respondents on key challenges that impact on the performance of the construction industry is presented in Table 4.6.

Table 4.6 Perception of Property Development and Investment Sector Respondents on Key Challenges that Impact on Construction industry performance.

| Description of Challenge | Impact of Challenge | | | | | Total Respsns | MIS Score | Rank |
|---|---------------------|------|---------|-----|----------|---------------|-----------|------|
| | Very High | High | Average | Low | Very Low | | | |
| Increase in the cost of building materials | 8 | 7 | 5 | 0 | 0 | 20 | 0.830 | 1 |
| High rate of enterprise failure/delivery capacity and performance | 5 | 13 | 3 | 0 | 0 | 21 | 0.819 | 2 |
| Availability of Infrastructure | 8 | 7 | 6 | 0 | 0 | 21 | 0.819 | 2 |
| Insufficient Mortgage Markets | 6 | 9 | 3 | 1 | 0 | 19 | 0.811 | 4 |
| High interest rates | 8 | 7 | 4 | 2 | 0 | 21 | 0.80 | 5 |
| External influences such as government legislations | 6 | 4 | 9 | 2 | 0 | 21 | 0.733 | 6 |
| Mismatch between available skills and required skills | 7 | 5 | 6 | 3 | 0 | 21 | 0.724 | 7 |
| Critical Global Issues/Globalization | 4 | 10 | 3 | 3 | 1 | 21 | 0.724 | 7 |
| Public sector capacity in terms of financial and human capital | 4 | 6 | 9 | 1 | 1 | 21 | 0.705 | 9 |
| Availability of suitable land | 5 | 8 | 3 | 2 | 3 | 21 | 0.695 | 10 |
| Poverty | 2 | 7 | 7 | 2 | 3 | 21 | 0.629 | 11 |
| Technology | 3 | 3 | 7 | 7 | 1 | 21 | 0.60 | 12 |
| Procurement practices/capacity for sustainable empowerment | 2 | 1 | 9 | 7 | 1 | 20 | 0.560 | 13 |

Table 4.6 shows that the property development and investor sector respondents perceived increase in the cost of building materials, high rate of enterprise failure/delivery capacity and performance and availability of infrastructure in that order as the key construction and development challenges. Government procurement practices/capacity for sustainable empowerment, Technology and Poverty were perceived by property development and investor sector respondents to be of least importance.

5. DISCUSSION OF FINDINGS

Table 4.3 reveals that the all the respondents' perceived increase in the cost of building materials, insufficient mortgage markets and high interest rates in that order as the key construction and development challenges affecting construction industry performance in South Africa. Technology, government procurement practices and critical global issues/globalization were perceived by the respondents' to be of least importance.

However, further analysis of the respondents in Tables 4.4, 4.5 and 4.6 according to cohorts' reveals that each sector of the construction industry has different views about the key challenge affecting the performance of the industry. The professional services sector respondents' perceived increase in the cost of building materials, high interest rates and availability of infrastructure in that order as the key construction and development challenge affecting construction industry performance in South Africa. The contractors perceived the key industry challenges to include mismatch in available skills and required skills, increase in cost of building materials and high rate of enterprise failure/delivery capacity and performance whilst, the property development and investor sector respondents perceived increase in the cost of building materials, high rate of enterprise failure/delivery capacity and performance and availability of infrastructure in that order as the key construction and development challenges.

6. CONCLUSIONS

The research reveals that the construction industry participants perceive that the key challenge to the performance of the industry in South Africa is primarily the increasing cost of building materials. This shows that there is either a high demand for the same type of building materials or a heavy reliance on particular materials leading to high demand with no matching supply. If materials prices are perceived as the key challenge to construction industry development and performance, there should be a concerted effort by all concerned which includes the clients – both public, private and end-users to accept other non-conventional materials when developed; the research institutions including universities and industry manufacturers should also intensify efforts into the research and development of other sustainable and affordable materials to replace those currently in use; the industry professionals should also disseminate knowledge on the existence and benefits of using new materials as substitutes to the existing ones. New materials have to be evolved if present and future needs of the products of the construction industry are to be met.

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