The Building and Construction Materials Sector, Challenges and Opportunities

cidb
development through partnership

The Construction Industry Development Board

ACKNOWLEDGEMENTS

This report on the building and construction materials sector was initiated by the dti and the cidb, and draws extensively on a report by Dr Lewelyn B Lewis of BMI-BRSCU that was commissioned by the dti and the cidb. In addition, this report draws on a parallel initiative commissioned by The Presidency, namely the Infrastructure Inputs Sector Strategy (IISS).

Many other organisations and individuals contributed to the investigation, including Industry Insight, Tom Fraser of Murray & Roberts, and industry representatives that attended a workshop on the report in September 2007, namely:

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Stadium Ad Prosperandum

BMI

BUILDING RESEARCH STRATEGY CONSULTING UNIT cc

Voluntas in Conveniendum

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EXECUTIVE SUMMARY

The successful delivery of the government and the private sector infrastructure programmes depends on the effective functioning of many stakeholders - including the building and construction materials sector. Without the necessary building and construction materials being available and delivered timeously, and at an appropriate price and quality, these infrastructure delivery programmes could well falter. Against the need for a healthy building and construction materials sector, the cidb has developed this report on the building and construction materials sector. A key focus of this study has been on:

- opportunities and challenges in the building and construction materials sector, and specifically;
- opportunities for new job creation, enterprise development, and empowerment in the building and construction materials sector.

This report draws extensively on a report by Dr Lewelyn B Lewis of BMI-BRSCU that was commissioned by the dti and the cidb. In addition, this report makes reference to a parallel initiative commissioned by The Presidency, namely the Infrastructure Inputs Sector Strategy (IISS). The present report and the IISS report are complementary, and draw similar conclusions.

I) MANUFACTURING AND DISTRIBUTION

An overarching conclusion from this investigation is that, notwithstanding likely shortages of a few materials (which can readily be supplemented by imports) as well as some regional shortages of materials, the building and construction industry is potential well served by the materials manufacturing and distribution sector. However, the ability of the materials sector to respond effectively to the demands on it will depend on investor and business confidence - and government has a role in facilitating an enabling environment for private sector delivery.

Key challenges derived from the above, in supporting capacity planning by the materials sector, are summarised below:

i.i) Consider the High-Road Scenario: The business sector needs to fully appreciate their potential - the "high road scenario" may very well be the reality!

i.ii) Information Dissemination: The availability of reliable information is one of the preconditions for business to be informed of the future demand. There is thus a need for improved collation and diffusion of infrastructure inputs, as well as construction and infrastructure development information, by government corporations and authorities. This will inform infrastructure inputs capacity expansion planning and infrastructure project planning and execution.

i.iii) Public Sector Delivery Capacity: Business and investor confidence by the materials sector is, to a large degree, dependent on the confidence that the public sector can deliver on its planned infrastructure delivery programme. However, public sector delivery capacity is, in many cases, severely limited. Current initiatives to strengthen public sector delivery capacity need to be continued, intensified where necessary, and cascaded to other spheres of government.

While business confidence is a prerequisite for investing in new capacity, this investigation has also shown that a number of factor conditions are also impacting on the manufacture and distribution of materials, namely:

i.iv) Quality Standards: While South Africa has a well developed set of national standards which enable manufacturers and contractors to provide consumers with high quality products, concerns have been raised in the industry about increasing non-compliance of materials and products with national standards, including:

- many building projects are poorly specified, and artisans and foremen are not accredited in terms of their performance in achieving the necessary standards;
- many of the current specifications are perceived to present a barrier to entry to small scale entrepreneurs and exclude their participation in particular markets, and a limited amount of clients are reportedly not requiring materials to comply with SANS standards; and
- there is a lack of capacity amongst building inspectors to evaluate compliance requirements.

As a result, owners of buildings and infrastructure are not always satisfied with the end product.

i.v) Skills Shortages are also being experienced in the materials manufacturing and distribution supply chain - and cross-sectoral synergies should be explored between the various skills development initiatives.

i.vi) Transportation Systems: The Infrastructure Inputs Sector Strategy (IISS) has noted that transportation of infrastructure inputs is currently biased in favour of road transportation, which has several critical limitations. There is an urgent need to develop an optimised infrastructure inputs transportation strategy that is aligned to the Department of Transport's National Freight Logistics Strategy.

A further conclusion drawn from this investigation is that price increases and cost pressures will continue to impact seriously on the construction industry until at least 2014 - and probably beyond. Key challenges that derive from these include:

i.vii) Public Sector Procurement Capacity: Increasing input costs and insufficiently detailed (poorly specified) tender contracts have seemingly led to risk premiums being added by contractors, resulting in escalating tender prices. This emphasises the need for government to increase its procurement capacity, which could improve tender specifications and contract guidelines.

i.viii) Contractor Development: Price increases and the availability of materials are placing particular demands on the tendering and delivery ability of developing contractors - as well as on the risk placed on their clients. Consideration should be given by large public sector clients to securing supplies of critical materials required for their construction programmes.

II) EMPLOYMENT, ENTERPRISE DEVELOPMENT AND EMPOWERMENT

In the light of the sustained increase in public and private sector infrastructure investment into the foreseeable future, a key focus of this investigation has been on identifying opportunities for increased employment, enterprise development and black economic empowerment in the R95 billion p.a. materials manufacturing and distribution sector.

Current (2006) employment in the building and construction sector is about 450 000 in the formal sector and 320 000 in the informal sector, for a total of about 870 000. There is a direct job creation multiplier of around 4,2 jobs in the formal sector per R1 million invested, and 2,3 jobs in the informal sector per R1 million. The employment in the materials manufacturing sector is about 200 000 with approximately another 200 000 in the materials distribution sector - at a direct job creation multiplier of around 3 persons per R1 million. The total direct job creation multiplier in the construction and materials sector is around 9 persons for every R1 million of investment!

This investigation has also highlighted a number of innovative BEE and enterprise development initiatives that are taking place in the materials distribution sector - driven in a large part by the need to be compliant with the BBBEE scorecards. These initiatives illustrate the potential for ongoing enterprise development in the manufacture of products with low entry barriers (such as concrete block manufacturing, and door and window frame manufacturing), as well as opportunities for enterprise development within the supply chain (such as distribution outlets, and packaging and transport). The most sustainable opportunities appear to be franchise type models with established manufactures or distributors as well as "spin-out" and joint venture opportunities.

The key challenges that derive from the above opportunities are highlighted below:

ii.i) Promote the good news: Although somewhat limited, a number of innovative BEE and enterprise development initiatives are taking place in the materials manufacturing and distribution sector. The leadership shown by these companies needs to be acknowledged, and should serve as examples for others.

ii.ii) Enterprise Development: Notwithstanding that the materials sector is largely dominated by few large organisations, opportunities do exist for new entrants. The most successful models appear to be franchise, joint venture and "spin-out" type opportunities within the supply chain (both upstream and downstream), in which the risk is substantially reduced. However, although government linked enterprise development and funding streams such as seda, IDC and Khula do support such opportunities, the materials sector does not appear to be a key focus to date.

ii.iii) Business-to-Business linkages: Procurement is a major driver of BBBEE - and in fact a major driver of many of the enterprise development opportunities that are taking place in the building and construction industry system. Clearly, it is to be expected that the major BEE compliant contractors, materials distributors and materials manufacturers are well known in the industry, but consideration should be given by the cidb to establish a voluntary register of materials suppliers (as provided for in the cidb legislation) to promote the visibility of BEE compliant organisations (in addition to recording the BEE status of contractors) - and thereby promoting business-to-business linkages.

CONTENTS

1. INTRODUCTION

After more than 25 years of decline, the South African construction industry is currently experiencing significant growth - which will be sustained well after 2010. This growth in infrastructure investment is being driven by both public and private sector demand.

Public sector investment (and in fact concomitant private sector investment) is being driven by the government's Accelerated and Shared Growth Initiative for South Africa (AsgiSA). AsgiSA is a national initiative that addresses both the first and second economies, aiming to unlock binding constraints to growth. It targets an economic growth rate of 6% and aims to halve poverty and unemployment by 2014. AsgiSA hinges on growing investment in infrastructure - at a rate of growth well beyond that of the economy.

The successful delivery of the government and the private sector infrastructure programmes depends on the effective functioning of many stakeholders - including the building and construction materials sector. Without the necessary building and construction materials being available and delivered timeously, and at an appropriate price and quality, these infrastructure delivery programmes could well falter.

Against the need for a healthy building and construction materials sector, the cidb has developed this report on the building and construction materials sector. A key focus of this study has been on:

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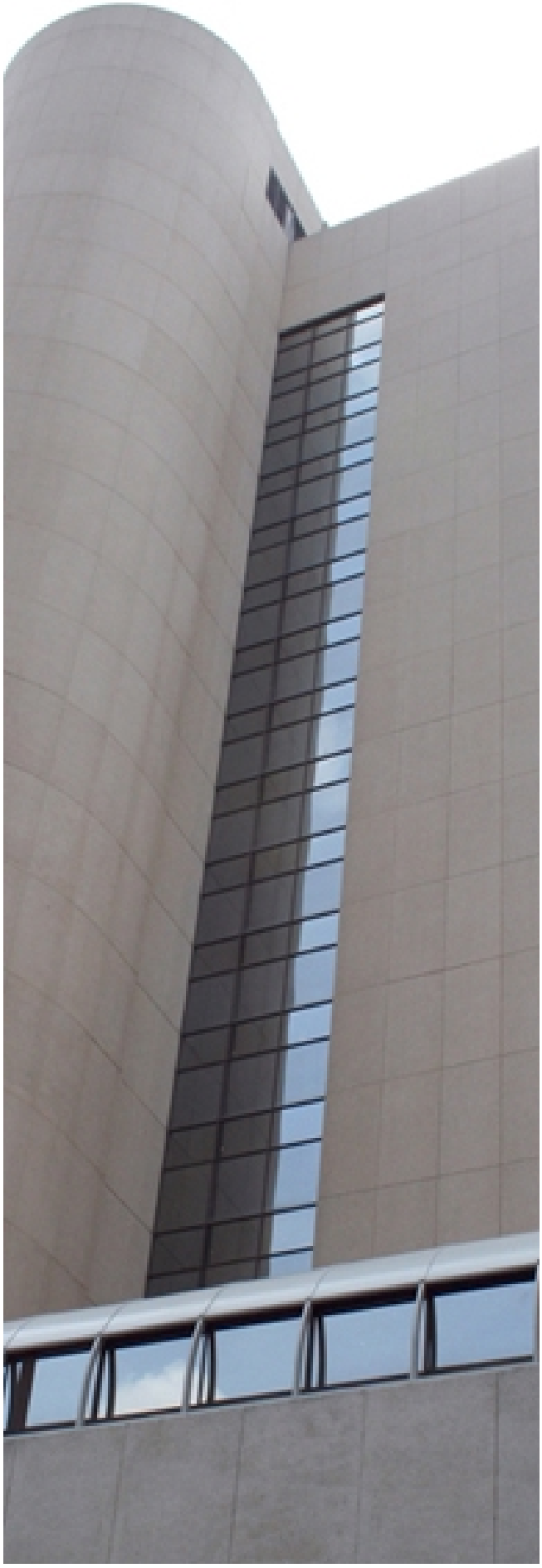


1 BMI-BRSCU (2007). Strategic Research into the Opportunities for Job Creation, New Enterprise Development and Empowerment in the Value System of the Building and Construction Industry. Produced by BMI Building Research Strategy Consulting cc for the Department of Trade and Industry and the Construction Industry Development Board, May 2007. www.cidb.org.za

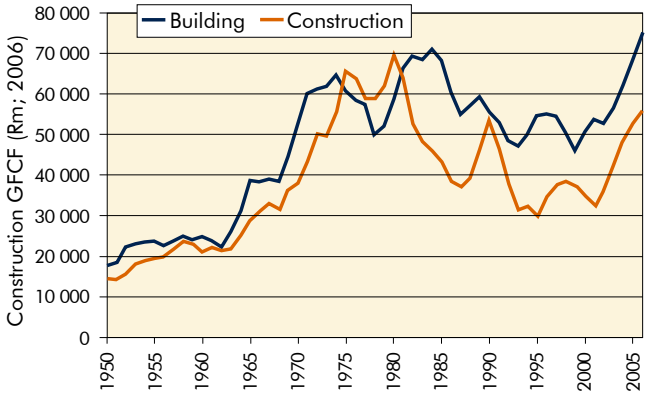
2 SUDEO IBC (2007). Research Report for the Infrastructure Inputs Sector Strategy; Executive Summary. Produced by SUDEO International Business Consultants for The Presidency, May 2007. www.btrust.co.za

2. THE BUILDING AND CONSTRUCTION SECTOR

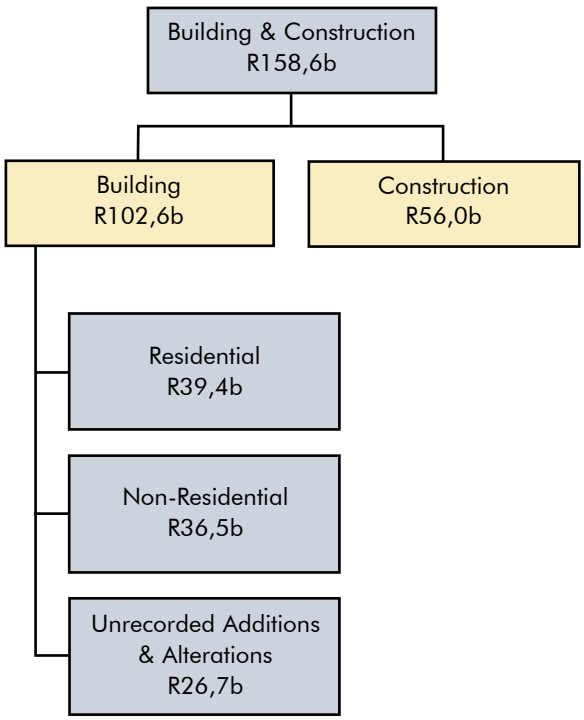
The market for building and construction materials is derived from primary building and construction activity. An overview of the building and construction sector is presented here as context for assessment of the materials sector.

2.1 THE CURRENT REALITY

Investment in the building and construction sectors currently amounts to about R158,6 billion p.a. including unrecorded additions and alterations.



Source: SARB (excluding unrecorded additions and alterations)



As illustrated in the graphs on the following page for building and construction excluding additions and alterations, the primary drivers of infrastructure spending have, historically, shifted significantly from the government and public corporations to the private sector over the past 45 years. A more detailed discussion of historic trends can be found in Merrifield[3].

Investment in Building by Sector: 2006

Sector	Rm	%
Private Residential	36 776	48.46%
Public Residential	2 610	3.44%
Private Non Residential	21 000	27.67%
Public Non Residential	15 500	20.43%
Total	**75 887**	**100.00%**

Investment in Private Residential by Segment: 2006

Segment	Rm	%
Dwelling-houses < 80 m2	2 162	5.88%
Dwelling-houses > 80 m2	15 857	43.12%
Townhouses & Flats	10 293	27.99%
Other (Incl. hotels & casinos)	363	0.99%
Additions & alterations	8 101	22.03%
Total	**36 776**	**100.00%**

Investment in Private Non Residential by Segment: 2006

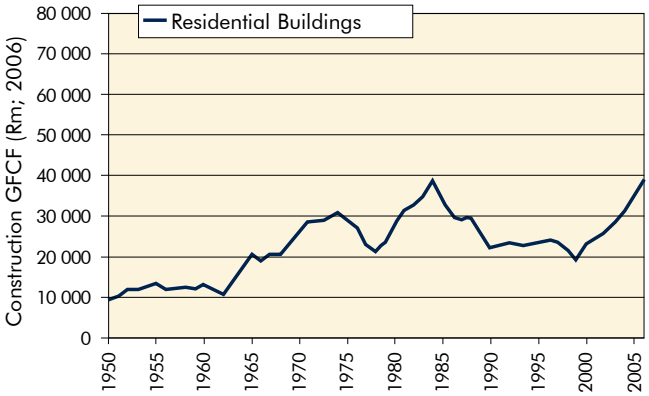
Segment	Rm	%
Offices	3 454	16.45%
Shops	4 490	21.38%
Industrial & warehouse	6 321	30.10%
Other	864	4.11%
Additions & Alterations	5 872	27.96%
Total	**21 000**	**100.00%**

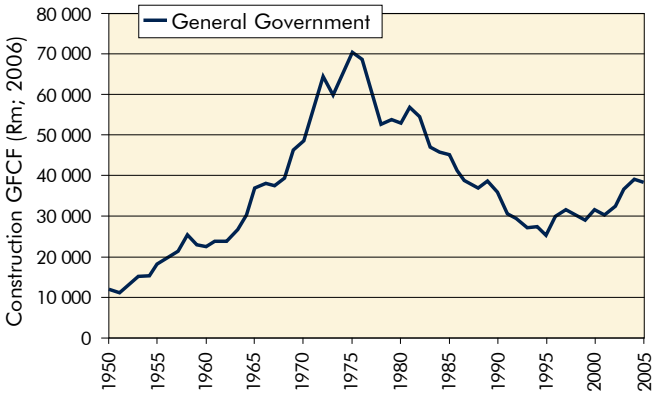
Source: BMI-BRSCU

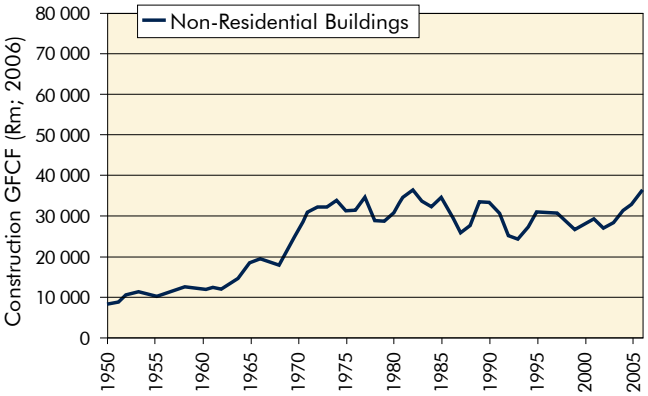
3 Merrifield (2006). Demand for Skills: An Analysis of the Proposed Infrastructure Spending Programme. Produced by Andrew Merrifield for the Construction Industry Development Board, October 2006. www.cidb.org.za

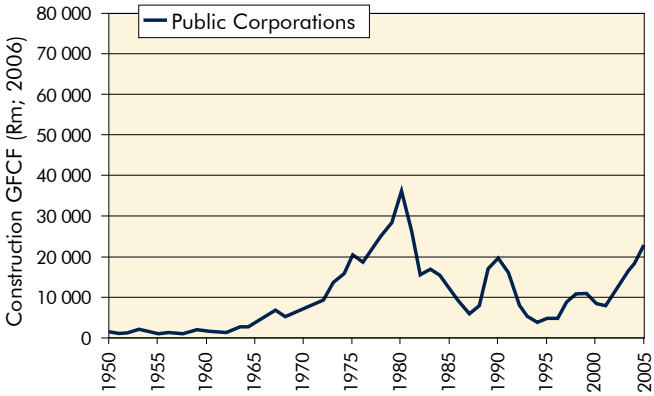
The private sector accounts for some 76% of industry activity in the building sector, while the public sector accounts for about 24%. A more detailed breakdown of the private sector investment in residential and non residential sectors is given in the adjacent tables. Of particular importance is the activity in additions and alterations, around R8,1 billion in the home-improvement market and R5,8 billion in the non residential market (amounting to R13,9 billion in total).

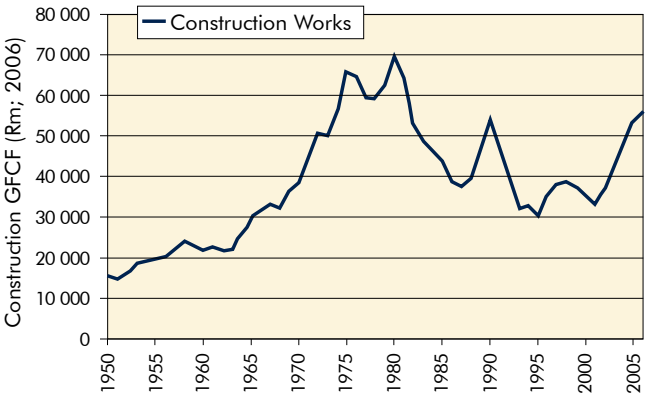
This significance of the home-improvement market is evidenced in the outstanding performances of the materials distribution companies such as Cashbuild, Iliad and Italtile.

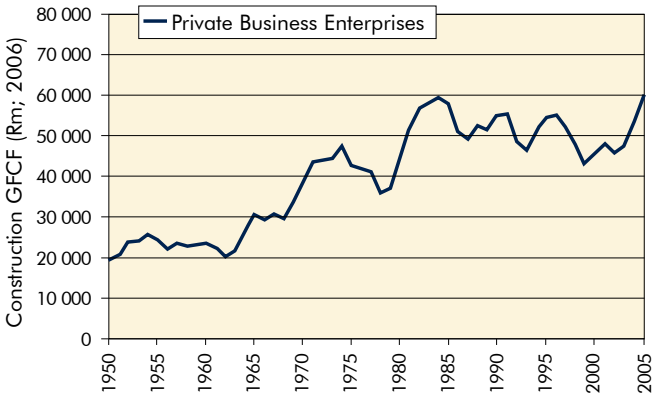












A total of 1,23 million households (11,24%) undertook home improvement of more than R1 000 in the year 2006. It is interesting to note that 37% of LSM Group 10 (279 000 households) undertook home maintenance/improvement of more than R1 000 in 2006.

As far as existing non residential buildings are concerned, there are compelling reasons why regular improvements are undertaken. The competition is strong for attracting tenants and customers. Continuous beautification, upgrading and reconstruction is part of the process of keeping and attracting tenants and customers.

The current reality in the construction sector is shown in the adjacent table. The importance of roads, streets and bridges in total activity can be noted from the graphic as well as the importance of the private sector.

Investment in Construction by Segment: 2006

Segment	Rm	%
Roads, Streets, Bridges	13 244	23,65%
Waterworks	5 236	9,35%
Sewerage Works	2 587	4,62%
Other Construction Works	16 458	29,39%
Private Sector	18 474	32,99%
Total	**56 000**	**100,00%**

Source: BMI-BRSCU

The following table shows the planned infrastructure expenditure estimates in key sectors projects by general government and public corporations to 2010 - amounting to over R300 billion over the next three years, or about R100 billion per year. Compared to the current expenditure by general government and public corporations of around R60 billion per year, it can be seen that there is a significant increase in planned expenditure by these sectors. The ability of the materials sector to meet the demand of government and public corporations is a key focus of the Infrastructure Inputs Sector Strategy (IISS) commissioned by The Presidency[4].

4 SUDEO IBC (2007). Research Report for the Infrastructure Inputs Sector Strategy; Executive Summary. Produced by SUDEO International Business Consultants for The Presidency, May 2007. www.btrust.co.za

Capital / Infrastructure Expenditure Estimates (R million)

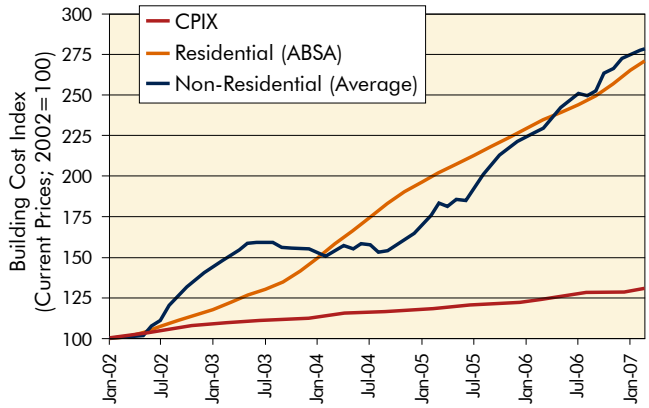
Sector	Total 04/05 to 06/07	Medium Term Estimates			Total MTEF
		07/08	08/09	09/10	
Water (DWAF, water Boards, TCTA and municipal)	17 731	8 395	9 098	9 758	27 250
Sanitation (Municipal and DWAF)	6 591	3 028	3 180	3 339	9 546
Electricity (Eskom and Municipal)	36 164	17 223	23 100	30 983	71 306
Housing (housing development)	16 139	8 238	9 853	11 531	29 622
Education (School building)	7 728	3 393	3 984	4 183	11 560
Health (Hospitals and clinic)	9 456	4 699	5 468	6 086	16 253
Roads (SANRAL)	40 040	18 740	20 806	22 618	62 164
Rail (SARCC, Gautrain and Spoornet/Transnet Freight Rail)	20 006	15 973	15 857	14 258	46 088
Ports (NPA and SAPO)	8 731	7 122	5 623	3 808	16 553
Justice (courts)	856	405	443	501	1 349
Police	1 323	727	1 226	1 356	3 309
Sports and Recreation (World Cup stadiums)	600	2 700	3 800	1 300	7 800
Total	**165 365**	**90 643**	**102 438**	**109 721**	**302 800**

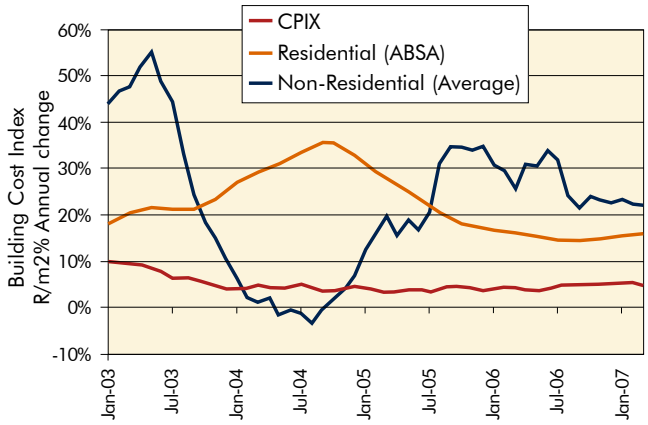
Source: National Treasury, 2007 Budget Review

Note that the above table includes expenditure by Eskom and Transnet, which are funded from outside of the tax base and out of their revenue streams. Not included in the above table is ACSA's planned expenditure of around R20 billion over the next 5 years

2.2 BUILDING AND CONSTRUCTION COSTS

Input building and construction costs are determined mainly by the cost of materials, labour, professional fees, competition and status of order book, profit margins, etc. As shown in the following figures, residential and non residential building costs have overall been increasing greater than CPIX. Indexed against CPIX of 100 in 2002, the building cost index is currently around 275 - against CPIX of 130! Similar trends, but somewhat lesser escalation, are taking place with construction works.





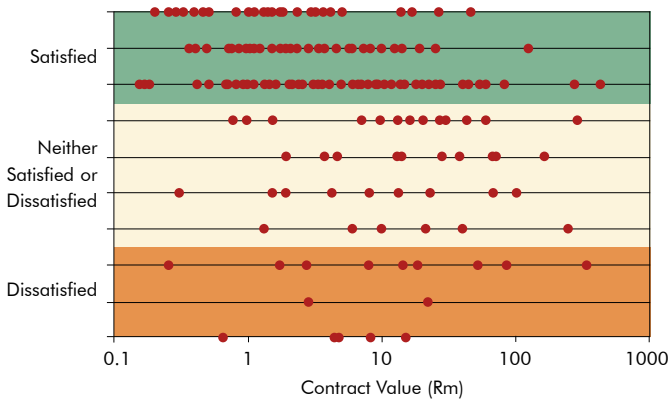
Source: Industry Insight

Various factors have contributed to these cost increases. A significant component of this increase is due to materials costs (see Section 3), while skills shortages are also playing an increasing role in cost escalations. Overall, as discussed by Merrifield[5], the volatility in demand has been a major contributor to capacity constraints and skills shortages, and the consequent cost escalations that the industry is experiencing.

Increases in costs will continue to impact seriously on the construction industry into the immediate future, and are exacerbated by insufficiently detailed and poorly specified tenders in both the public and private sectors - which has seemingly led to risk premiums being

added by contractors, resulting in escalating tender prices. This emphasises the need for government to increase its procurement capacity, which could improve tender specifications and contract guidelines.

Insufficiently detailed and poorly specified tender contracts have seemingly led to risk premiums being added by contractors resulting in escalating tender prices.



Client Satisfaction with Contract Documentation
Source: cidb 2007 Construction Industry Indicators

5 Merrifield (2006). Demand for Skills: An Analysis of the Proposed Infrastructure Spending Programme. Produced by Andrew Merrifield for the Construction Industry Development Board, October 2006. www.cidb.org.za

As illustrated in the box below, government clients are investigating various ways to minimise the impact of such price increases - one such mechanism being to force contractors into long term fixed contracts. This could, however, be potentially disastrous for both client and contractor.

RISING CONSTRUCTION COSTS HIT EXPANSION PROJECTS

The escalating costs for building supplies and services are increasingly becoming a serious challenge for South Africa's ongoing infrastructure upgrades in ports, rail, pipelines and electricity generation. Moira Moses, group executive for Transnet projects, said yesterday that among the challenges facing infrastructure investment are "enormous increases in bulk materials costs and contractors fees. We are seeing an increase of up to 30 percent per annum."

Transnet will spend R78 billion in the next five years improving its ports, rail and pipeline infrastructure. Moses said: "Contractors can pick and choose. We are seeing a runaway in costs." One Transnet project where the costs are mounting higher is Petronet's new R9.5 billion pipeline. The project has been delayed due to the National Energy Regulator of SA's rejection of Transnet's application for a 5.6 percent increase in tariffs. Maria Ramos, Transnet's chief executive, said in May: "I am particularly worried as with each and every passing month we are delayed, the cost of building the pipeline just escalates."

John Neville, Acsa's group executive of aviation services spoke yesterday on Acsa's plans to spend R19.3 billion over the next five years on airport expansions. He said if construction costs continued to rise, Acsa's capital expenditure could be between 20 percent to 30 percent higher. Of Acsa's capital expansion, R12.5 billion would be spent on OR Tambo International Airport.

To contain costs going forward and to secure services and skills in a market where there is such demand, Transnet and Eskom are aiming to sign up contractors for extended periods. Moses said: "We are trying to lock contractors into long-term contracts that require long-term planning." Eskom is trying the same tactic.

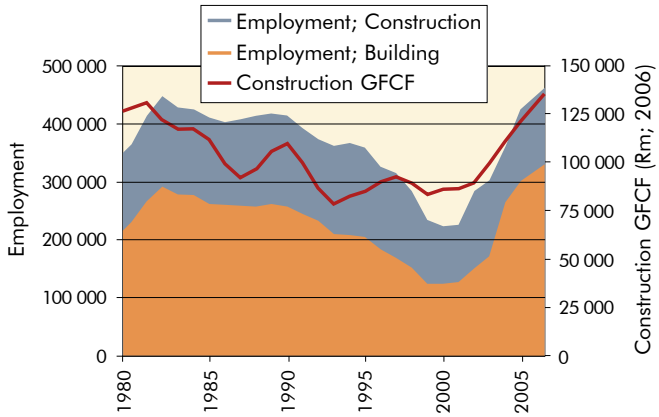
By Samantha Enslin-Payne
Business Report, 8 June 2007

Cost escalations are placing particular demands on the tendering and delivery ability of developing contractors - as well as on the risk placed on their clients. Consideration should be given by large public sector clients to securing supplies of critical materials required for their construction programmes.

Cost escalations are placing particular demands on the tendering and delivery ability of developing contractors - as well as on the risk placed on their clients.

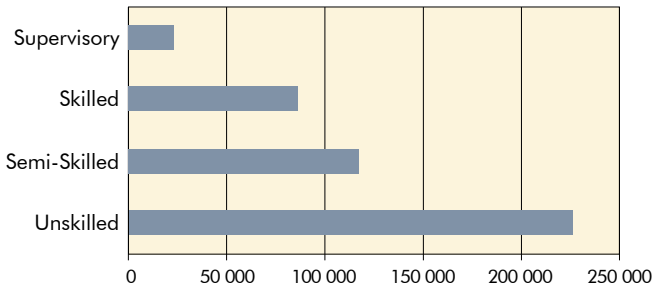
2.3 EMPLOYMENT AND SKILLS

The formal employment in the building and construction industry is shown in the adjacent figure for the period 1980 to 2006. The peak employment level of 1982 was exceeded for the first time in 2006. In 2006, the building and construction industry employed 451 000 people, split 71% in the building sector and 29% in construction sector.



In addition to the formal employment, it is estimated from the Labour Field Survey[6] that an additional 320 000 employees are employed in the informal sector.

The estimated composition of the on-site workforce is provided in the adjacent figure. It can be noted that some 50% of the on-site workforce in the industry are generally unskilled workers.



It follows that about 4,2 formal jobs are created for every R1 million invested in building and 2,3 jobs for every R1 million invested in construction, or a total of 3,4 formal jobs per R1 million invested in building and construction. In addition, around 2,4 jobs are created in the informal sector per R1 million invested in building construction from "labour only" to "labour and materials" subcontractors - giving a total job creation multiplier of around 5,9 jobs per R1 million invested.

6 StatsSA (2006). Labour Force Survey, P0210. Statistics South Africa, March 2006. www.statsa.gov.za

The challenge of skills shortages in the building and construction industry is well documented, and is not discussed further here[7]. A full discussion on the skills shortages in the building and construction industry can be found in the cidb report Demand for Skills: An Analysis of the Proposed Infrastructure Spending Programme[8].

2.4 BEE

BEE and BBBEE in the building and construction sector is discussed briefly in this section as a context for BEE and BBBEE in the materials sector (see Sections 3.7 and 4.3).

One measure of BEE in the building and construction industry is the ownership of contracting companies registered with the cidb Register of Contractors shown in the adjacent table (June 2007). It is seen that companies with black ownership greater than 50% dominate contractor Grades 2 to 5. Transformation is also clearly taking place in Grades 6 to 8, but is clearly lagging.

Contractor Grade	Max Tender Value (Rm)	GB/CE Total	GB/CE Black Owned > 50%	% Black Owned > 50%
2	0,5	2 159	2 034	94%
3	1,5	805	761	95%
4	3,0	891	773	87%
5	5,0	426	346	81%
6	10,0	337	234	69%
7	30,0	164	73	45%
8	100,0	50	15	30%

cidb, June 2007

It should be noted, however, that the data shown in the adjacent table reflects black ownership of greater than 50% and not a weighted average of overall equity ownership - which is likely to be higher per Grade than that shown in the table.

7 cidb (2007). Skills for Infrastructure Delivery in South Africa: The Challenge of Restoring the Skills Pipeline. A discussion document by the cidb, DPW and DPE. December 2006.

8 Merrifield (2006). Demand for Skills: An Analysis of the Proposed Infrastructure Spending Programme. Produced by Andrew Merrifield for the Construction Industry Development Board, October 2006. www.cidb.org.za

One of the major difficulties being experienced by black-owned companies in the lower grades is the high competition and sustainability of work - and in many cases, the contractors in Grades 2 and 3 are competing in a "lottery environment". This highly competitive environment and lack of sustainability in the workload is resulting in high failure rates in these Grades.

Rank 2006	Company	BEE Score (%)
9	Group Five	63,68
69	Murray & Roberts	33,28
87	Basil Read	26,00
98	Aveng	21,59
148	WBHO	6,88

Source: Financial Mail / Empowerdex

Grade 2 to 8 contractors are largely privately owned, while Grade 9 contractors are typically public listed companies in which ownership is difficult to determine. Information on BBBEE in, typically, Grade 9 contractors is shown in the Financial Mail/Empowerdex Top Empowerment Companies 2006 rankings in the adjacent table. (Note that the BEE ranking for WBHO for 2006 was undertaken prior to the October 2006 BEE deal.)

GROUP 5

In 2005 Group Five finalised a BEE transaction. Two broad-based entities, iLima Group and Mvelaphanda Group Ltd, hold 21.6% of Group Five and current and future black management and broad-based employees hold 4.5%.

The transaction also included a unique enterprise development agreement with iLima, a new BEE ownership entrant with construction-specific skills. iLima is working with us to fast-track transformation to the right skills base at the right levels in the company. The long-term aim is to consolidate this business into Group Five, leading to further transformation of our group.

Group Five has entered into a formal agreement with the construction arm of the iLima Group, namely iLima Projects. In terms of this agreement, the following arrangements have been put in place: management and labour assistance and skills transfer, the establishment of administrative systems and financial assistance.

Group Five's total direct costs relating to financial assistance for 2006 amounted to R511 937 for which no charge has been made to iLima Projects. Group Five has also provided a medium-term loan to iLima Projects of R14,4 million and provided financial guarantees and assisted the group with plant and equipment.

Since October 2005, iLima Projects' secured order book has grown from R110 million to R440 million and its permanent staff compliment from 77 to 145. The long-term aim is to consolidate this business into Group Five, leading to further transformation of the group.

Group 5; www.g5.co.za

WBHO INTRODUCES BEE SHAREHOLDING

Wilson Bayly Holmes - Ovcon (WBHO) announced that it had concluded a Black Economic Empowerment (BEE) agreement for the facilitation of black equity ownership into WBHO in terms of which a group of black people including a significant proportion of WBHO's permanent employees would acquire a shareholding in WBHO.

It was envisaged that the BEE consortium would be introduced via a new company to be renamed Akani Investment Holdings, (Akani means "we are building" in Shangaan), the company said. WBHO will issue 9,989,000 new WBHO ordinary shares (15% of the issued share capital of the company) to Akani at a subscription price of one cent per share. The subscription shares will rank pari passu in all respects with the existing issued ordinary shares of WBHO.

Inet Bridge, 13 September 2006

It should also be noted that, in addition to the empowerment transactions listed above, notable examples of BEE are also taking place, which can serve as learning. For example[9,10]:

- Stocks Building Africa (SBA), which has R360 million worth of assets and an order book of R1,5 billion, has signed a deal with Leswikeng Building, enabling the group to acquire a 30% stake in one of the country's unlisted building contractors. The deal is believed to be worth R100 million.
- Power Construction in the Cape has invested in three companies that are 51% black owned, with two that are over 6 years old.
- A BEE consortium which includes Sonn's African Star Ventures, Vunani Capital, represented by Dube, and Hlongwane's Zerovest Investments acquired 65,5 million shares in Esor in 2006, equating to 26 percent of the company's share capital, for R105 million.

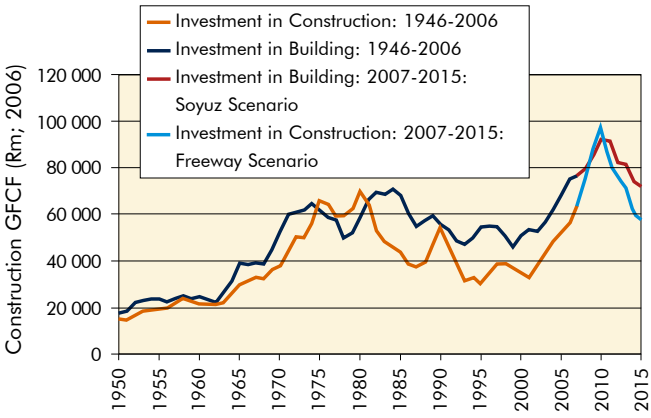
Of significance is that many of the above are joint venture type arrangements with strong elements of skills transfer, which significantly reduce the risk to the new enterprise.

9 BMI-BRSCU (2005). Update to Strategic Assessment of Black Economic Empowerment (BEE) Opportunities in the Building and Construction Industry System. Produced by BMI Building Research Strategy Consulting cc for the Construction Industry Development Board, May 2005. www.cidb.org.za

10 cidb (2004). SA Construction Industry Status Report - 2004; Synthesis review on the South African construction industry and its development. Discussion Document. Construction Industry Development Board, April 2004. www.cidb.org.za

2.5 BEYOND 2010

South African is currently experiencing a significant increase in infrastructure investment, driven by both public and private sector investment - the likes of which have not been experienced since the 1960s and 1970s. Forecasts for the future are important for the industry, but become increasingly difficult for long term forecasts.



Source: BMI-BRSCU

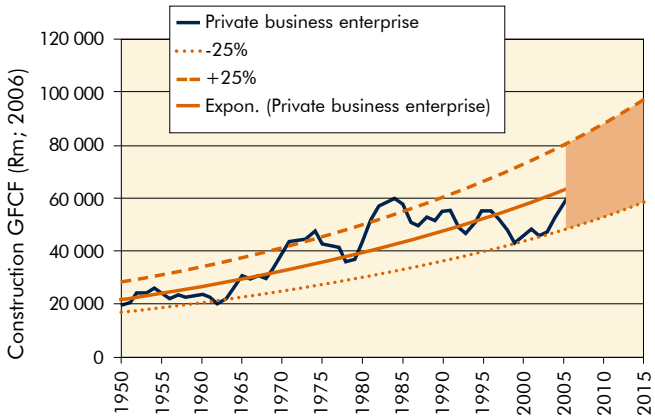
Various forecasts have been produced for infrastructure investment into the future in South Africa - one such forecast being that by BMI-BRSCU[11], supported by research by the Medium-term Forecasting Associates.

A key element of this forecast is that the building and construction industry is expected to show healthy growth to 2010 even under the conservative, lower middle road scenarios for building and construction. It will be driven in particular by investment in non residential building (41% growth) and construction (73% growth). The residential sector will languish particularly in 2007 and 2008, growing by only some 3% to 2010 on the back of the huge growth experienced in the period 2000 to 2006. From 2009, the residential market is expected to resume good growth of 7% in 2009 and 6% in 2010. Thereafter the outlook is less optimistic and the residential sector is expected to continue its decline to 2015, returning to below the peak 2006 level of investment.

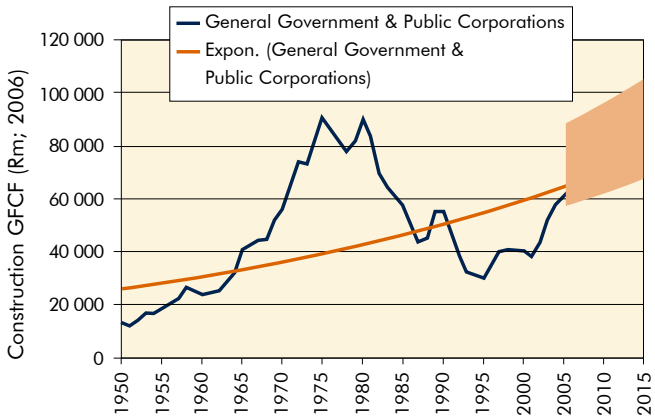
11 BMI-BRSCU (2007). Strategic Research into the Opportunities for Job Creation, New Enterprise Development and Empowerment in the Value System of the Building and Construction Industry. Produced by BMI Building Research Strategy Consulting cc for the Department of Trade and Industry and the Construction Industry Development Board, May 2007. www.cidb.org.za

Forecasts for the construction sector are less certain. The public sector accounts for 65% to 70% of investment in construction works. Consequently, the infrastructure programme of government is of the utmost importance in stimulating growth in this sector.

Another view of the future can be seen by considering the long term growth rate in public and government investment separately, as shown below. The long term growth rate for private sector investment is around 2,2% p.a., which is closely related to the overall population growth rate. The investment cycles around the long term growth rate, of which the industry is currently emerging from, are typically around ±25% of the long term trend.

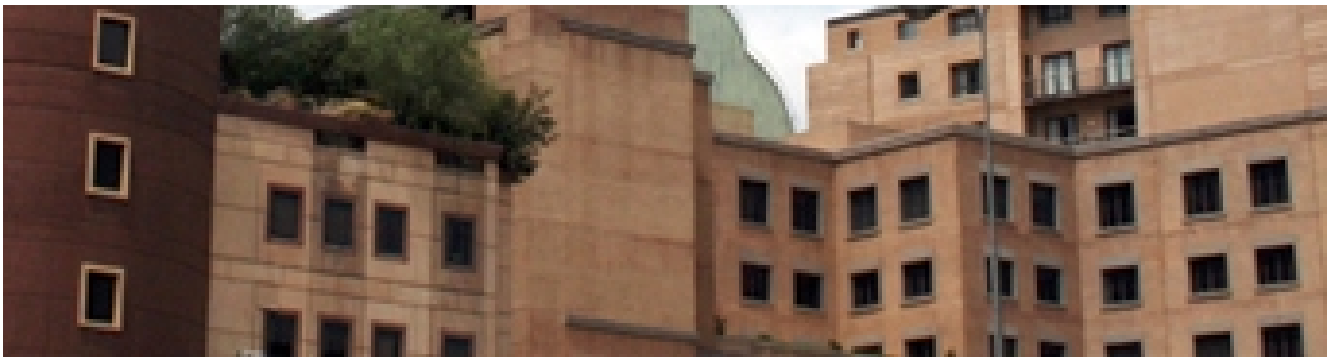


Private sector investment



Public sector investment

However, public sector investment has in the past been much more volatile, being determined by infrastructure investments needs of the day. It is anticipated that the current government investment programmes will be sustained well into the future - and certainly beyond 2010.



SA CONSTRUCTION SHIP WON'T SAIL OFF A CLIFF POST-2010 - ECONOMIST

There is a bit of flat-earth-society thinking prevalent around 2010, with many people of the opinion that South Africa's economic growth will halt in its tracks after the soccer World Cup, says Absa Capital senior economic strategist Chris Hart. "Some people think the ship is going to sail off the edge of the earth after 2010. "However, the 2010 Soccer World Cup is only a catalyst for growth."

Hart says infrastructure spend is still "very reactive", owing to the fact that economic growth has been exceeding expectations - which is why he believes South Africa is going to put infrastructure in place for at least the next 15 to 20 years as it tries to catch up with demand. "Coega (port and industrial development zone) was South Africa's last proactive infrastructure spend."

Hart also highlights that there is not sufficient plant and machinery to carry the boom, and that the country's current account deficit may well keep on ballooning as companies gear up to import more plant and machinery. DaimlerChrysler South Africa (DCSA) Mercedes-Benz trucks product manager Peter Wraight agrees with Hart's positive forecast. He says 2010 is a mere stepping stone for bigger things. DCSA is one of many companies smiling as the construction boom continues. The sale of trucks (such as concrete mixers) into the construction industry has shown triple-digit growth since 2000, and Wraight is hopeful it will continue, as "long as government keeps on building". In the heavy segment of the truck market, the sale of 4 10005 2 tippers (all makes) into the construction sector has jumped 387% since 2000. In the extra-heavy segment of the market, sales (all makes) have increased a massive 622% since 2000.

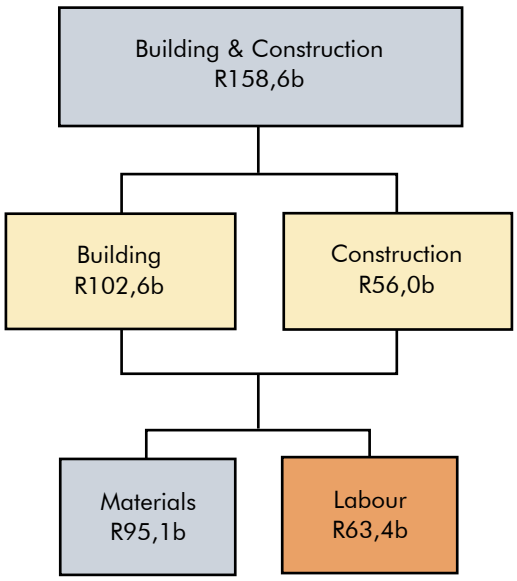
Admittedly, the market started from a low base, as the local construction industry languished in a 20-year lull until recently.

By Irma Venter
Business Report, 8 June 2007

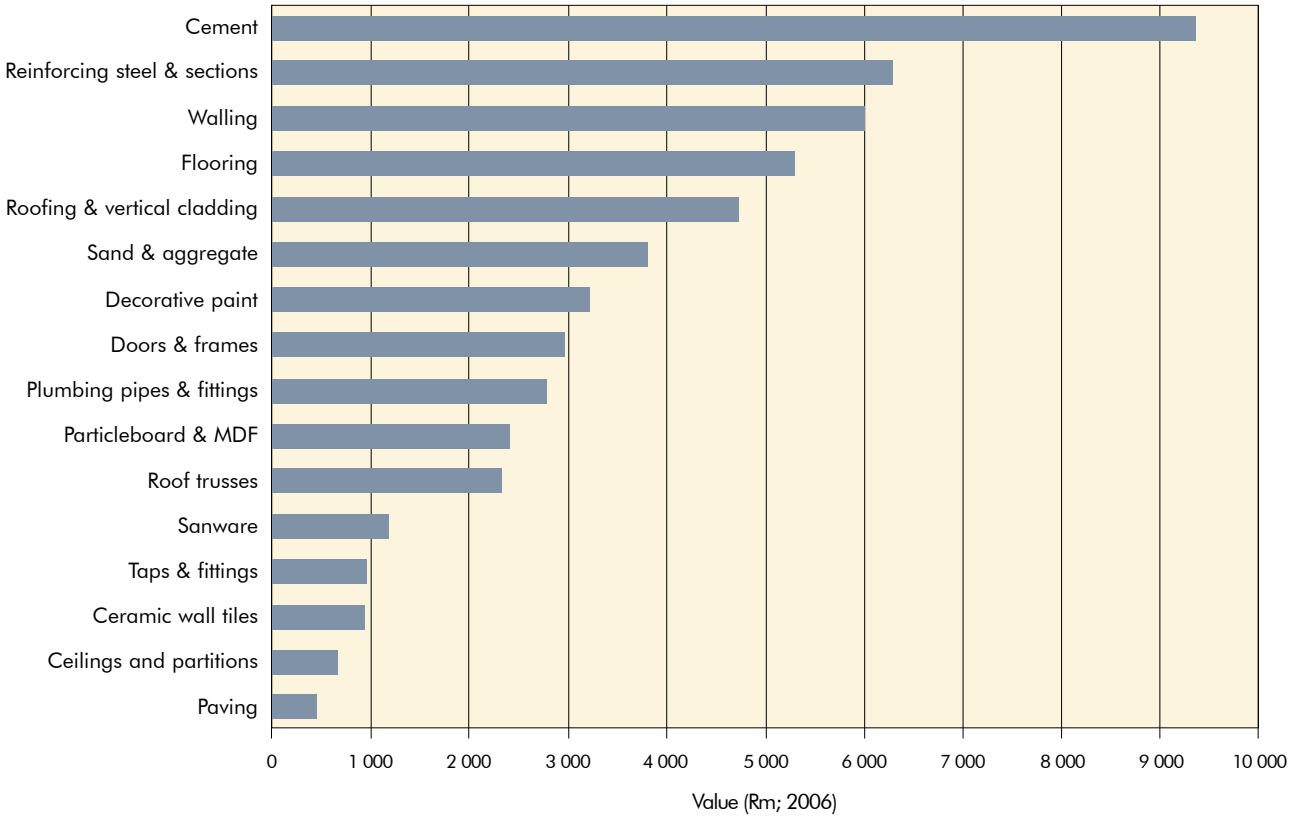
3. THE MATERIALS MANUFACTURING SECTOR

3.1 OVERVIEW

The market for building and construction materials is derived from primary building (including unrecorded additions and alterations) and construction activity. Of the current building and construction investment of about R158,6 billion p.a., materials accounts for about R95 billion.



An overview of the major product groups is given below, together with a more detailed breakdown in the following table. The breakdown provides an estimate of the market for the major product groups, representing about 49% of total building and construction materials.



Source: BMI-BRSCU

A large number of manufacturers supply the building and construction market. Some 65% of materials are sold into the building industry and 35% into construction. The split in the building industry is approximately one third into each of the sectors, i.e. residential, non residential and additions and alterations and home improvement (including unrecorded home improvement).

Product Group		Market Size	Rm; 2006
Cement (Tonnes)	Building Industry	9 226 525	6 090
	Construction	4 967 386	3 278
	Sub-total	**14 193 911**	**9 368**
Reinforcing Steel and Sections (Tonnes)	**Sub-total**	**700 000**	**6 300**
Walling (BE*1000)	Facebricks	1 157 193	1 526
	Faceblocks	202 073	245
	Stockbricks	2 464 479	1 820
	Stockblocks	4 589 969	2 421
	Sub-total	**8 413 714**	**6 012**
Flooring (m2*1000)	Carpeting	17 538	1 547
	Vinyl	6 562	289
	Ceramic Tiles	39 091	3 161
	Other Tiles	2 912	300
	Sub-total	**66 103**	**5 297**
Roofing and Vertical Cladding (m2*1000)	Roofing	57 451	3 120
	Vertical Cladding	32 005	1 611
	Sub-total	**89 457**	**4 730**
Aggregate and Sand (Tonnes)	**Sub-total**	**90 000 000**	**3 800**
Décorative Paint (Litres*1000)	**Sub-total**	**217 062**	**3 226**
Doors & Frames (Units*1000)	Doors	3 742	908
	Garage Doors	189	240
	Window	3 970	900
	Door	2 613	740
	Built in Cupboard	207	70
	Patio	150	98
	Shower	98	17
	Sub-total	**10 969**	**2 973**
Plumbing Pipes & Fittings (LM*1000)	Pipes & Fittings to Building	9 963	349
	Pipes & Fittings inside Building	26 089	1 868
	Pipes & Fittings from Building		572
	Sub-total	**36 053**	**2 790**
Particleboard & MDF (m2*1000)*		**24 745**	**2 414**
Roof Trusses (Units*1000)	Timber Prefab trusses	5 114	1 555
	Timber On-site trusses	1 481	550
	Steel Prefab trusses	339	228
	Sub-total	**5 288**	**2 333**
Glass and Mirrors (m2*1000)	**Sub-total**	**6 356**	**1 520**
Sanware (Units*1000)	**Sub-total**	**2 340**	**1 193**
Taps and Fittings (Units*1000)	Chromeware	3 434	487
	Brassware	1 573	144
	Fittings & Accessories	29 458	350
	Sub-total	**34 465**	**981**
Ceramic Wall Tiles (m2*1000)	**Sub-total**	**5 864**	**947**
Ceilings and Partitioning (m2*1000)	Ceilings	23 465	508
	Partitioning	6 968	157
	Sub-total	**30 433**	**664**
Geysers (Units*1000)	**Sub-total**	**319**	**631**
Insulation (m2*1000)	**Sub-total**	**22 851**	**501**
Paving (BE*1000)	**Sub-total**	**362 167**	**478**
WIndowsills, Fasciaboards & Bargeboards (LM*1000)	Windowsills	4 651	150
	Fasciaboards	6 591	147
	Bargeboards	5 848	126
	Sub-total	**17 089**	**423**
Guttering and Downpipes (Lm*1000)	**Sub-total**	**13 535**	**212**
Total; Major Building & Construction Materials			**56 793**

* 35% of PB & MDF is used in Building Industry and 65% in furniture and other.

Source: BMI-BRSCU

Most of the building and construction materials required by the industry are manufactured locally. However, imports are readily available across the product groups, and are particularly important in high value aspirational products such as ceramic wall and floor tiles, taps and mixers, and sanitaryware. Commodity products are imported when need dictates, such as in the cement market. Over 750 000 tonnes of cement was imported in 2006, mainly by the cement manufacturers themselves.

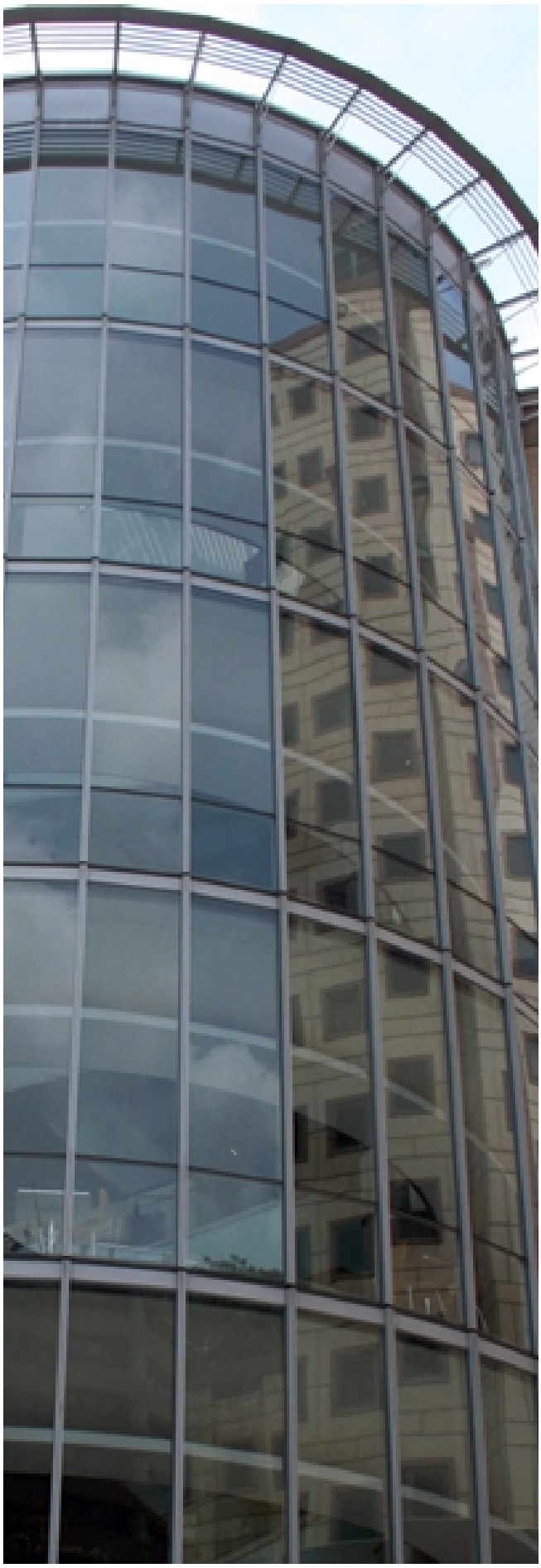
Imports are typically from countries with large production capacities and low costs, and are particularly prevalent from China, Eastern European and Latin American countries. Very often these products are landed in South Africa at prices lower than that of the local production costs.

Estimate of the imports and exports; 2006

Product / Material	Imports %	Exports %
Insulation	20-25%	0-25%
Particle Board	5-10%	Minimal
Medium Density Fibreboard	90.00%	Nil
Glass	2-38%	5-15%
Plastic Piping	2%	6%
Timber Prefab Trusses	10%	10%
Steel Prefab Trusses	15%	85%
Window Frames	2%	5%
Door Frames	2%	
Carpet	5%	10%
Ceramic Tiles	35%	11%
Galvanised Iron	19% to 44%	25%
Chromadek/Globalcoat	15% to 25%	35%
Steel Tiles	1%	20%
Cement	5%	1%
Range	**5% to 44%**	**0 to 85%**

Source: BMI-BRSCU

Exports are generally limited and again are applicable mainly to high value aspirational products.



3.2 MAJOR PRODUCT GROUPS

An overview of the leading manufacturers of the major product groups is given in the following table, and a selection of these major product groups are discussed in more detail in the following sections.

Building Product Group	Leading Manufacturers				
Cement	PPC	Holcim	Lafarge	NPC	
Reinforcing Steel and Sections	Mittal Steel	Macsteel	Highveld Steel	Clotan Steel	Trident
Walling	Corobrik African Brick INCA Eureka	Crammix Berts Brick Columbia DBL	Brikor Kopano Cape Brick	Rosema Apollo Probrick	Ocon SABlock Denkem
Flooring	Belgotex Floorworx	Nouwens	Domo	Ceramic Ind	Johnson
Roofing and Vertical Cladding	Mittal Steel Marley	Macsteel Brikor	Global Roofing Concor	Clotan	Lafarge
Aggregate and Sand	Afrimat	WG Wearne	AfriSam / Holcim	Lafarge	
Doors	TDM	Nulu	Van Acht	Swartland	
Frames	Wispeco	Dura	Nulu	Van Acht	Swartland
Plumbing Pipes and Fittings	DPI	Petzetakis	Incledon		
Particleboard and MDF*	PGBison	Sonae	CIT		
Roof Trusses	Mitek	Federated	Iliad		
Ceilings and Partitioning	BPB Gypsum	Everite	Lafarge Gypsum		
Glass and Mirrors	PFG Building Glass	AFGLASS			
Taps, Mixers and Fittings	Cobra Watertech	ISCA	Imports		
Geysers	Kwikot	Franke			
Insulation	OCSA	SAGEX	SISALATION		
Paving	Corobrik	Crammix	Brikor	Rosema	Concor
Windowsills, Fasciaboards and Bargeboards	Everite	Hans Merensky			
Guttering and Downpipes	Buildmax	Everite	DPI	Main Ind	Petzetakis

Source: BMI-BRSCU

i) Cement

Cement demand from the region, which includes SA, Lesotho, Botswana, Namibia and Swaziland, currently exceeds 14 million tonnes. It is projected that demand could increase to between 19 and 23 million tonnes of cement by 2010.

2006 Sales per Sector; 2006

End-use Sector	Building	Construction
Mining	14%	86%
C.P.M.	55%	45%
Readymix Producers	55%	45%
Resellers	77%	23%
Civil Construction	0%	100%
Building Construction	100%	0%
Blenders	55%	45%
Other	47%	53%
Total tonnes	**65%**	**35%**

Source: BMI-BRSC

The estimated split between the building and construction sectors (65%:35%) by end-use is shown in the following table. Of interest to note is that resellers account for nearly 50% of sales.

In the building sector, the split in cement demand between residential and non residential is estimated to be 68%:32%.

The cement manufacturing industry is highly oligopolistic with few large firms of highly capital intensive nature. The largest producer of cement in South Africa is PPC (40%), followed by Holcim (31%), Lafarge (18%) and NPC (11%). PPC is wholly South African owned, while Holcim, Lafarge and NPC have strong overseas interests - although Holcim international is currently selling its 85% stake in Holcim South Africa to empowerment groups.

COMPETITION THREATENS LOCAL CEMENT MAKERS

Local manufacturers of cement will face increased international competition if a proposed relaxation of a technical barrier to trade in the current compulsory standard for the product is pushed through. This follows the SA Bureau of Standards (SABS) being requested earlier this year by the trade and industry department to take over responsibility for the regulation of cement by means of a compulsory standard.

By Roy Cokayne
Business Report, 21 July 2006

Apart from imports of about 750 000 tonnes to alleviate shortages in 2006, all of South Africa's cement is manufactured locally, and all the South African cement manufacturers are planning to increase capacity: PPC (1,25 million tonnes by mid 2008), Lafarge (1 million tonnes by 2008), NPC (0,6 million tonnes by mid 2007) and Holcim (1,5 million tonnes by 2011) (see Section 3.2). However, as pointed out by Industry Insight[12], importing of cement may be viable by small companies depending on the strength of the Rand.

WIPHOLD TO IMPORT CHINESE CEMENT, CAPITALISE ON BALLOONING DEMAND

Black-women-owned investment and operating company Wiphold on Tuesday signed two agreements, one with the Chinese cement company Tangshan Jidong Cement to import high-quality cement from China, and one with the South African Bureau of Standards (SABS) certifying the cement quality.

The agreement with Jidong would see Wiphold acting as Jidong's sole distributor in South Africa. Jidong is a 52% State-owned enterprise.

Speaking at a function held in Johannesburg, Wiphold executive director Gloria Serobe said the agreement would "go a long way" towards tackling the cement backlog in the country.

South Africa's building and construction materials industries are being thinly stretched, as supply struggles to meet the demand generated by the large number of infrastructure projects under way. These include the Gautrain rapid-rail link, airports, stadiums and other preparations for the 2010 soccer World Cup, power utility Eskom's R150-billion five-year capex plans, and road, rail and housing projects.

All the country's major cement producers are importing product to meet demand.

"Expanding our operations to support infrastructure development underpins economic growth and will play a part for job creation, a successful 2010 and more broadly for the transformation challenges of South Africa and the continent," Serobe added.

Jidong, one of the leading cement producers in China produces some 25-million tons a year, more than that of South Africa's local producers combined.

Serobe pointed out that Wiphold would be selling the cement at highly competitive prices, but was unable to peg an exact price for local sales. "Our 'Dunshi' brand cement is currently delivered to South East Asia, America and Nigeria. We look forward to Wiphold expanding our markets and believe there is much opportunity in South Africa and on the African continent."

By: Nelendhre Moodley
Engineering News, 19 June 2007

12 Industry Insight (2006). State of the South African Construction Industry; 4th Quarter 2006. Industry Insight, November 2006. www.industryinsight.co.za

ii) Reinforcing Steel and Sections

Domestic carbon steel sales totalled 5 343 523 tonnes during 2006, an increase of 26,2% compared with 2005. During this period, sales of carbon steel flat products increased by 28,9% while sales of profile products increased by 24,7%. Domestic carbon steel sales of flat and profile products increased by 10% during the third quarter of 2006 compared with the second quarter of 2006. The carbon steel sales to the Building and Construction Industry totalled 1 235 743 tonnes or 23% of the total. Sales of reinforcing steel and sections totalled 700 000 tonnes (at an estimated R6,3 billion) or 57% of total carbon steel sales to the industry. Major suppliers of carbon steel flat products include Cape Gate, Cisco, Columbus Stainless, Mittal Steel, and Scaw Metals Group.

Opportunities for small-scale scrap metal vendors (individually or in alliance) could exist with established dealers. Entry barriers are low, and the collection process requires local knowledge and appropriate transport.

A wide range of value added product manufacturers and services exist, in the supply, cut, bend and fixing of reinforcing steel and reinforcing mesh, and in the manufacture of structural steel elements. These players include both local as well as regional/national businesses, although the market is dominated by the regional / national businesses, including:

- Steeledale, the oldest and largest reinforcing steel supplier and sub-contractor in Southern Africa, and Steeledale Mesh, part of Aveng Manufacturing;
- Trident Steel, part of the Aveng Group, providing a wide range of steel products (including steel sections);
- Reinforcing Steel Contractors, a supplier of steel reinforcing products and related services and BRC Mesh Reinforcing, part of Murray & Roberts Steel; and
- Capital Africa Steel, a subsidiary of the WBHO group, which holds a 78% stake in Reinforcing & Mesh Solutions and 50% of Dywidag Systems International.

The South African Reinforced Concrete Engineers' Association (SARCEA), whose members are drawn from businesses involved in the design, supply and placing of reinforcing steel for concrete structures, consists of 25 independent organisations - reflecting not only the dominance of the major players but also the opportunities for local players, such as:

- Alert Steel Polokowane;
- Ensimbini Reinforcing;
- Koedoespoort Reinforcing Steel, Pretoria;
- LPM Reinforcing, Veereniging; and
- Thekweni Reinforcing, Durban.

iii) Walling

Concrete face and stock bricks have taken market share from clay over the last number of years, and currently account for some 57% of the total market for walling (in millions of Brick Equivalents).

Mineral rights for the establishment of a new clay brick factory can take up to 3 years to obtain.

This shift to concrete bricks is largely due to the high investment cost required in tunnel kilns, which is too high to justify the manufacture of a commodity and low priced product such as a stock brick. Consequently, clay stock bricks are mainly manufactured using old clamp kiln technology. Furthermore, there are also environmental concerns concerning pollution and smoke emission with clay brick manufacture, and the authorities are reluctant to grant new licences unless rigorous requirements are met.

In contrast, concrete brick plants are readily available at fairly low incremental sizes and investments. The plants are easily transferable and therefore fairly flexible in moving to where the market is. The product has also gained ready acceptance from users and can easily be manufactured to SABS requirements. With the exception of clay face brick, which has aesthetic value and is highly priced, it can be expected that concrete brick will continue to take market share from clay in future. Clay face brick will continue to be in demand in the luxury end of the market and in the non residential sector.

Cement brick manufacturers can enter the market at fairly low cost (some R4m start-up cost for a factory producing the equivalent of 130 000 stockbricks per day).

The Clay Brick Association has some 100 to 120 member companies including associates from whom production and sales statistics are obtained on a regular basis. The 14 large brick companies have about 60 factories between them and probably represent some 85% of total production capacity and sales turnover. Of these, Corobrik is the largest clay masonry producer in Africa, with a turnover of more than R1 billion per annum. Corobrik produces about 3,5 million bricks per day (or 1 000 million per annum) and the product range includes clay face bricks in many colours and textures, clay pavers, plaster bricks and concrete blocks, pavers and retaining blocks.

Most of the clay brick companies (in terms of numbers but not capacity) are family concerns. These companies have been built up over many years and ownership is closely held within the immediate family. The business is typically handed down from father to son.

The tendency is for clay brick manufacturers to focus on geographic areas in the economic delivery range of the factory. For example, Berts Bricks (a family owned business producing some 400 000 face and stockbricks per day) is located in Potchefstroom and services the surrounding area, but would deliver all the way to Gauteng.

iv) Flooring

The major flooring products are:

- ceramic floor tiles (and walling tiles) (about 60% of market by value);
- carpets (30%); and
- vinyl products (5%).

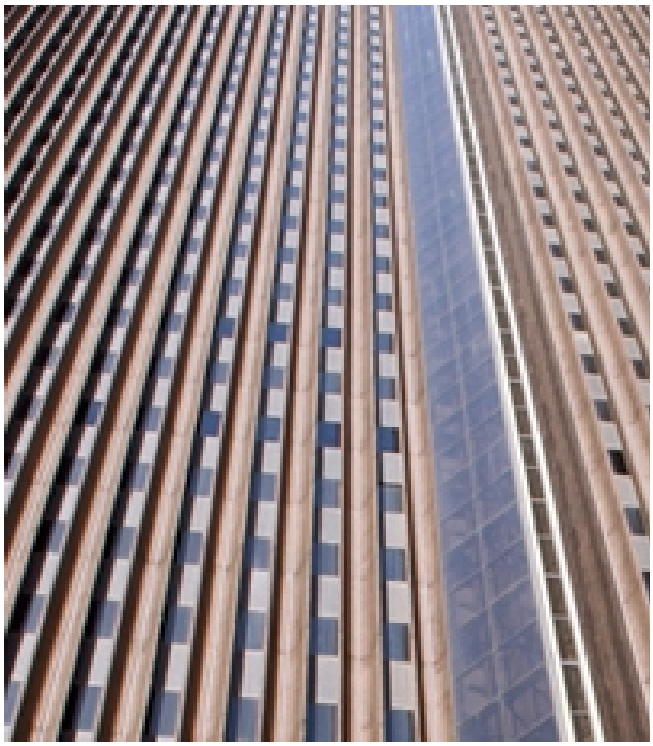
The Ceramic Industries Group is the largest Southern African manufacturer and supplier of ceramic tiles and vitreous china sanitaryware. Turnover in 2006 was R1,1 billion. Ceramic Industries holds 55% of the South African ceramic tile market and 50% of the market for sanitaryware requirements. Domestic sales of 28,1 million m² exceeded production.

The Ceramic Industries Group comprises 4 tile factories; one sanitaryware factory and one acrylic bath factory based in South Africa, as well as one tile factory based in Australia. The tile factories (Samca 1, Samca 2, Vitro, Pegasus and Centaurus) manufacture a combination of pressed and extruded tiles in various sizes, textures and finishes. The sanitaryware factory (Betta) manufactures a wide range of vitreous china sanitaryware, the main focus being on water closets, basins, cisterns and pedestals. The recently acquired bath factory (Sphinx Acryllic Bathroomware) manufactures a comprehensive range of baths and showertrays, catering for all sectors of the local and European markets[13].

The distribution of carpets is via wholesalers (some of which are BEE compliant) and a host of small retailers. Opportunities exist in the retailing sector for small and medium sized companies. The fixing of carpets is also suitable for small operators, and training is provided by the manufacturers.

Most ceramic tiles are manufactured locally by Ceramic Industries and by Norcross, but imports play an important role at the discretionary end of the market. It is estimated that imports could be about 25% of the total market demand. This is achieved by drawing on relationships, established over decades of operation, to import from countries that have a reputation for supplying outstanding product in the tile industry, namely Italy, Spain and Brazil. Excellent product is now also sourced from China, Turkey, Thailand and Australia.

13 Ceramic Industries Limited (2007). www.ceramic.co.za



Ceramic flooring will probably continue to dominate the flooring market and may take further market share from carpet flooring. However, the carpet manufacturers have taken significant strategic actions to stem the trend away from carpeting, and it remains to be seen to what extent this will be successful. The flooring market is aspirational and the marketing actions of the manufacturers play a significant role in influencing demand.

Many of the ceramic tile manufacturers and distributors provide training to floor and wall tilers. The fixing industry is dominated by a multitude of small- and medium-tiling subcontractors.

Ceramic floor and wall tiles are aspirational products and are used extensively in refurbishment projects. The success of Italtile, CTM, Ceramic Industries, Tile Africa and the many other tile distributors are indicative of the success of these products (see Section 4.1). The current tile usage is about 1 m² per capita of population. Italtile estimates that it could be 3 m² per capita, implying a potential market size of some 120 million m². The market is driven by the aspirational needs of consumers as they regularly upgrade and improve their homes in a 5 to 7 year cycle. Under the (high road) BMI-BRSCU Columbus Scenario, it is anticipated that the total flooring market could be some 90 million m² by 2011 and moderate thereafter.

There are three major carpet flooring manufacturers, namely Belgotex, Nouwens and Crossley, while Floorworx (a BEE company) is the largest manufacturer of vinyl flooring. This product is used predominantly in government type buildings such as hospitals, clinics, schools and libraries.

v) Roofing and Vertical Cladding

The roofing market consists predominately of steel roofing material, concrete tiles, fibre cement and natural slate tiles. The major market share is commanded by Steel at 57%, followed by concrete tiles at about 24% share by volume.

There are low entry barriers for small-scale corrugated roofing profilers. The roll formers are relatively low capital intensive and flat coils can be directly obtained from the suppliers. There are also opportunities for on-site profiling of long sheets (steel and aluminium).

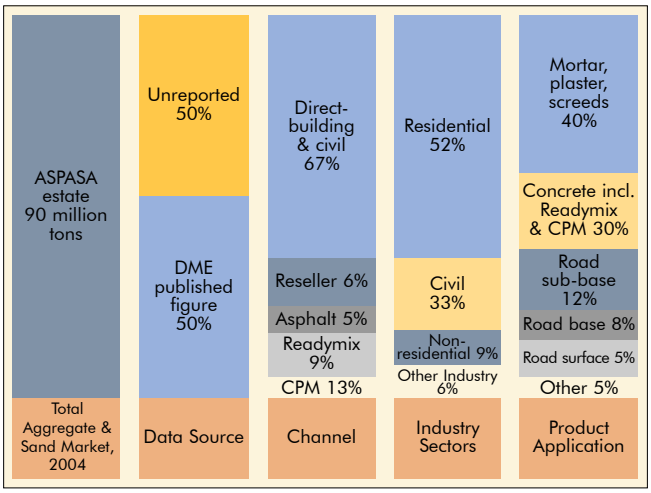
Steel products (galvanised, Chromadek and steel tiles) command the major roofing market share at about 70% in terms of value. The major player in the roof profiling market is Macsteel, a 50% subsidiary of Mittal Steel. Other companies that are prominent in the profiling market include Global Roofing Solutions (formerly H.H. Robertson and Brownbuilt) and Clotan Steel.

There are a number of concrete tile manufacturers in South Africa with Lafarge, Marley, Kulu, Brikor and Concor Technicrete the five largest, representing more than 94% of the total market between the five of them. Approximately 45% of their product is supplied directly to the end-user (builders, roofing contractors, project developers) with about 55% routed through merchants, including roof truss manufacturers.

Small-scale concrete roof tile manufacturing has low entry barriers, and the plant can easily be moved to different locations to address local market demand.

vi) Aggregate and Sand

Aggregate is the name given to different sizes of stone that are used in the building, civil construction and road construction industries. Crushed stone is usually designated as coarse aggregate and sand as fine aggregate. Aggregates make up 70% to 80% of the volume of concrete and typically form between 90% and 95% of asphalt.



Source: ASPASA 2006

An estimated breakdown of the use of aggregate and sand is given in the adjacent figure.

The aggregates market is highly fragmented with more than 520 registered quarries. The Aggregate and Sand Producers Association of South Africa (ASPASA) estimated the total South African aggregate market, both formal and informal, in 2004 to be 90 million tonnes, which translates into revenues in the order of R3,8 billion.

However, it is estimated that only about half of the total industry sales are reported to the Department of Minerals and Energy (DME)[14]. Poor aggregate and sand industry regulation and management of permitted reserves have been cited as impediments to responsible growth and environmental management of aggregate resources. BEE (relating to mixed messages from the DME) and poor facilities maintenance (crusher plants etc.) have also been raised as impediments towards growth and increased operational efficiencies.

Most of the aggregate and sand suppliers operate on a regional or local basis. Afrimat is one of the largest producers, with market share of around 10% and turnover of about R350 million annually. It is a black-empowered group supplying building materials to the building and construction industries. The group has a strong brand presence, with operations that are market dominant in the Eastern and Western Cape, northern KwaZulu-Natal, eastern Free State and Namibia. Its primary products are:

- aggregate stone products;
- ready-mix concrete;
- building blocks and bricks; and
- moulded concrete products.

Planned government infrastructure spend of over R400 billion coupled with parastatal and private expenditure should boost activity in the civil engineering and non residential sectors of the construction market. Parastatals such as Eskom and Transnet have embarked on significant capital expenditure programmes.

This presents opportunities for local quarries to provide aggregates to roadbuilding and other programmes.

The Afrimat group was formed through the merger of two specialist companies, Lancaster and Prima, founded in 1965 and 1963 respectively. More recently, the Afrimat Group acquired the Malan quarrying group for R125 million. 25,1% of the new shares issued to the vendors as part payment of the purchase consideration were required to be placed with a BEE shareholder to maintain Afrimat's solid empowerment platform.

14 SUDEO IBC (2007). Research Report for the Infrastructure Inputs Sector Strategy; Executive Summary. Produced by SUDEO International Business Consultants for The Presidency, May 2007. www.btrust.co.za

The Afrimat group has 18 quarries, 13 ready-mix concrete plants and 8 precast factories. In addition, it has 4 mobile crushing plants and a mobile ready-mix plant, offering greater geographical flexibility. The group also owns 120 ready-mix, tipper and delivery trucks. Its customer base ranges from small cash-paying companies to large multi-national construction corporations and parastatals, including Spoornet/Transnet Freight Rail.

Other large suppliers include:

- WG Wearne, the family owned AltX-listed supplier of ready-mixed concrete and aggregates with a revenue of R352 million[15], with operations in Gauteng, the Free State, North West, KwaZulu-Natal and Limpopo provinces;
- AfriSam (Holcim), with 16 quarries and aggregate operations in Gauteng, Western Cape and KwaZulu-Natal; and
- Lafarge, also with operations in Gauteng, Western Cape and KwaZulu-Natal.

vii) Windows and Doorframes

The window and door frame market is about R3,0 billion in 2006. The manufacture of steel windows has very low entry barriers, and this market has therefore essentially been taken over by small to medium sized downstream enterprises that specialise in local market areas. There is, however, a large market in window and door frames manufactured from extruded aluminium sections, the largest of these manufacturers being Wispeco.

The steel window market has essentially been taken over by small to medium sized enterprises that specialise in local market areas.

viii) Plumbing pipes and fittings

The total piping used in the plumbing market in 2006 is estimated at 36,05 million metres, at a total value of R2,2 billion. Some 54% was used in the residential sector and 46% in non residential. Copper piping comprised some 45% of the total meterage, with plastic 40% and galvanised 15%. When fittings are included, the piping market constitutes R2,2 billion, of which copper commands 68,5%, galvanised 24% and plastic 7%.

The plumbing market is populated by a large number of small subcontractors and the distribution of plumbing materials also offers BEE opportunities. DPI and Incledon have formed downstream alliances with the distribution end of the value chain.

15 Wearne (2006). http://www.wearne.co.za

Plastic is used mainly in low cost housing and non residential, whilst copper is used mainly in the standard to luxury housing sectors.

Water supply (piping) and fittings to the building industry comprise R349 million, of which galvanised piping and fittings makes up about 31% of the total.

The total market for Chromeware and Brassware amounted to R630 million in 2006. Chromeware comprised 77% of the total and Brassware 23% in monetary terms. Fittings (compression and capillary) comprised a further R350 million.

Cobra has the major market share in Chromeware at about 60-65%. Imports account for about 20% and the main single competitor is ISCA, who hold about 7% market share in taps and mixers. DAWN (Distribution and Warehousing Network) has acquired the controlling shareholding of both Cobra Watertech and ISCA. There are a number of smaller competitors.

ix) Roof Trusses

There are about 190 roof truss manufacturers countrywide, and it is estimated that approximately 5 843 000 roof trusses are consumed in the building industry annually at a value of about R2,3 billion. Some 60% of these trusses are prefabricated timber, 25% timber trusses made on site and 15% steel trusses. Almost 7,5 out of every 10 roof trusses are used in the residential sector. Some 2 800 to 3 000 tons of nail plates are used (to the value of about R52 million) to connect the engineered roof trusses.

The technology to manufacture timber roof trusses is fairly simple although some capital equipment is required to pre-cut and staple the components together using nail plates. However the designs of the trusses do require some engineering knowledge and certification credentials.

MiTek Industries South Africa (Pty) Ltd., a division of the world wide MiTek Group, is the leading roof truss system supplier in South Africa and the world. The major materials distributors such as Federated Timbers, Downing and Atwood and Iliad are also major players in prefabricated timber roof trusses. Steel specialist companies like Macsteel, MiTek and Clotan Steel are active in the manufacture of steel roof trusses.

x) Ceilings and Partitions

The ceiling market in 2006 was some 26,8 million m² at a retail sales value of about R575 million. Gypsum ceilings and partitioning (produced by BPB Gypsum) has traditionally held the major market share at just more than 60% followed by Fibrecement (produced by Everite, a subsidiary of Group Five) at about 26,5%. BPB Gypsum also has two plants, each with a capacity of about 16 million m² annually.

The ceiling and partitioning market offers opportunities to subcontractors. The manufacturers offer training in erection and contracting.

Lafarge Gypsum (part of the Lafarge Group with interests in Cement, Concrete Tiles, Aggregates) has also recently entered the ceiling market, and have invested in a new plant with a capacity of 15,8 million m². Product from this plant will become available to the market from mid-2007. To date there has also been a limited amount of imports, mainly by Lafarge to test the market. The industry has more than sufficient capacity for the foreseeable future.

Lafarge Gypsum also owns Macsteel Interior Systems (MIS) in South Africa. MIS is a leading South African manufacturer and distributor of ceiling, partitioning and access flooring systems for commercial and residential buildings. Manufacturing operations are in Alrode near Johannesburg and in Durban. MIS operates distribution depots throughout South Africa and has recently established depots in Mozambique and Botswana.

Lafarge Gypsum has successfully introduced its plasterboard products into South Africa via the distribution network and sales people of MIS.

xi) Bitumen[16]

There are 4 oil refineries that produce bitumen from refined crude oil residue. Domestic and export bitumen sales in 2006 were 308kt and 164kt respectively, with approximately 90% of local sales arising from government demand for road and runway projects. Bitumen imports are costly due to the need for handling bitumen in hot bulk, and require additional investment in dockside tanks and support logistics.

16 SUDEO IBC (2007). Research Report for the Infrastructure Inputs Sector Strategy; Executive Summary. Produced by SUDEO International Business Consultants for The Presidency, May 2007. www.btrust.co.za

3.3 MANUFACTURING CAPACITY

Possible capacity shortages have been the subject of much attention recently. In particular, the capacity of the materials manufacturing sector to respond to the government's planned R400 billion infrastructure investment programme has been a key focus of the Infrastructure Inputs Sector Strategy (IISS) commissioned by The Presidency[17].

The capacity of the materials manufacturing sector is investigated in this section.

Product/Material	Current (2006) Capacity Utilisation (%)
Insulation	20 to 80%
Particleboard	90 to 97%
MDF	85 to 90%
Glass	70 to 100%
Plastic Piping and Fittings	80%
Timber Prefab Trusses	90%
Timber On Site Trusses	50%
Steel Prefab Trusses	100%
Window Frames	75%
Door Frames	80%
Vinyl Flooring	50%
Carpeting	60%
Ceramic Tiles	100%
Galvanised Iron Roofing	69% to 100%
Chromadek Roofing	85% to 100%
Concrete Tiles	90%
Fibrecement Roofing	60%
Steel Tiles	65%
Clay Facebrick	98%
Concrete Facebrick	90%
Clay Stockbrick/block	100%
Concrete Stockbrick/block	98%
Cement	100%
Range	**70% to 100%**

Source: BMI-BRSCU

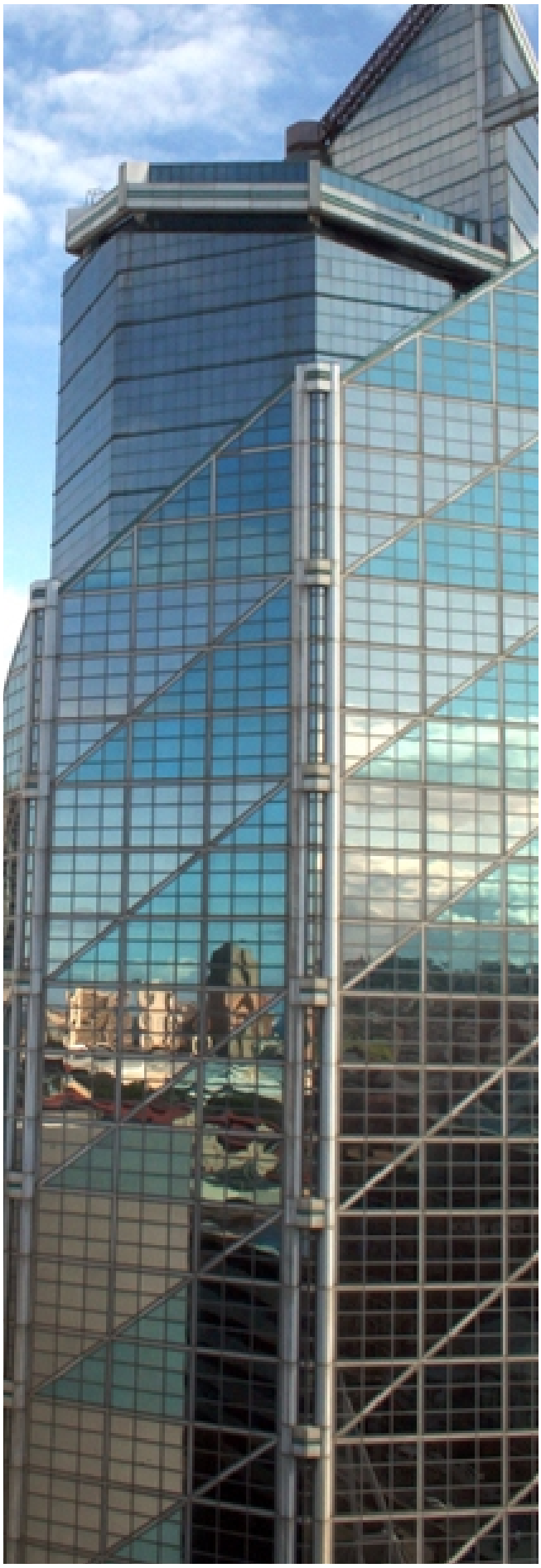
17 SUDEO IBC (2007). Research Report for the Infrastructure Inputs Sector Strategy; Executive Summary. Produced by SUDEO International Business Consultants for The Presidency, May 2007. www.btrust.co.za

The February 2007 report by StatsSA on manufacturing utilisation of production capacity by large enterprises (not only in the building and construction industry) shows an increase in utilisation from 2000 to 2007, and shows current utilisation running at about 86%. Surveys undertaken for this study as well as for the IISS study, together with anecdotal information, also confirm that the manufacturing sector in the building and construction industry is operating close to capacity. Furthermore, many of the manufacturers are planning capacity increases.

Planned capacity increases vary widely across the different product groups, and the results of a small scale survey undertaken for this study are given below. At best the information is anecdotal, but it does confirm the intuitive view that the manufacturing industry is currently operating near to full utilisation and is planning to increase capacity to cope with expected increases in demand.

Product/Material	Planned Capacity Increase (%)	Timing
Cement	31%	2007 to 2011
Sisalation	50%	2007
Particle Board	15%	
Melamine	70%	
Glass	40% to 70%	2007
Plastic Piping	22%	Mch-08 to Jun-10
Window Frames	5%	Jun-07
Door Frames	5%	Jun-07
Vinyl Flooring	5%	
Carpeting	Nil	
Ceramic Tiles	25%	Jun-07
Galvanised Iron Roofing	14% to 20%	2008/9
Chromadek Roofing	10% to 20%	2008/9
Steel Tiles	10%	2007/8
Clay Facebrick	4%	May-07
Range	**5% to 70%**	**2007 to 2010**

Source: BMI-BRSCU



However, the actual magnitude of the increased capacity delivered is uncertain and will, to a large extent, depend on the confidence that the business sector has in the planned public and private sector infrastructure plans materialising, skills availability, and on other factors influencing investor confidence. Specifically, there is concern whether the public sector has the necessary procurement and delivery capacity to roll out the planned infrastructure investment programme as envisaged, and concern about the ability of the logistics infrastructure (and, in particular, transportation) to cope with demands placed on it.

SA CONSTRUCTION GIANT TALKS TOUGH ON DELIVERY SHORTFALLS

Speaking following the release of strong interim results, Murray & Roberts (M&R) executive director Sean Flanagan, who is responsible for the high-profile 2010-type projects within the group (including Gautrain and the World Cup stadiums), said that there was a "complete imbalance" between government's delivery capacity and that of the contractor community.

By way of example, he pointed out that, on the R25-billion rapid-rail Gautrain project, the only permanent government employee able to engage with the complexities of the project was Gautrain project head Jack van der Merwe. The balance of the Gautrain team, Flanagan said, was made up entirely of outside consultants.

"Government has the money and the projects, but they simply do not have the capacity to deliver those projects . . . so when we sit down to negotiate there is a massive problem," Flanagan lamented, adding that this reality was making it difficult to reach closure on deals.

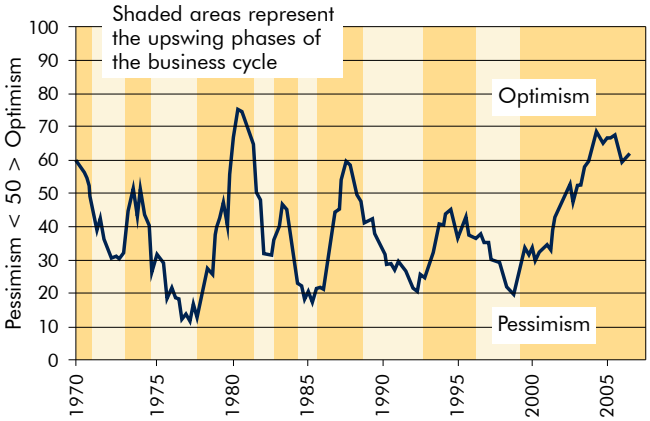
Polity.org.za, 9 March 2007

An indication of business confidence in the building industry can be seen below in the Medium-term Forecasting Associates (MFA) Composite Leading Indicator for the South African Building Industry (CLIBI). The CLIBI indicator is based on 24 Bureau for Economic Research (BER) business survey variables, and includes the confidence levels of building contractors and sub-contractors, their workloads, employment and profitability trends, the availability of labour and materials and the degree of competition in tendering[18].

Absa chief economist Christo Luüs points out that most periods of economic growth that South Africa has experienced since 1945 have been brought to an end by three factors: balance of payments problems, inflation, and a shortage of skilled labour.

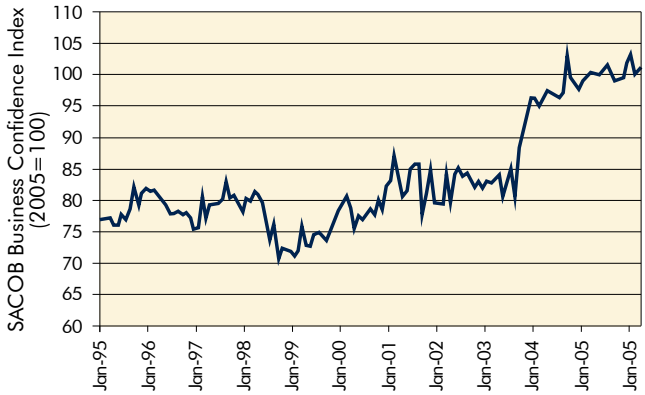
18 MFA (2007). MFA Newsletter, April 2007

The index recorded a peak of 69 in late 2004, but has since dropped to 62. This means that 62% of the respondents are still optimistic about building conditions. This is indicative of buoyant building demand at present. However, one can expect that business conditions could tighten during 2007, especially in the housing market where the increase in prime interest rate levels (from 10,5% to 12,5% p.a. during 2006) has had a negative effect on the affordability of housing.



Source: MFA; FNB/BER; SARB

The FNB / BER business survey, on which the CLIBI is based, shows that competition in tendering has intensified. This suggests that while most building contractors seem to be busy at present, the amount of new work coming out on tender could be decreasing. The survey also shows that residential contractors are not quite as optimistic as non residential contractors. Skilled labour shortages are still reported to be serious and shortages of certain materials are causing delays on certain building projects.



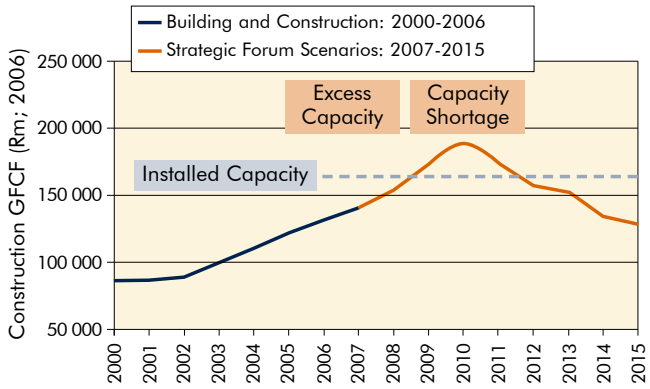
Source: SACOB, March 2007

A more macro-trend of business confidence can be seen in the SACOB Business Confidence Index.

There is no doubt that the success of the building and construction industry (including the materials sector) pivots around business and investor confidence. While rather nebulous to pin down, an influence on confidence is within the grasp of government and business leadership. Government needs to establish an effective dialogue with business to develop and promote a vision for growth in the industry and the country. There is no doubt that confidence creates confidence in a virtuous cycle and this determines the willingness to invest in fixed assets.

It is absolutely urgent that leadership in government and business act as confidence channels to investors of all descriptions

A further dilemma for manufacturers is to decide which infrastructure investment scenario is most likely to materialise and to plan capacity increase accordingly. Naturally there is a risk involved both in planning for under capacity as well as over capacity. Under capacity will open the door for other manufacturers or imports and over capacity involves a financial risk in the period of amortisation of the capital expenditure. Very often, the business sector tends to focus on the lower risk option.



I believe that we don't acknowledge or understand the power of this unleashing of economic energy in driving long term growth and as a result we are prone to "under forecasting" the performance of the economy. The residential property and consumer booms exceeded most people's wildest dreams, while who would have expected us to now be in the longest business cycle upswing on record? The fixed investment and construction booms are now well under way, but for the same reason it is possible that we will grossly under forecast these as well.

Industry Insight
Economic Overview: April 2007

However, overall (with limited exceptions), no significant shortages are anticipated in the industry, although the industry is geared for imports if surges in demand should occur. Notwithstanding this, some regional delays in materials are to be expected.

Anticipated shortages in building materials to 2010

Year	< 5%	5 < 10%	10%
2007	Taps, Roof Trusses	Galvanised Iron	MDF
2008	MDF, Taps, Vinyl Flooring, Galvanised Iron	Roof Trusses	
2009	Glass, Taps, Vinyl Flooring, Galvanised Iron Roofing		Roof Trusses
2010	Taps, Vinyl Flooring	Glass	Roof Trusses

Source: BMI-BRSCU

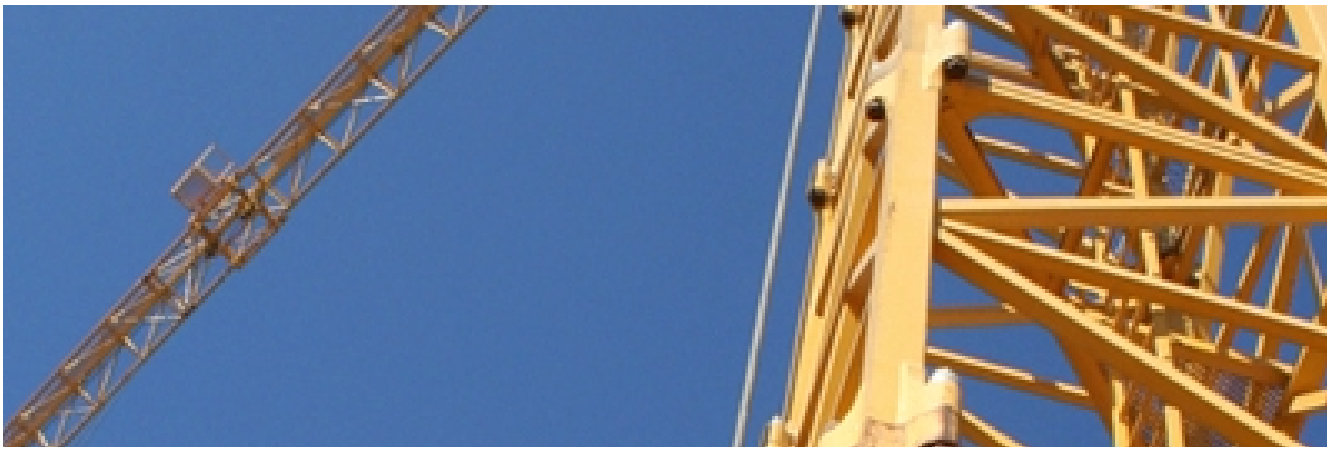
Areas where significant shortages are envisaged are discussed briefly in the following sections.

i) Bitumen[19]

Supply constraints affecting domestic bitumen availability include: scheduling of shutdowns, limited storage and loading capacity, "cleaner fuels" legislative concerns and the potential future product rationalisation of NATREF's operations (to produce fuel only rather than bitumen periodically).

Domestic availability over the next 12 months is expected to lead to a shortfall of approximately 20 kt, due to unforeseen supply problems at SAPREF and NATREF, coupled with planned plant shutdowns. The 4 refineries have a potential total bitumen processing capacity of 725 kt per annum, assuming there is sufficient storage capacity and loading facilities in place to dispatch bitumen. There may therefore not be a need for expansion over the medium term from 2007 to 2010, as there is spare capacity of 253 kt per annum, provided the annual average domestic growth of bitumen over this period does not exceed 16,2%.

19 SUDEO IBC (2007). Research Report for the Infrastructure Inputs Sector Strategy; Executive Summary. Produced by SUDEO International Business Consultants for The Presidency, May 2007. www.btrust.co.za



Over the long term, there will be a need for further investment in bitumen distillation, blending and dispatch facilities at all refineries, and improved optimisation of surplus production capacity for bitumen exports, to cope with demand primarily from government infrastructure projects

ii) Timber[20]

Over the decade 1994 to 2003, sawn timber sales have doubled to 2,549 million m^3 in 2003 and demand for sawn timber continues to exceed projections. The projected domestic availability of sawn timber is dependent on the plantation yield rate and mill recoveries from sawlogs. It has been estimated that, at a conservative average demand growth rate of 2,5% per annum, the demand for sawlogs in 2033 will be approximately 10,04 million m^3. The projected domestic availability of sawlogs, however, is expected to result in a consistent supply shortage over the next 30 years averaging 38% per annum. In view of shortages, sawlog prices and sawn timber prices are also likely to rise, leading to further concerns around import parity pricing of locally produced timber.

iii) Steel[21]

Traditionally the South African market is oversupplied with up to 50% of production being exported but, given the current demand pipeline for several large-scale infrastructure projects, it could be expected that supply shortages (as and when they occur) are likely to be very product specific. For example, the carbon steel industry have indicated that they are currently unable to supply the full demand of specific products (such as popular structural sections) to the domestic market due to production capacity limitations, which are thus leading to increased imports of certain products in the short to medium term.

The industry is also investigating production expansion plans, planning capital expenditure and inter-company supply opportunities.

20 ibid
21 ibid

3.4 QUALITY STANDARDS

The South African Bureau of Standards operates in terms of the Standards Act, 1993, as the national institution for the promotion and maintenance of standardisation and quality in connection with commodities and the rendering of services. SABS publishes national standards which it prepares through a consensus process in technical committees. It also tests and certifies products and services to standards, and develops and enforces compulsory specifications, based on national standards. Standards comprise specifications, codes of practice or standard methods. Such standards are voluntarily applied unless declared as compulsory specifications in terms of the Act or made mandatory by reference in a piece of legislation. To date, the only compulsory standard in the construction industry is that for cement.

Agrément South Africa was established as an independent organisation by the Minister of Public Works in 1969 to certify non-standardised / non-conventional construction products, through technical assessments that verify whether the products and systems are fit for purpose. This assures specifiers and users of the fitness for purpose of such products.

There are several testing bodies which have been accredited by the South African National Accreditation System to certify compliance with national or international standards.

The National Building Regulations are framed around health and safety requirements. They are mainly performance based and, as such, do not prescribe the materials and construction solutions that may be provided to satisfy the regulations. Deemed-to-satisfy solutions are, however, provided for the most commonly encountered building technologies in SANS 10400: The Application of National Building Regulations. Compliance with the provisions of SANS 10400 and the applicable national standards referenced therein enable compliance with the requirements of the National Building Regulations to be achieved.

The National Home Builders Registration Council's Technical Requirements, issued in terms of the Housing Consumers Protection Measures Act, which are framed around a structural warranty scheme, are performance based. The NHBRC's Home Building Manual provides design and construction rules which, if satisfied, enable a home builder to comply with the NHBRC's technical requirements.

Local authorities and the NHBRC inspectorate enforce building standards that impact on health and safety. Standards for building finishes and domestic water supply within buildings need to be agreed between the purchaser and the contractor or supplier. Standards for public and municipal infrastructure are established by government and provincial departments, state owned enterprises and municipalities. Standards for private infrastructure are established by owners and their professional advisors. Such standards are frequently established by reference to South African Standards and Agrément certification.

South Africa has a well developed set of national standards which enable manufacturers and contractors to provide consumers with high quality products. However, some concerns have been raised in the industry about non-compliance with national standards, including:

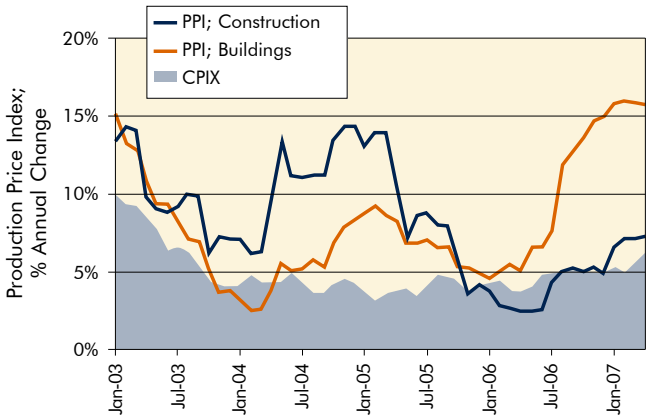
- Many building projects are poorly specified, and artisans and foremen are not accredited in terms of their performance in achieving the necessary standards;
- Failure by a small scale manufacturer to comply with any of the requirements of a specification, albeit a relatively minor lack of compliance, means that compliance with a SABS standard cannot be claimed. Thus, in effect, many of the current specifications are perceived to present a barrier to entry to small scale entrepreneurs and exclude their participation in particular markets.
- As a consequence of the above, a limited amount of clients are reportedly not requiring materials to comply with SANS standards, with a possible increase in sub-standard materials being used.
- A lack of capacity amongst building inspectors, including compliance assessment.

As a result, owners of buildings and infrastructure are not always satisfied with the end product.

3.5 PRODUCTION PRICE INDEX

> … building-materials inflation also remains a concern, with (Iliad CEO) Patmore forecasting that it could reach as high as 14% in 2007, on the back of rising prices for timber, cement, copper piping and galvanised sheet. He shows that the prices of timber, bricks, cement building blocks, cement and galvanised sheet had already doubled between October 2000 and October 2006, while the price of copper pipe has risen four times during the same period.
>
> *Engineering News, 30 March 2007*

The overall annual change in the weighted average Production Price Index (PPI) for materials used in building and for construction is shown in the adjacent figure, together with the annual change in CPIX. It is seen that building materials in particular have seen a surge in price increases.



The increases in the Production Price Index (PPI) of selected building and construction materials are shown in the following table[22]. While CPI reached a level of about 140 (2000 = 100), many major building product groups reached 200, thus effectively a doubling in price since 2000 (and itself a contribution to inflation and increases in CPI). The price increase leaders are Copper Pipes, SA Pine, Stockbricks, Cement Building Blocks, Aggregated Crushed Stone, Galvanised and Coated Sheets, Facebricks and Cement. These products fundamentally affect the cost of building (see Section 2.2).

"Either contracting activity dries up or people pay the price"

John Gomersall
PPC Cement

22 StatsSa (2007). Production Price Index (PPI); P0142.1. Statistics South Africa, April 2007. www.statssa.gov.za

	PPI Index; 2000 = 100		% increase
	Apr-06	Apr-07	
Cement	191.5	214.2	11.9
Walling			
Cement building blocks	208.3	226.4	8.7
Bricks - Face	179.9	200.9	11.7
Bricks - Stock	198.5	223.9	12.8
Sand and aggregate			
Sand	140.6	140.6	0.0
Aggregated crushed stone	203.3	214.9	5.7
Flooring			
Resilient floor coverings	160.3	168.8	5.3
Vinyl tiles flooring	154.6	163.9	6.0
Woven needle punch carpeting	159.7	169.3	6.0
Roofing			
Fibre cement roof sheet	162.6	170.8	5.0
Concrete roof tiles	162.5	174.9	7.6
Profiled aluminium roofing	153.1	190.3	24.3
Coated profiled GMS roofing	159.9	214.9	34.4
Reinforcing steel	201.3	215.3	7.0
Paints	147.4	165.6	12.3
Plumbing pipes & fittings			
Plumbing	130.6	141.8	8.6
Copper Piping	228.7	288.0	25.9
Particleboard & MDF			
Gypsum board	150.7	158.4	5.1
Roof trusses			
Structural steel products	172.5	199.2	15.5
SA Pine, kiln dried	215.9	224.5	4.0

Source: StatsSA

While the increases in PPI for materials used in the building and construction industry are certainly of concern, it should be noted that these increases are less than (or at least on parity with) those for materials used in the mechanical and electrical engineering sectors[23].

	PPI Index; 2000 = 100		% increase
	Apr-06	Apr-07	
Building and construction	155.6	174.8	12.3
Building industries	153.9	178.1	15.7
Civil engineering	161.1	172.8	7.3
Mechanical engineering	141.0	163.6	16.0
Electrical engineering	143.8	168.8	17.4

Source: StatsSA

The reasons for the price increases in materials are varied, but significant factors include:

- higher energy costs (induced through both higher crude oil prices and an increase in local electricity prices), which have severe inflationary implications and which are becoming increasingly evident in the consumer price index[24]. In addition, because the construction industry is particularly sensitive to the cost of transport, it also impacts on the overall cost of construction;
- increases in material input costs, such as aluminium and copper, due to volatility in world markets;
- increased labour costs; and
- increased profit margins.

GOVERNMENT PROCUREMENT AND ESCALATING TENDER PRICES

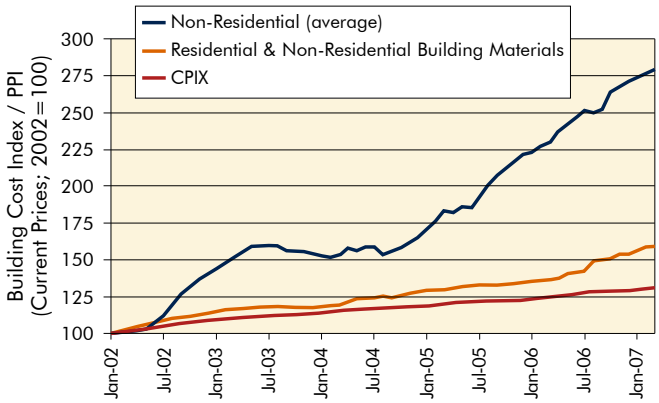
Increasing input costs and insufficiently detailed (poorly specified) tender contracts have seemingly led to risk premiums being added by contractors resulting in escalating tender prices. This emphasises the need for Government to increase its procurement capacity (either through internal skills development by attracting relevant competencies to procurement offices or through the appointment of specific technical teams) that could improve tender specifications and contract guidelines.

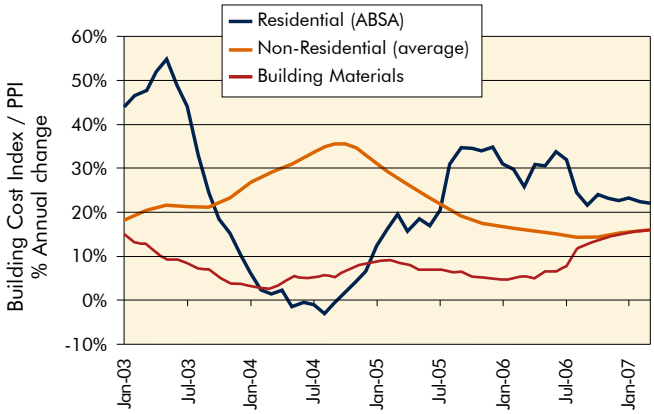
IISS Report (2007)

However, what is of particular concern is that the Industry Insight output "Building Cost Index" is increasing at a far faster rate that the materials PPI (see next page).

23 StatsSa (2007). Production Price Index (PPI); P0142.1. Statistics South Africa, April 2007. www.statssa.gov.za

24 Industry Insight (2007). The South African Construction Industry Building Cost Review. Industry Insight, January 2007. www.industryinsight.co.za





Source: Industry Insight

The rapid increases in the Building Cost Index can be attributed to increases in:

- building and construction input costs (mainly labour, materials, plant and equipment and diesel);
- non-construction costs (land, professional fees, etc.);
- tendering factors (such as tendering risks, competition [or lack of] for tenders, etc);
- late payments to contractors and materials suppliers, which are being priced into materials costs and construction costs; and
- profit margins.

It is likely that tendering factors due to clients, decreasing competition for tenders and increased profit margins of contractors is contributing significantly to the increased construction costs.

It is anticipated that price increases of materials will continue to impact seriously on the construction industry into the immediate future, and this impact is exacerbated by:

- insufficiently detailed and poorly specified tender contracts (in both the public and private sectors);
- public sector procurement capacity.

3.6 EMPLOYMENT AND SKILLS

It is estimated that some 200 000 people are employed in the materials manufacturing sector, with an average number of employees of between 200 and 500 persons per organisation. Based on a survey undertaken by BMI-BRSCU for this investigation, the anticipated growth in employment by 2010 of the manufacturing organisations that responded to the survey is less than 10% (i.e. over a 3 year period). The annual growth in employment is therefore anticipated to be much lower than the annual growth in infrastructure investment - due to the fact that the manufacturing process is, in general, capital intensive and not people intensive. Future expansion will take place in capital equipment rather than numbers of employees.

As for the building and construction sector, the materials manufacturing sector is also experiencing shortages in skilled and semi-skilled labour. However, a number of manufacturers (or industry associations) have initiated training activities to support skills development - although these are largely downstream in the supply chain:

i) The Cement & Concrete Institute (C&CI) offers a wide range of CETA accredited training courses, including Introduction to Concrete (NQF2), Concrete Practice (NQF4), Concrete for the Construction Supervisor (NQF4), Concrete Road Design and Construction (NQF7), etc.

ii) Corobrick Building Training Centres have been launched in KwaZulu-Natal (1995), the Western Cape (1998) and Gauteng (2002) with the aim of equipping unskilled people with building and bricklaying skills. The Building Training Centres also offer courses for bricklayers who are already employed in the industry, but who lack formal qualifications. The training has been accreditated by CETA, and the Building Training Centres have recently been awarded the status of CETA Centres of Excellence.

iii) BPB Gypsum has established the Gypsum Academy at Germiston to train learners to erect Gypsum products. The Academy and the training courses have full accreditation from CETA and many learners have graduated, some of which have established their own contracting companies.

iv) PPC announced the launch of the PPC Operations Academy in July 2007. The Academy offers a range of programmes, including a nationally recognised qualification in cement manufacturing - a first for South Africa, and a new benchmark in the company's

115 year tradition of investing in people[25]. Twenty PPC learners from around the country recently started their 18 month qualification in cement manufacturing. The NQF4 qualification is registered as a learnership by the Mining Qualifications Authority (MQA).

Notwithstanding these important training initiatives, significantly more needs to be done to address the skills shortages in the entire building and construction industry system[26].

3.7 BEE AND ENTERPRISE DEVELOPMENT

Broad based black economic empowerment in the building and construction sector, including the materials manufacturing and distribution sectors, is influenced by the BBBEE Charters in the:

- Construction Charter (design and construction sectors);
- Mining Charter (cement, aggregate and sand);
- Manufacturing Charter;
- Wholesale and Retail Charter; and
- Financial Charter.

Of these, only the Construction, Mining and Financial Charters have been finalised.

Clearly, not only are the Charters themselves important in influencing BBBEE within the building and construction sector, but also the linkages between the Charters which influence the supply chain.

Opportunities for enterprise development through the form of new entrants in the manufacture of products with low entry barriers have been highlighted in Section 3.2, with opportunities possible particularly in low capital intensive manufacturing sectors such as:

- sand and aggregate;
- cement bricks;
- concrete tiles;
- corrugated roof profiling; and
- door and window manufacturing.

However, in addition to these, opportunities also exist for enterprise development within the supply chain, and some innovative examples of enterprise development within the context of BEE and the materials manufacturing sector are highlighted below:

i) PPC sold a 75% stake in packaging division Afripack to empowerment group Nozala Investments and management in 2004. Afripack had generated R240 million in turnover, or 7% to 10% of PPC's annual revenue. PPC will remain one of Afripack's largest customers. According to the Chairman's Review in the 2006 PPC Annual Report, the Afripack empowerment transaction with Nozala has proved highly successful, the loan funding has been fully repaid a year early, and the company continues to show good profit growth.

ii) Holcim sold 280 of its concrete fleet to owner lorry drivers in 2004. Holcim financed the sale and taught individuals how to run their own businesses. An 80% success rate has been achieved, creating some 200 small businesses. Holcim has also sold a 26% share of its tanker cement transport company to a black partner and arranged the bulk of the finance.

iii) BPB Gypsum has initiated several enterprise development initiatives, namely:

- in 1998, the company sold its transport fleet to the drivers, who have continued to provide the company's transport needs;
- the company has a BEE supplier to supply into government housing projects, which includes on-site training for installers and an assembly line for pre-assembly of components.

iv) Everite has initiated a number of activities, including the creation of a new company to manufacture pallets on the Everite factory site. This company is majority owned by a black manager previously employed by the company, with Everite holding only a minority stake in the business. This venture is both fully funded and viable from day one.

Everite have an overriding strategy to create BEE opportunities around their supply chain, both foreword and backward.

v) DPI Plastics has to date established several BEE companies in South Africa. In all these BEE engineering merchant companies and the DPI Manufacturing Fabrication company, HDIs hold the majority of the shares and the majority of senior managers are from historically disadvantaged communities. The following initiatives have been implemented in the company[27]:

- Mabona Industries (Pty) Ltd: joint venture to manufacture polyethylene cable ducting;
- Sekunjalo: joint venture trading operation;

25 PPC (2007). http://www.ppc.co.za/ppc/view/ppc/en/page127?oid=3673&sn=Detail

26 cidb (2007). Skills for Infrastructure Delivery in South Africa: The Challenge of Restoring the Skills Pipeline. A discussion document by the cidb, DPW and DPE. December 2006.

27 DPI (2007). www.dpipastics.co.za

- Adpoint Trading and Boyzyl Logistics: independent transport contractors;
- Sambel: independent maintenance and cleaning company;
- DPI-Motown (Pty) Ltd: engineering merchant established in the Eastern Cape in July 2002;
- Incledon-DPI (Pty) Ltd: engineering merchant established for Central and Northern RSA in February 2003;
- DPI-Phumela Trading (Pty) Ltd: engineering merchant established for Western, Northern and Southern Cape in July 2003;
- Boseng (Pty) Ltd: national specialist plastics fabrication company established in July 2003;
- DPI-Kwanzi (Pty) Ltd: engineering merchant established for Southern and Central KwaZulu-Natal region in March 2004;
- DPI-Ichweba (Pty) Ltd: engineering merchant established for Northern KwaZulu-Natal region in April 2004; and
- DPI-Fike (Pty) Ltd: mining solutions merchant established in July 2004.

vi) Concor Holdings entered into a BEE joint venture with Royal Bafokeng Finance in 2005, in a move designed to secure increased market penetration in the mining and commercial building sectors. Bafokeng Concor Technicrete is involved in the manufacture and sale of concrete pavers, masonry, roof tiles, ready-mix, wet-cast concrete and pre-mix bag products.

In August 2006, Concor Technicrete expanded its concrete block and paving manufacturing operations into the Eastern Cape in a joint venture enterprise with local black business entrepreneurs. The new Port Elizabeth-based company, Concor Technicrete Coastal has been formed from the acquisition of the assets of the well-established local company, Coastal Bricks. Concor Technicrete holds a 70% shareholding in the new company, while the 30% balance is held by two prominent local businessmen.

The above examples illustrate BEE enterprise development within the materials manufacturing supply chain and, while these are very important, the total value of these enterprises is in fact small in relation to the turnover of the manufacturing companies. However, this is not surprising because manufacturing organisations are typically large and highly capital intensive, so the opportunities for enterprise development are consequently limited.

On the other hand, several "big ticket items" empowerment deals are taking place within the industry:

i) Holcim Limited, the international Swiss-based company, has sold 85% of its stake in Holcim South Africa to the AfriSam Consortium (Pty) Ltd at a reported value of R6,82 billion[28]. In addition, Aveng has approved the sale of its 46,65% stake in Holcim South Africa to AfriSam Consortium for R7,4 billion[29]. AfriSam (South Africa) (Pty) Ltd has now been formed under the Holcim brand, and is the leading black-controlled company in the building materials industry in Southern Africa.

AfriSam (South Africa) (Pty) Limited is controlled by AfriSam (Pty) Limited in which the shareholding is:

- 15% held by Holcim Limited; and
- 85% held by AfriSam Consortium (Pty) Ltd, a broad based black economic empowerment consortium. AfriSam Consortium is owned by Bunker Hills, community and women's groups, and employees of AfriSam (South Africa) (Pty) Ltd.

ii) Lafarge finalised a R1,1 billion empowerment deal in December 2006 that involved the sale of 26% of its mining and 10% of its manufacturing operation in South Africa to its employees and Sinako[30]. Sinako now holds 75% of the empowerment stake and Lafarge's employees hold 25% of the empowerment stake via an employee share ownership trust. Two joint lead partners - Peotona Group Holdings (led by Cheryl Carolus, Dolly Mokgatle, Wendy Lucas-Bull and Thandi Orleyn) and Motjoli Resources (led by Nchakha Moloi and Nonkqubela Mazwai) - hold 40% of Sinako and a Broad Based independent Education Trust and Community Trust hold respectively 53% and 7% of the ordinary shares of Sinako. Lafarge is also in the process of issuing equity over and above the BEE transaction to non-historically disadvantaged employees under a separate trust.

iii) PPC are currently negotiating a BEE equity transaction, which should be concluded during the 2007 financial year. The transaction was made possible by the unbundling of PPC from Barloworld, which owns 72% of the cement maker.

28 Business Report (2006). http://www.busrep.co.za/index.php?fArticleId=3563574

29 Engineering News (2007). http://www.engineeringnews.co.za/article.php?a_id=109900

30 Mail & Guardian (2006). http://www.mg.co.za

iv) Corobrick, the largest supplier of clay bricks, changed its ownership structure in 2002 with the sale of a 25% to 30% stake to AKA Capital, led by Eskom non-executive chairman Reuel Khoza. AKA secured the stake at a substantially discounted price of R50m.

v) Floorworx: Marley Flooring was established in 1953 and previously formed part of Marley SA (Pty) Ltd which was owned by the Belgium-based Etex Group. During 2004, the black-owned investment company Empowerment Financial Investment Company, EFIC (Pty) Ltd, acquired Marley Flooring. At the same time, a chemicals business, Safic Holdings Limited, acquired 32% of the local operation of Marley Flooring. Marley FloorworX became a 100%-owned subsidiary of Safic in June 2006 and from there on started trading as FloorworX. The business is currently 33% black-owned, with some prominent black businessmen, including Dr Malesela Motlata and Manne Dipico, listed as shareholders[31]. Turnover was R188 million as at June 2006.

vi) Owens Corning South Africa advises that a BEE equity deal is currently awaiting shareholder approval.

vii) WG Wearne: At present, BEE interests and staff hold some 16% of the aggregate and sand company, but Wearne previously reported that it is working on a scheme to raise that percentage to the end-state requirement of 26% required by the Mining Charter - including through acquisitions[32]. Currently, construction entrepreneur Ernest Moloi of Moseme holds 5%, Bonke Mkhonto a further 5%, while staff own 6%.

viii) Afrimat is a black empowered company in the aggregate and sand sector, with a 25,1% BEE shareholding ahead of Mining Charter requirements. Kwezi Mining (Pty) Ltd, a broad-based black empowered affiliate of Kwezi (Pty) Ltd, a 100% black-owned company, holds 6,6%, while Mega Oils (Pty) Ltd, a 100% black-owned company, holds a 14,4% stake in Afrimat. A staff trust will be set up going forward, which will hold a 4,1% stake in Afrimat[33].

31 FloorworX (2007).
http://www.marleyflooring.co.za/about_us/about_us_history.html

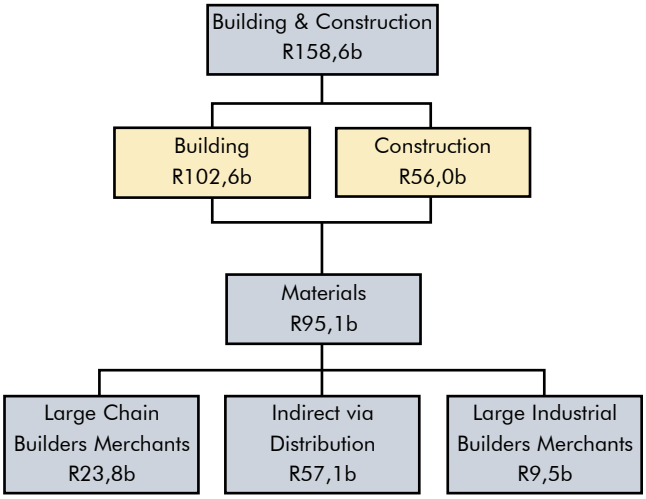
32 Engineering News (2006).
http://www.engineeringnews.co.za/article.php?a_id=97182

33 Afrimat (2007).
http://www.afrimat.co.za/investosite/html/afrimat_300.php

4. THE MATERIALS DISTRIBUTION SECTOR

4.1 OVERVIEW

The current building and construction materials market is estimated at about R95 billion per annum, with some 60% sold direct to end-users and 40% via the distribution/merchant network. Of this total of R95 billion, some R17 billion (18%) of materials would be used in the additions, alterations and home improvement market (including unrecorded home improvement).



The distribution of building materials is different for commodity products and for the more discretionary products. In the case of commodity products, the bulk is distributed direct to contractors or large users, whilst the smaller projects may, in some cases, involve a role for the distributor or hardware merchant. On the other hand, the discretionary products are distributed mainly via local hardware distributors, of which there are between 8 000 and 10 000 countrywide.

Because of the increasing importance of the residential market in the total building industry mix, the distribution of building materials has undergone structural change to cope with the increasing fragmentation of the market. The market is increasingly characterised by large numbers of individual units built countrywide by a large number of locally based small to medium sized contractors and subcontractors. Consequently, the building materials must be available at the right place, time and price to serve the widely dispersed market. This has led to the increasing importance of the building materials distributors in the system, and to the fact that some 60% of materials are now distributed via the distributor and merchant network and 40% direct to the end users, notably the larger contractors and projects.

Supplier	Branches	Turnover Rb pa[1]
Massbuild[2]	73 branches	R4,0 billion
Iliad Africa	104 branches	R3,4 billion
D.A.W.N (Wholesale Distributor)	7 warehouses	R2,8 billion
Cashbuild	150 branches	R2,7 billion
Italtile/C T M	8/66 branches	R2,3 billion
Buildit[3]	200 branches	R2,0 billion
Mica Hardware[4]	200 branches	R1,6 billion
Pennypinchers[5]	25 branches	R1,6 billion
Tile Afrika and San Afrika[6]	35 branches	R0,6 billion
Timber City[5]	39 branches	R0,5 billion
Buffalo Building Supplies	9 branches	R0,5 billion
Homewarehouse	1 branch	R0,5 billion

Notes:

1 Turnovers as estimated by BMI-BRSCU

2 Massbuild is part of the MASSMART Group comprising Builders Warehouse, Tile Watehouse, Federated Timbers, De La Rey,

3 Buildit is part of the SPAR Group.

4 Micabuild is a franchising operation and is part of the Supergroup.

5 Pennypinchers and Timber City are part of Steinhoff International.

6 Tile Afrika and San Afrika are part of the Norcross Group which also includes Johnson Tiles

The large groups play an important role in distribution and, as illustrated in the adjacent table, they have about 884 outlets between them. Each of these major distribution chains has their own strategy and focus on specific market niches. In general, it can be accepted that all the distributors compete for market share but focus on specific market segments and location in specific geographic areas. Nevertheless, there is overlap both in terms of markets served and geographic areas served, and therefore competition takes place at the fringes.

In addition to the large distribution chains and independents, there are an estimated 8 000 to 10 000 retailers/merchants in the country. Many of them are small, with just over half having a turnover of less than R1 million per month. It is only the top 10% or so of retailers who have a monthly turnover exceeding R2 million.

The smaller retailers typically have stores less than 500 m² in size, but with a yard to store bulk materials. Some 60% of their turnover is to the home-improvement market. Up to 80% of their business is cash, and their products are mainly locally produced. Some 50% of the custom is the DIYer and products are mostly collected.

These independent stores are logical targets for franchising type operations by Mica, Build-it, Timber City or Italtile. As discussed in Section 4.3 to follow, they are also logical targets for BEE ownership, with or without a franchise link. Such an individual outlet would also be a relatively low cost entry for a BEE candidate.

Franchising type operations provide a relatively low cost and low risk option for BEE.

4.2 EMPLOYMENT AND SKILLS

It is estimated in this report that the Large Distribution Chains and Independents have about 884 outlets between them, employing some 4 000 people in total. In addition to these Large Distribution Chains and Independents, there are an estimated 8 000 to 10 000 retailers/merchants in the country, employing around 200 000 people. The materials distribution sector also provides around 200 000 formal job opportunities. (By comparison, the building and construction contracting sector currently employs around 450 000 people in the formal sector, see Section 3.2.)

The majority of these employees are skilled (drivers and plant and machine operators), semi-skilled or unskilled. As with other sectors of the industry, these suppliers are also experiencing shortages in skilled and semi-skilled labour.

Again, while the employment opportunities in the materials distribution sector are clearly significant, the growth in employment (in response to the anticipated growth in demand for materials) is likely to be relatively small in relation to the growth in employment in the actual building and construction process (see Section 3.2).

4.3 BEE AND ENTERPRISE DEVELOPMENT

A number of innovative BEE and enterprise development initiatives are taking place in the materials distribution sector, which illustrate the potential for ongoing BEE.

Rank 2006	Company	BEE Score (%)
47	Super Group; " MICA	43,51
53	Massmart; " Builders Warehouse " Delarey " Federated Timbers " SERVISTAR " Tile Warehouse	41,51
100	Spar Group; " Buildit	21,40
113	DAWN	16,00
117	Cashbuild	13,80
127	Masonite	10,00
149	Iliad Africa	6,88
176	Italtile	2,86

Source: Financial Mail/Empowerdex

i) Saffer/DAWN (Distribution and Warehousing Network) was listed in 113th place in the Financial Mail / Empowerdex top empowerment companies in 2006[34].

DAWN has an annual turnover of R2,8 billion, and consists of a number of diversified divisions:

- the Manufacturing Division consists of Cobra, DPI Plastics, Libra, Isca, Vaal Sanitaryware, Lasher and La-co;
- the Trading Division consists of Saffer Bathroom & Plumbing, WHDSA, Stability, Incledon, DPI, Amalgamated Fastenings & Fittings Group, and Saffer Building Materials; and
- the Logistics Division consists of Dawn Distribution Centres ("DDC") and DAWN Cargo.

34 Financial Mail.
http://free.financialmail.co.za/projects06/topempowerment/index.html

Ukhamba Holdings (Proprietary) Limited owns 33,47% of DAWN's shareholding through its wholly-owned subsidiary, Dream World Investments 239 (Proprietary) Limited. Ukhamba is a broad-based black-owned investment holding company whose beneficiaries include some 15 000 historically disadvantaged individuals and a number of community trusts. 28,6% of the DAWN Board comprises black directors.

DAWN has been nominated by Impumelelo as one of South Africa's top empowerment companies as a result of its contribution to Broad-Based Black Economic Empowerment and Transformation.

ii) Cashbuild was listed in 117th place in the Financial Mail / Empowerdex top empowerment companies in 2006.

The creation of the Cashbuild Empowerment Trust meant that 2 400 employees, more than 90% of whom are from disadvantaged backgrounds, have been introduced as shareholders.

Cashbuild completed a BEE transaction in February 2005 which gave all (approximately 2 400) Casbuild employees a 10% stake in the company via a Trust. All employees share equally in the dividends from the Trust. 30% of the Cashbuild shares are owned by previously disadvantaged staff, namely:

- 20% by individuals; and
- 10% by the Cashbuild Employee Trust.

The employees benefited to the tune of R1,4 million after the group declared a generous interim dividend for the six months to December 2004.

"Cashbuild continues to give preference to the use of local suppliers and is constantly increasing its support of black economic empowerment initiatives. Cashbuild is continuing a programme that initiates projects within the communities within which we trade, offering entrepreneurs the opportunity to produce bricks, blocks and lintels. These products are then purchased and on-sold by Cashbuild.

Cashbuild stores stimulate enterprise development by contracting local individuals and companies to carry out:

- *glass cutting and fitting;*
- *delivery of building materials to customers;*
- *manufacturing of concrete building blocks; and*
- *manufacturing of doors.*

Cashbuild also currently offers glass-cutters and fitters the opportunity to work on Cashbuild premises. Cashbuild's free local customer delivery service which once again created local employment by utilising local labour and transport services provides a service to Cashbuild customers and supports local job creation. These and other projects will continue to be supported by Cashbuild as we contribute to the development of the communities surrounding our stores."[35]

iii) Iliad Africa Ltd was listed in 149th place in the Financial Mail / Empowerdex top empowerment companies in 2006. About 26% of Iliad's equity is currently held by empowerment groups, including management, the Women Private Equity Fund and Vunani. Iliad also recently acquired the R300-million a year Campwell Hardware, with 11 stores in the Western Cape. 25% of Campwell will be sold back to a consortium of mainly key management personnel.

iv) Italtile was listed in 176th place in the Financial Mail / Empowerdex top empowerment companies in 2006.

Italtile has developed a franchising system and already has seven franchises owned by BEE partners. Their model is based on a 50% ownership by the BEE partner and 50% by an established sector partner (typically white), who acts as mentor. An interest-free loan of about R700 000 is provided and repayment is out of profits. Italtile also plans to establish some 30 to 40 franchises in the next five to eight years. Currently, more than 15% of turnover comes from empowered franchises, and the intention is to increase this.

Italtile has also entered into a unique, broad-based black economic empowerment deal with 'strategic black groupings', valued at R400 million. The deal will see 10,7% of Italtile's entire issued share capital going to black-owned entities including Mafumbuka Investment Holdings, led by Siyabonga Gama, Spoornet's chief executive; and AKA Capital, led by Reuel Khoza, Nedbank's non-executive chairman. Mafumbuka is 100% black-owned, made up of a trust, individual shareholders and Ingcucuce Women's Organisation, which is involved in HIV/Aids projects.

35 Cashbuild (2006). 2006 Annual Report. www.cashbuild.co.za

5. CHALLENGES AND OPPORTUNITIES

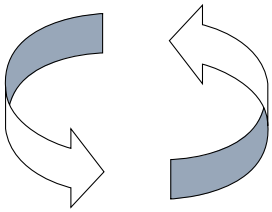
5.1 MANUFACTURING AND DISTRIBUTION

An overarching conclusion from this investigation is that, notwithstanding likely shortages of a few materials (which can readily be supplemented by imports) as well as some regional shortages of materials, the building and construction industry is potentially well served by the materials manufacturing and distribution sector.

However, the ability of the materials sector to respond effectively to the demands will depend on investor and business confidence. Several of the factors influencing business confidence are in fact within the influence of the infrastructure related government departments, while others factors (such as interest rates, mining rights, labour regulations, transportation systems, power generation, crime) are under the influence of other government and semi-government departments and organisations.

Although the manufacture and distribution of building and construction materials is private sector driven, government has a role in facilitating an enabling environment for private sector delivery. This results in a need for a partnership between government and the business sector, namely:

- government facilitating an enabling environment for private sector delivery, living up to its delivery commitments, and creating a climate for business confidence; and



- the business sector correctly interpreting and responding at the appropriate levels to the sustained growth that is upon South Africa.

Key challenges derived from the above in supporting capacity planning by the materials sector are summarised below:

i.i) Consider the High-Road Scenario: Many businesses in the private sector have not experienced the potential growth in infrastructure investment facing South Africa at the moment, and there is a fine balance between gearing up effectively for such growth and underestimating the potential. The business sector needs to fully appreciate the potential upon them - the "high road scenario" may very well be the reality!

Consider the High-Road Scenario - it may very well be the reality!

i.ii) Information Dissemination: One of the preconditions for business to be informed of the future demand is the availability of reliable information. As noted in the Infrastructure Inputs Sector Strategy (IISS) report, there is a need for improved collation and diffusion of infrastructure inputs, construction and infrastructure development information by government corporations and authorities, to inform infrastructure inputs capacity expansion planning and infrastructure project planning and execution. This information needs to be timely and transparent.

The IISS recommendation for improved collation and diffusion of information by government corporations and authorities needs to be actioned and taken forward. The cidb will monitor and facilitate this action.

SAFCEC staff attended a conference on the "Support Programme for Accelerated Infrastructure Development" (SPAID) organised by the Deputy President's office …….. For the first time …. someone stood up and spelt out all the general government (central, provincial and local) and public corporations' investment plans, and roughly the impact on supplier demand.

The fantastic thing is that the knowledge levels of those attended "jumped by about 3000%", AND the approach was "how do we learn from and help each other to achieve these targets".

SAFCEC Newsletter, May 2007

i.iii) Public Sector Delivery Capacity: Business and investor confidence in the materials sector is largely dependent on the confidence that the public sector can deliver on its planned infrastructure delivery programme. However, public sector delivery capacity is in many cases severely limited - which negatively impacts on business and investor confidence. Current initiatives to strengthen public sector delivery capacity, such as the Infrastructure Delivery Improvement Programme (IDIP), need to be continued, intensified where necessary, and cascaded to other spheres of government.

Initiatives to strengthen public sector delivery capacity need to be continued, intensified where necessary, and cascaded to other spheres of government.

IDIP is a multiyear programme which guides and builds capacity in public sector departments to improve infrastructure delivery. It is a joint initiative between the cidb, National Treasury and the DBSA. Following a successful pilot, phase two of the IDIP is now being rolled out. IDIP is underpinned by the Delivery Management Toolkit developed by the cidb.

IDIP currently targets national and provincial government organisations, and there is a need to extend IDIP to include a focus on local authorities, as well as to include a strong focus on the maintenance of infrastructure in support of the National Infrastructure Maintenance Strategy (NIMS).

While business confidence is a prerequisite for investing in new capacity, this investigation has also shown that a number of factor conditions are also impacting on the manufacture and distribution of materials, namely:

i.iv) Quality Standards: While South Africa has a well developed set of national standards which enable manufacturers and contractors to provide consumers with high quality products, concerns have been raised in the industry about increasing non-compliance of materials and products with national standards, including:

- many building projects are poorly specified and artisans and foremen are not accredited in terms of their performance in achieving the necessary standards;
- many of the current specifications are perceived to present an entry barrier to small scale entrepreneurs and exclude their participation in particular markets, and a limited amount of clients are reportedly not requiring materials to comply with SANS standards; and
- there is a lack of capacity amongst building inspectors to evaluate compliance requirements.

The cidb will investigate further possible concerns about materials quality, including the possibility of introducing a Register of Material Suppliers.

As a result, owners of buildings and infrastructure are not always satisfied with the end product.

These quality concerns will be investigated further by the cidb, including the possibility of introducing a Register of Material Suppliers.

i.v) Skills Shortages are also being experienced in the materials manufacturing and distribution supply chain - and these could even become more pronounced as increased capacity is required. The benefits of the current skills development initiatives in the building and construction sector (such as the cidb, SAFCEC, MBSA initiatives) are likely to spill over into the materials manufacturing and distribution sectors to some extent. However, additional focused skills development initiatives are required in the materials manufacturing sector in particular. Cross-sectoral synergies should be explored between the various skills development initiatives.

Cross-sectoral synergies should be explored between skills development initiatives.

CURRENT SKILLS TRAINING INITIATIVES INCLUDE (AMONGST OTHERS):

- DPW Expanded Public Works Programme (EPWP)
- DPW Contractor Incubator Programme (CIP)
- DoH-NHBRC Centre of Excellence in Soshanguve
- COEGA-Eastern Cape initiatives
- SAFCEC- Western Cape Masakhisizwe
- SAFCEC-MBSA Gauteng proposal to NSF
- SAFCEC Western Cape Centre of Excellence at Paarl
- The Cement & Concrete Institute (C&CI) CETA accredited training courses
- The Corobrick Building Training Centres in KwaZulu-Natal, the Western Cape and Gauteng
- The BPB Gypsum Academy at Germiston
- The PPC Operations Academy

i.vi) Transportation Systems: The Infrastructure Inputs Sector Strategy (IISS) has noted that transportation of infrastructure inputs is currently biased in favour of road transportation, which has several critical limitations. There is an urgent need to develop an optimised infrastructure inputs transportation strategy that is aligned to the Department of Transport's National Freight Logistics Strategy. This recommendation is being facilitated by SPAID.

A further conclusion drawn from this investigation is that price increases and cost pressures will continue to impact seriously on the construction industry until at least 2014 - and probably beyond. Key challenges that derive from these include:

i.vii) Public Sector Procurement Capacity: Increasing input costs and insufficiently detailed (poorly specified) tender contracts have seemingly led to risk premiums being added by contractors, resulting in escalating tender prices. This emphasises the need for government to increase its procurement capacity, which could improve tender specifications and contract guidelines. Current initiatives to strengthen public sector procurement capacity (such as the cidb/National Treasury's Infrastructure Delivery Management Toolkit) need to be continued, intensified where necessary, and cascaded to other spheres of government.

Initiatives to strengthen public sector procurement capacity need to be continued, intensified where necessary, and cascaded out to other spheres of government.

i.viii) Contractor Development: Price increases and the availability of materials are placing particular demands on the tendering and delivery ability of developing contractors - as well as on the risk placed on their clients. Consideration should be given by large public sector clients to securing supplies of critical materials required for their construction programmes. In this regard, the cidb should consider producing a practice note for contractors and clients, which should be promoted through the National Contractor Development Programme (NCDP).

Guidelines for securing critical materials for developing contractors by public sector clients should be developed by the cidb and promoted through the NCDP.

The NCDP is a sector-specific intervention within the framework of South Africa's Accelerated and Shared Growth Initiative. Led by the Minister of Public Works and the Provincial MECs, it is committed to the accelerated growth of the construction industry to meet rising national demand.

Specifically, the programme is geared to enhancing capacity and equity ownership across the different contracting categories and grades, as well as improved skills and performance in the delivery of capital works and maintenance across the public sector.

5.2 EMPLOYMENT, ENTERPRISE DEVELOPMENT AND EMPOWERMENT

In the light of the sustained increased in public and private sector infrastructure investment into the foreseeable future, a key focus of this investigation has been on identifying opportunities for increased employment, enterprise development and black economic empowerment in the R95 billion p.a. materials manufacturing and distribution sector.

Current (2006) employment in the building and construction sector is about 450 000 in the formal sector and 320 000 in the informal sector, for a total of about 870 000. There is a direct job creation multiplier of around 4,2 jobs in the formal sector per R1 million invested, and 2,3 jobs in the informal sector per R1 million. The employment in the materials manufacturing sector is about 200 000 with approximately another 200 000 in the materials distribution sector - at a direct job creation multiplier of around 3 persons per R1 million. The total direct job creation multiplier in the construction and materials sector is around 9 persons for every R1 million of investment!

However, this investigation has highlighted that, while the growth in infrastructure investment will create employment opportunities for skilled, semi-skilled and unskilled labour in the materials sector, the rate of growth in employment will be less than the rate of growth in infrastructure investment. In contrast, the growth rate in employment (in both the formal and informal sectors) in building and construction is approximately the same as the growth rate in infrastructure investment.

This investigation has also highlighted a number of innovative BEE and enterprise development initiatives that are taking place in the materials distribution sector - driven in large part by the need to be compliant with the BBBEE scorecards. These initiatives illustrate the potential for ongoing enterprise development in the manufacture of products with low entry barriers (such as concrete block manufacturing, and door and window frame manufacturing), as well as opportunities for enterprise development within the supply chain (such as distribution outlets, and packaging and transport). The most sustainable opportunities appear to be franchise type models with established manufacturers or distributors as well as "spin-out" and joint venture opportunities. Although it is not possible to quantify these opportunities, the total magnitude of these opportunities for enterprise could amount to about 5% to 10% of the current R95 billion p.a. materials sector.

Opportunities for enterprise development in the materials sector is estimated to be around R5 billion to R10 billion per annum.

Opportunities for enterprise development	
Type of Material/Product	**Manufacturing or Downstream Opportunity**
Aerolite	Installation
Alucushion	Installation
Sisalation	Installation
Melamine, Paper foils, Wood Veneer	Installation
Conventional, Laminated, Toughened	Installation
Taps, Mixers, Flush Valves	Plumbing
Timber Prefab Trusses, Timber On Site Trusses, Steel Prefab Trusses	Small-scale manufacturing, erection
Windows, Doors, Built in Cupboards	Small-scale manufacturing
Vinyl Flooring	Fitting
Laminate	Fitting
Carpet, Ceramic Tiles, Vinyl Flooring	Fitting
Concrete Tiles	Small-scale manufacturing
Glass and mirrors	Glass cutting and fitting
Fibrecement Flat and Decorative	
Natural Slate Roofing	
Galvanised Iron, Chromadek, Steel Tiles	Small-scale roofing profilers
Clay and Concrete Stockbrick	Small-scale manufacturing
Delivery of materials	

Broad Based Black Economic Empowerment (BBBEE) in the building and construction sector and supply chain is influenced by the BBBEE in the following sectors:

- construction sector (design and construction sectors);
- mining sector (cement, aggregate and sand);
- manufacturing sector;
- wholesale and retail sector; and
- the finance sector.

Of these, only the Construction, Mining and Financial Charters have been finalised, while the remaining sectors are required to use the dti generic codes and scorecards.

The government's BEE initiatives are changing the marketplace progressively. That which started as a political drive is making a difference in the economy. The main driving factor for the success of BEE Scorecards is the procurement policy. Every company with an independently verified scorecard would have contacted its suppliers for their scorecard. The company receives more points for purchasing larger sums from companies with higher scores on their scorecards. The preferential procurement leads to the spiralling of BEE implementation.

Source: EMEX BEE Management Handbook

This report has highlighted the state of black economic empowerment in the materials sector. Typically, BEE transactions include equity ownership by black-owned investment holding companies / funds, as well as empowerment transactions with staff.

The total empowerment transactions concluded in the materials sector to date is estimated to be around R30 billion. This represents black ownership of up to, typically, 20% to 30% in some of the major materials manufacturers and distributors (which is in line with the targets for ownership in the Charter scorecards). Although already significant, there is clearly room for more growth in BEE in the materials sector, subject to the availability of capital.

The key challenges that derive from the above opportunities are highlighted below:

ii.i) Promote the good news: Although somewhat limited, a number of innovative BEE and enterprise development initiatives are taking place in the materials manufacturing and distribution sector. The leadership shown by these companies needs to be acknowledged, and should serve as examples for others. The need exists for a workshop to profile these initiatives, and to disseminate and share the learning - thereby encouraging broader participation in enterprise development in the materials sector.

The dti and the cidb should organise a workshop to profile and to disseminate and share the learning on enterprise development in the materials sector.

ii.ii) Enterprise Development: Notwithstanding that the materials sector is largely dominated by few large organisations, opportunities do exist for new entrants. The most successful models appear to be franchise, joint venture and "spin-out" type opportunities within the supply chain (both upstream and downstream), in which the risk is substantially reduced. Although government linked enterprise development and funding streams such as seda, IDC and Khula do support such opportunities, the materials sector does not appear to be a key focus to date. It is strongly recommended that the dti and the materials sector, facilitated by the cidb, should jointly investigate the potential of development financing institutions to encourage BEE enterprise development in the materials sector - with a strong focus on franchise and spin-out type models.

Funding streams targeting enterprise development in the materials sector should be explored by the dti, the private sector and the cidb.

KHULA-SHOPRITE JOINT VENTURE

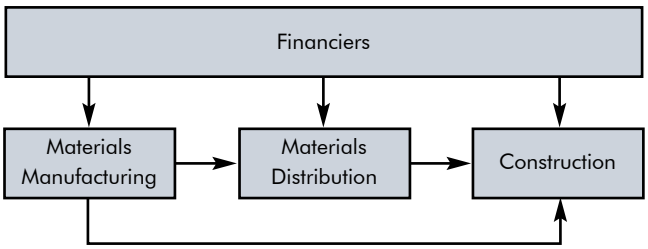
The Khula-Shoprite joint venture aims to create positive spin-offs for BEE in South Africa by granting successful SMME applicants a number of OK Foods concessions on negotiable terms. Dual guidance by OK Foods and Khula in terms of outfitting, training and mentorship of the SMMEs promises to deliver maximum viability of this groundbreaking initiative.

In terms of the agreement Shoprite and Khula will share the capital investment and risks associated with promoting this BEE initiative, whereby Khula will accord loans to the concession holder for the payment of equipment and the outfitting of stores. Shoprite will supply the stock without the solicitation of securities from the concession holder, as well as longer-term repayment provisos, especially on first consignment.

Furthermore, Shoprite will support the concession holder with training and support in lieu of concessionaire affairs, whilst Khula's Thuso Mentorship Programme to provide generic business and financial guidance for the SMME.

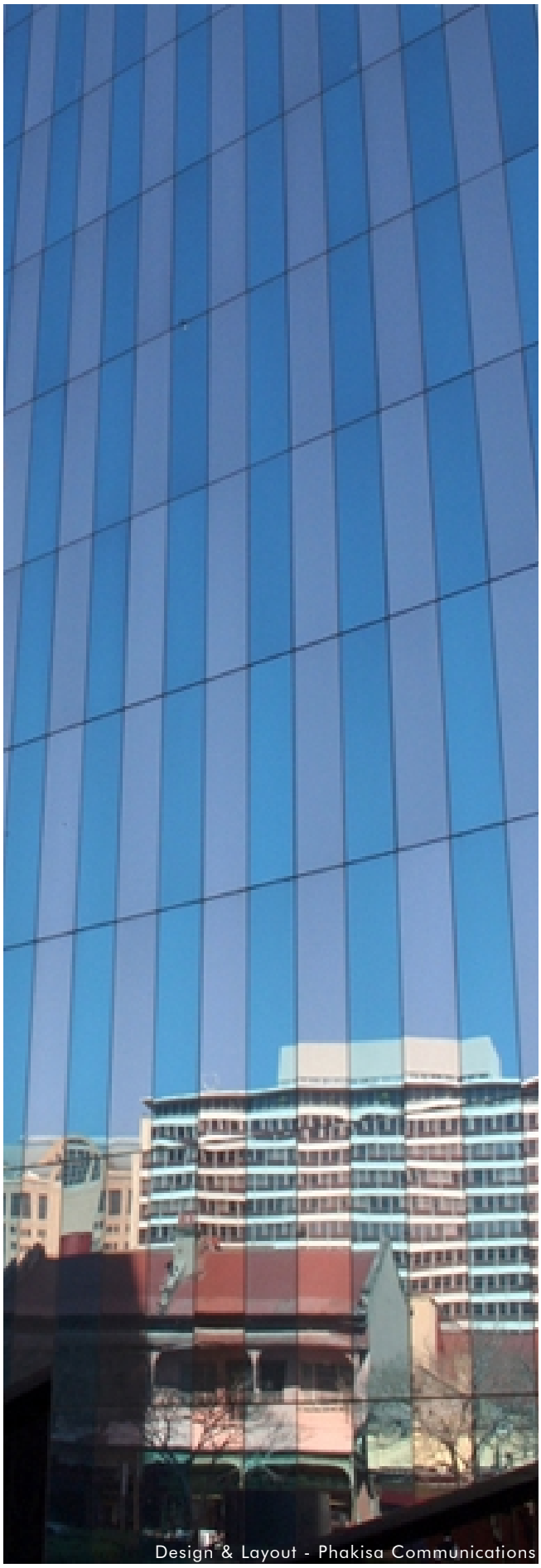
Source: Khula. http://www.khula.org.za/f

ii.iii) Business-to-Business linkages: Procurement is a major driver of BBBEE - and in fact a major driver of many of the enterprise development opportunities that are taking place in the building and construction industry system.



Clearly, it is to be expected that the major BEE compliant contractors, materials distributors and materials manufacturers are well known in the industry, but consideration should be given by the cidb to establish a voluntary register of materials suppliers (as provided for in the cidb legislation) to promote the visibility of BEE compliant organisations (in addition to recording the BEE status of contractors) - and thereby promoting business-to-business linkages. This would have to be done in conjunction with registered BEE accreditation organisations.

Consideration should be given by the cidb to establishing a voluntary register of materials providers to promote the visibility of BEE compliant organisations.



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