



Strengthening Africa's Economic Performance

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THE CONSTRUCTION INDUSTRY AND LONG-TERM ECONOMIC GROWTH IN SOUTH AFRICA

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Executive Summary

The construction sector literally lays the foundations for economic growth through the provision of economic and social infrastructure. Although the effects of the sector contributions to economic growth and employment creation are normally captured through direct, indirect and induced multipliers, there is also a longer term 'supply-side effect' that must be taken into consideration. Currently the South African construction sector employs an estimated 450,000 to 600,000 people, and total activity is in the region of 5% of gross domestic product (GDP).

This concept relates to the long-term effects of fixed investment. The real contribution of the sector to gross domestic product growth is captured in the provision of infrastructure to unlock bottlenecks and ensure that sectors in the economy can operate competitively in the global economy, as well as attract and stimulate new investment.

Although the activity in the sector is derived from investment decisions by various clients, there is little stimulation of increased activity from within the sector. However, the sector cannot contribute on a macro level if there are debilitating factors on the micro level. This relates to proper planning, the regulatory framework, the development of skills, fragmentation within the sector and adapting to the global economy.

Given the renewed focus on infrastructure as a result of growing awareness of backlogs and bottlenecks, it would seem that the country is moving in the right direction. The impact of the investment will yield direct positive returns and increase growth for many years to come.

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Introduction

The construction sector facilitates the expansion of economic and social infrastructure and can be seen as a national asset. It is in essence being driven by the demand for increased capacity in fixed assets and is not in itself a primary driver of investment. The sector consists of multidisciplinary industries encompassing residential, non-residential and civil engineering work employing an estimated 450,000 to 600,000 people (depending on the scope of the definition of what comprises the sector), and total activity is in the region of 5% of gross domestic product (GDP).

The direct impact of the sector on GDP manifests in a 1.18 and 1.2² multiplier for civil engineering and building, respectively, translating into an accelerator effect on economic growth of 18 to 20 cents in the rand for every 1 rand change in the final demand for the services of the sector. Employment creation multipliers are 10.82 and 11.87,³ respectively, for civil engineering and building per R1 million rand spent. The above multipliers contain direct, indirect and induced effects. Regarding the indirect impact, materials supplied to the sector alone are valued at about R21.5 billion, and machinery and equipment total an estimated R12 billion.

Since the sector's multipliers are fairly high compared to most other sectors, it would make sense to ensure that microeconomic conditions exist that would foster its development and growth. From a macroeconomic perspective, there is a further impact on economic growth that can be expressed loosely as the 'supply-side effect'. This effect goes further than capturing the impact of construction through its direct, indirect and induced derivatives, and takes into account the peripheral effect on the greater economy, specifically the effective functioning of the supply side of the economy.

Though some empirical evidence exists related to the positive impact of particularly economic infrastructure on economic growth, the arguments around the supply-side effect of the construction sector as explored in this paper are intuitive and mostly anecdotal.

The Supply-side Effect

In essence, the supply-side effect of construction is captured in the following question:

What is the economic impact of getting to work on time, getting goods to the ports on time, establishing a flourishing tourism industry in an area where lack of access made it previously impossible, etc.?

The real impact of construction presents itself, therefore, in the long-term effects of fixed investment in South Africa. The direct, indirect and induced impact of annual construction activity translated into GDP growth for a specific year therefore does not provide a true reflection of its real long-term effects. In essence, the construction industry manifests its true contribution in the provision of infrastructure that stimulates higher growth in the supply side of the economy.

Stimulating the supply side of the economy relates to various perceived costs and risks of doing business. The following quote clearly illustrates the value of infrastructure in lowering costs and stimulating growth.

² Industrial Development Corporation (2004) 'Sectoral multipliers for South Africa.'

³ Conningarth Economist (2004) 'Labour multipliers.' Unpublished document.

The capacity for economic infrastructure to reduce costs associated with production and delivery and increase the competitiveness of South African business suggests a positive relationship between expansion in infrastructure and economic growth. In fact, neglecting infrastructure investment could compromise long-term economic growth.⁴

The study from which the quotation comes finds some empirical evidence that supports a view of dual causality. In effect, GDP growth will bring about some growth in fixed investment; however, as the independent variable, growth in fixed investment related to economic infrastructure leads to higher economic growth.

The South African Scenario: The Macro View

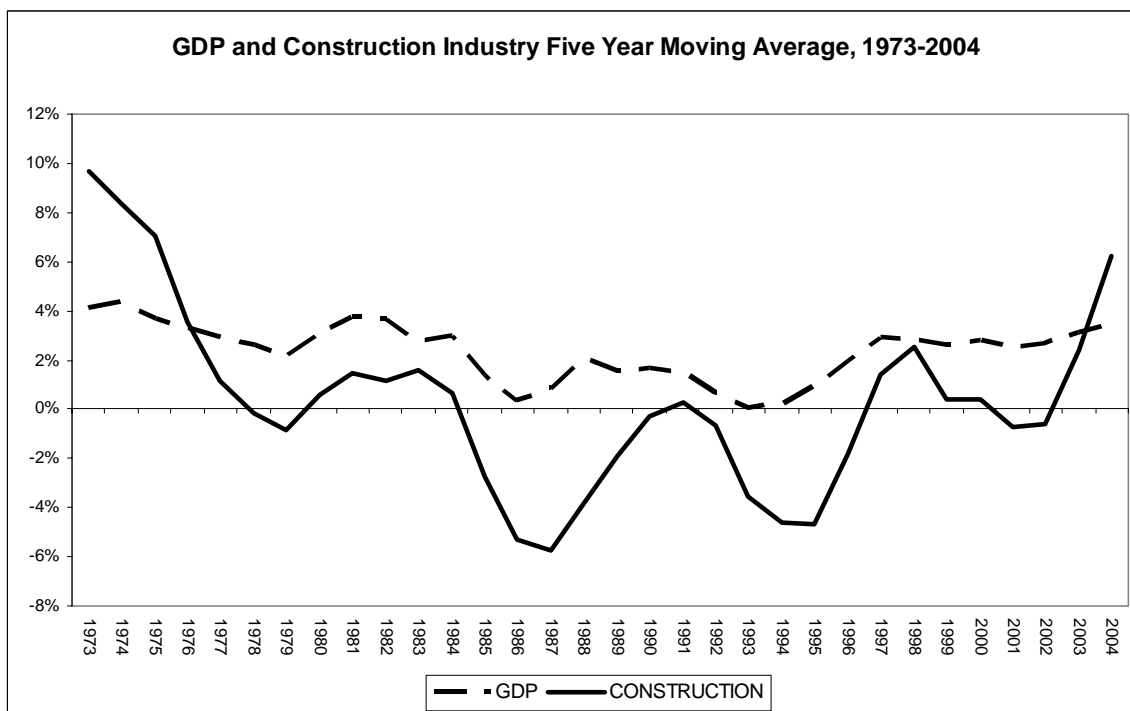
In South Africa, current levels of GDP growth are mainly driven by the demand side of the economy, which has been growing at 4.9% per annum over the past decade and 5.5% per annum over the past five years. The supply side grew by 1.8% and 2.6% for the same periods, respectively.⁵ As a result of this imbalance, figures for the third quarter of 2005 showed a deficit on the current account of 4.7% of GDP, the highest level since 1983.

Apart from the apparent vulnerability caused by the deficit on the current account being financed mainly through portfolio flows, limited stimulation of the supply side will prevent any mitigation of the negative impact on GDP growth due to declining demand. Hence government's renewed focus on stimulating the supply side through major infrastructure projects over the next ten years must be applauded. The target of gross fixed capital formation (GFCF) reaching 25% of GDP is around 8 to 9 percentage points up from the current level of 16.7% of GDP.

The graph below indicates the relationship between GDP and the construction portion of GFCF. During periods of low GDP growth, construction amplified downward movements and under-accentuated upward swings. However, the sustained growth of 28 quarters that started just before 2000 underlines the dual causality in the relationship. One could refer to this as 'momentum growth', since as a result of sustained economic growth, the need for greater capacity has gained sufficient momentum to make it a national objective — one that can potentially elevate the growth path, and if neglected will dampen economic growth.

⁴ Perkins, P. (2003) *An Analysis of Economic Infrastructure Investment in South Africa*. Johannesburg: University of the Witwatersrand Press.

⁵ Business Unity South Africa (BUSA) Circular 03/06: BUSA Submission to the Deputy President's Office regarding the Accelerated and Shared Growth Initiative for South Africa (ASGISA).

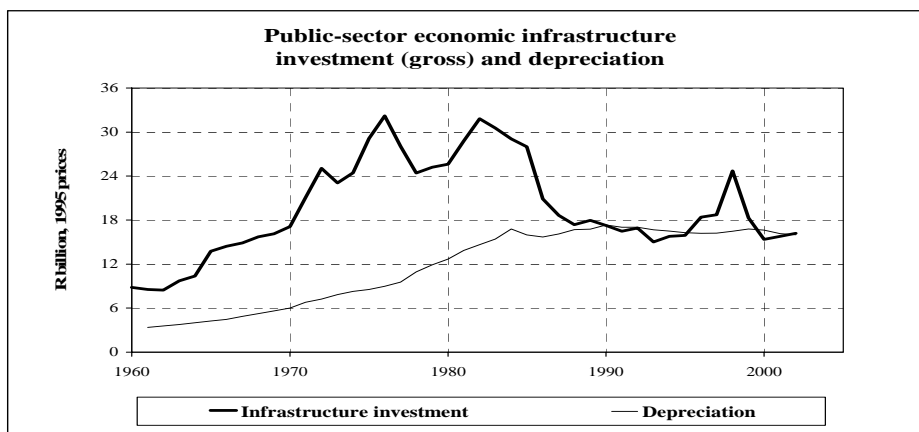


Under the banner of the Accelerated and Shared Growth Initiative of South Africa (ASGISA), government is charging into the battle for higher economic growth head on. Infrastructure is at the top of the agenda, and rightly so. Apart from the direct, indirect and induced effect of construction, there is the supply-side effect, which will address input costs and lead to greater competitiveness. Three broad initiatives are being addressed, namely the development of the Olifants River system, the development of a Durban–Gauteng corridor and the roll-out of broadband capacity.

More specifically, some major expansion plans over the next five years include the following.

- Eskom will spend R84 billion to grow capacity. This is part of its R250 billion spending plans up to 2024.
- Transnet will be spending R47 billion, of which R40 billion will be for ports, railways and a petroleum pipeline.
- The Airport Company of South Africa will be spending R5.2 billion to improve airports, including the Dube Trade Port at the King Shaka International Airport, KwaZulu-Natal.
- Water infrastructure totalling R19.7 billion will be developed, which includes the De Hoop Dam.
- 2010 Soccer World Cup stadiums and their environs will receive R7.5 billion.
- The Gautrain development costs are estimated at R20 billion.

The renewed focus is long overdue, if one looks at gross economic infrastructure investment by general government and the depreciation of economic infrastructure. During early 2000, depreciation was larger than gross investment, pointing towards shrinkage of economic infrastructure stock. The mere fact that depreciation is comparable to gross investment is due to ageing economic infrastructure.



Source: Perkins (2003)

Economic infrastructure includes roads, bridges, dams, water supply, electricity etc. Though this type of infrastructure receives a great deal of attention in this paper, the intention is not to detract from the importance of social infrastructure. The current backlogs related to housing and low levels of service delivery must be addressed to ensure social stability, a much-needed ingredient for greater economic stability.

Concluding the macro view

Stimulating activity in the construction sector will yield positive GDP and employment multipliers. The stimulus, however, is not endogenous to the sector, but rather due to calculated investment decisions by investors, be they government or the private sector. In the case of economic infrastructure, it is normally government. Given the state of economic infrastructure in South Africa, the potential supply-side effects of construction will be significant.

The significant amount of domestic investment could be compared to the Bull Run in Pamplona, where the sheer volume of bulls always claims a victim; in the case of construction, we should examine the vulnerability in the supply chain. Though from a macro perspective the sector will form an important cog in the wheel of national productivity, churning out higher revolutions, the micro challenges should not be underestimated.

Micro Challenges

The sector has its fair share of challenges relating to the micro environment. These include the institutional regulatory burden, low levels of government delivery, skills development, foreign companies and the fragmentation of the sector. For the sector to be an effective cog that functions as efficiently as possible, these challenges must be addressed.

Regulatory overburden

The sector has a heterogeneous client base. As a result, it is exposed to unco-ordinated policies from five national government departments, nine provincial roads and works departments, and more than 300 engineering departments in local authorities.⁶ The various

⁶ Langenhoven, H. (2004) 'Business submission for construction sector summit.' Unpublished document.

regulations imposed on the sector create new intermediate levels of control by costly bureaucratic departments, and have unintended consequences, e.g. delays in the commencement of contracts.

A case in point would be the application of the Preferential Procurement Policy Framework Act 5 of 2000. Currently, the parameters for interpretation are wide, leading to large discrepancies in the application of the legislation. Due to the geographic mobility of companies within the sector, they are expected to comply with different rules for targeted procurement. In this regard, the Department of Trade and Industry can be commended for the cohesive structure related to the Broad Based Black Economic Empowerment Act 53 of 2003. The sector reacted to the draft policy directives and developed a Sector Charter through inclusive negotiations.

A single set of requirements will unlock capacity within many client bodies, as policing and verification of the rules will no longer be within their mandate. It is the clear intention of the construction sector to pursue the legislative process and ensure that the charter is gazetted as a Section 9 Sector Code of Good Practice. This will ensure standardisation and limit uncertainty.

Including preferential procurement legislation, the various pieces of legislation impacting on the sector are estimated at 120.⁷ With huge amounts of paperwork accompanying most requirements and costs relating to tender documentation, Construction Industry Development Board registration and National Home Builder Registration Council registration, the conditions seem less than conducive to stimulating entrepreneurship and the rise of small contractors.

Government spending

An exogenous micro-level element that directly affects the planning cycles within construction companies is the low level of spending within government departments, especially the bottom tiers. Inconsistent spending and budget flushing⁸ are systemic as a result of low technical expertise. This has a direct bearing on long-term planning related to human capital and capital expansions. The sector has been subjected to extremely volatile market conditions during the last 30 years. The trend over this period has been mostly downward and is reflected in the conservative mindset adopted by most companies.

For companies to adopt a more expansionary mindset, a greater level of transparency is needed. Though one could argue that the latest budget documents indicate spending plans spanning a three-year period into the future, the reality is that budgeted and actual spending could differ considerably. As an example, provincial government departments had spent only 55% of their capital budgets three-quarters of the way into the 2005/06 financial year. Local government performance is no better, but at this stage little information is available to audit budget and actual spending.

The following information covers provincial spending for the first nine months of the 2005/06 financial year, ending 31 December 2005, and is captured in a report from Treasury dated 30 January 2006.⁹

⁷ Construction Industry Development Board (2005) *Legislation Impacting on the Construction Industry*. Unpublished report.

⁸ This is aggressive spending of budgets at the end of the budget cycle. Mostly, this type of spending does not address real priorities, as the only priority is to spend the funds.

⁹ Treasury (2006) *Provincial Budgets 2005/06: 3rd Quarter Provincial Budget Report*. Pretoria, available at <<http://www.treasury.co.za>>.

The following key points are made.

- Provinces spent 55% (R7.6 billion) of their R13.9 billion combined adjusted capital budgets.
- The highest share of provincial adjusted capital budgets is for public works, roads and transport departments at 34%. Spending came in at 71.6% of the combined capital budget of R4.7 billion after three quarters.
- Capital spending of capital budgets for each province are given in the following table.

Province	Percentage of Capital Budget Spent
Eastern Cape	65.6
Free State	45.9
Gauteng	51.2
KwaZulu-Natal	56.0
Limpopo	42.7
Mpumalanga	63.7
Northern Cape	51.6
North West	48.3
Western Cape	61.9
Average	55

The average across all provinces is 55%, substantially lower than around the figure of 75% that should be the level of spending after three quarters of the financial year. According to Treasury, a lack of skilled staff is hampering the ability of local and provincial authorities to spend, which accounts for the poor provision of services in many parts of the country.¹⁰

Treasury expects under-spending in the 2005/06 financial year to be proportionately the same as in the previous financial year. This raises serious questions around the ability of government to increase the efficiency of provincial governments, as well as the speed with which appropriate institutional capacity can be built to ensure a marked increase in delivery.

According to the 2005 budget review, several billion has been committed to capacity building and restructuring initiatives, but without measurable impact on capacity.¹¹ This is alarming and does not bode well for expectations that the next fiscal year will be any different. With 2010 approaching fast, budget allocations for infrastructure spending must be channelled through effective implementing agents, irrespective of the tier, and fast-tracked where possible, otherwise results will not be achieved.

Taking into consideration that local and provincial departments will be responsible for R190 billion — just over 50% of the estimated R372 billion over the medium-term expenditure framework — serious consideration must be given to the low levels of skills in these tiers of government. Public-private partnerships (PPPs) provide for an alternative delivery model and could potentially lead to greater project prioritisations and budget management. Over and above PPPs, several other initiatives will be needed, such as attracting retired personnel back into the system. Where this is already under way, efforts must be stepped up. As a last resort, Treasury could channel funding through the most effective departments and, where needed, use implementing agencies like the South African National Roads Agency and the Trans Caledonian Tunnelling Authority.

¹⁰ 'Treasury predicts more under-spending from provinces', *Business Day*, 31 January 2006.

¹¹ Treasury (2005) *Budget Review 2005*. Pretoria: State Publishers, p. 158.

The skills challenge

As a service provider of fixed assets ranging from fairly simple to sometimes hugely complex structures, the sector is reliant on a spearhead of highly qualified staff and a broad base of lower-skilled workers. Concerns have been raised on various occasions that the domestic sector has a shortage of skills to deal with the increased levels of spending envisaged. The concern is not totally unfounded, especially if one takes the following facts into account.

- According to a study of civil engineers, technicians and technologists in South Africa, it appears that 47% of all practising civil engineers are 45 years and older. The study concludes that this age group, due to its vulnerability to premature death, early retirement and emigration, should only make up 25% to 35% of the workforce.¹²
- Several factors are contributing to attrition in the sector, and it would seem that the image of the sector must be enhanced. Apart from the unattractiveness of working on remote sites under difficult conditions, there have always been high levels of uncertainty in the sector due to fluctuating market conditions. This has resulted in emigration to other countries, with numbers estimated at between 3,000 and 4,000 over the last 20 years for engineers, technicians and technologists, as well as movement to other sectors.¹³
- The Construction Education and Training Authority (CETA) is falling short in monitoring training and establishing an appropriate framework to develop skills in the sector.
- Research for the second sector-skills plan shows that 50% of the sector's labour force does not have access to the training system because of labour force instability, sub-contracting and the use of temporary labour.

Though the factors cited above are ringing alarm bells, various suggestions can be made regarding remedies.

- The CETA should be strengthened and its role clearly defined in relation to the complementary roles of private sector institutions.
- Grants for the development of staff of emerging contractors must be increased.
- Learnerships must be managed properly and should have a specific construction bias.
- Administrative barriers should be addressed to give smaller firms with lean administrative capabilities greater access.
- Careers in the sector must be demystified and properly marketed, with higher demand resulting in better remuneration, which will attract more candidates.
- Greater transparency is needed regarding public sector spending, while this sector needs to establish a better track record for punctual delivery of large projects to enable better planning.
- More sustainable roll-out of projects is needed from government.
- Employment and skills development centres should accommodate the 50% of workers without access to training in a region.
- Government should start making a contribution to the pool of trained construction professionals.
- Companies must look at their own requirements and start training. An expansionary mindset must be adopted and the wait-and-see attitude related to training must be dropped.
- The proper application of the Construction Charter will lessen the focus on equity as the sole determinant of preferencing, thereby increasing the likelihood of companies gaining increased experience, as well as formalising enterprise development relationships, mitigating risk and increasing chances for access to finance.

¹² Lawless, A. (2005) *Numbers and Needs*. Johannesburg: Creda Communications, p. 177.

¹³ Lawless (2005), p. 175.

- Contracts should not be unbundled, but rather awarded to large contractors who can work with smaller contractors on site. The public sector should 'go big to go small', rather than taxing capacity within government through fragmentation of contracts. Large companies can fit in with such a model within the enterprise development required by the charter, which will foster long-term relationships rather than short-term high-risk relationships.

Some of the suggested remedies will take effect sooner than others. The fact remains, however, that the lag period applicable to creating a civil engineer with experience is seven years at least. Even if serious consideration is given to attracting more students from the limited maths higher grade pool with A's, B's and C's (6,734 in 2004), the impact will only be measurable in 2013. This does not mean that every possible attempt should not be made to increase the skills available to the sector, but what it does mean is that in the short term the sector will have to rely on the mobility factor related to the skills commodity. Already the Department of Home Affairs has indicated an allowance for 5,000 people with civil engineering and structural-related skills to be allowed into the country. Over and above that, there are many South African emigrants that will return under the right market conditions and several initiatives are under way to place retired engineers within ailing local governments and municipalities.

On balance, systemic problems need to be addressed, as it would be most beneficial to carry out the country's construction with home-grown skills. It is, however, far fetched to expect this, in the light of the unprecedented spending envisaged over the next ten years.

Foreign participation

Historically, this is an industry of high-risk, low margins, and many would argue that this is not unlike some other industries, although one would expect that, like other industries, the construction sector would be able to increase profitability during a 'boom'. This, however, might become quite a challenge, if we take the following into consideration.

The fact that the industry will face a skills crunch during the boom time, a systemic problem resulting from the 30 dry years it has recently come through, is well known. Although some of these skills are more elastic in terms of attracting people possessing them from other sectors, other skills are less so in this regard, especially those in the 'technological band' requiring years of study and experience to acquire. But one thing is common to both types of skills: the remuneration mindset must shift from 'keeping people' to 'attracting people'. The premium captured in this shift will increase costs experienced by companies, exacerbated by the pressure to employ along specific demographic lines. Although this is one cost among others and it could be argued that increased costs will be reflected in asking prices to the client, there is an interesting new dynamic.

The renewed focus on spending on infrastructure — with figures like R370 billion being mentioned over the medium-term expenditure framework — will attract the attention of foreign players. Historically, the domestic market has proved to be a tough nut to crack and many companies have come and gone. More recently, Hochtief and Bouygues stepped back from holding shares in local companies. Although the plethora of regulations, and in particular the regulation around black economic empowerment, could be seen as a deterrent that discourages foreign companies from participating in the local market, none of these regulations is discriminatory. Hence local companies face basically the same challenges that an offshore company would face.

With envisaged spending to increase unparallel to anything experienced during the last 30 years, with pressure increasing on the government to open the domestic market and with no

real defensive strategy existing, the question arises: is the industry ready for the new dynamic of aggressive international participation in the domestic market, in particular, the challenge of state-owned Chinese companies focused on establishing a local presence and willing to tender as low as it takes to be awarded contracts? Their aggressive approach, though they are currently isolated, sends a clear message: this is not globalisation in its true form, but rather a political endeavour that may change the capitalist orientation of making profits altogether.

This new factor in the industry will force domestic companies to employ skilled people as a scarce commodity at high prices while simultaneously having to remain highly competitive, with pricing impacting on profit margins. The rate at which civil engineers are being churned out in China will result in lower costs related to these skills and increasingly less compromise on quality, thus strengthening the ability of Chinese companies to win projects. The question is whether and to what extent the Chinese challenge will escalate. If indeed their presence is about more than company-specific economic motives, but rather a China-specific economic motive, an escalation can be expected. The Chinese economic engine, currently growing over 9% per annum and investing 45% of that growth in fixed assets, is currently utilising most of its own skills capacity, but any surplus capacity will be used strategically.

From now on, there will be no sacred cows, and all large projects will be tendered for in the context of this global dynamic. The domestic industry will be challenged to remain competitive in its domestic pricing to ensure that construction remains a national asset. In fact, the time has arrived for the industry to engage with government on the appropriate policy towards foreign participation. Free trade must be endorsed, though discussions must be focused to ensure that the national asset is preserved, that foreign companies abide by the laws of South Africa, that domestic skills are grown sustainably over the long term, that domestic labour is used and that there is a home-grown level of empathy towards the social needs of the country.

Fragmentation and communication

The construction sector is characterised by a high level of fragmentation, causing limited access to important clients due to the lack of a single access point to the sector. Though there are institutional bodies, none represents the broader mandates of business organisations and associations in the sector. A further result of having around 13 national organisations working on private sector issues and several regional associations is that work related to the sector is effectively conducted in separate silos.

A significant step toward achieving a higher level of co-operation among private sector stakeholders, government and the labour unions was taken as a result of work on the Construction Charter. The sector embarked on this process during 2004 and made considerable progress in identifying key challenges in the sector and setting targets, which signifies both a vision for the sector and the commitment by all stakeholders to achieve the objectives of broad-based empowerment.

Over and above addressing inequality in the sector, the charter provides greater clarity on the points related to targeted procurement as stipulated in the Preferential Procurement Policy Framework Act. The sector is aggressively pursuing the establishment of a Section 9 Sector Code of Good Practice (in conformity with the Broad Based Black Economic Empowerment Act 53 of 2003). This will give legal standing to the charter and compel clients to apply it when tendering.

The charter activities will culminate in the creation of a charter council, and though details are sketchy at this stage, the impetus is there to ensure that this council is structured in such a way that it will represent the broader mandates of the various business organisations and associations involved in the sector. The charter council will be supported by a full-time secretariat that will oversee the monitoring and implementation of the charter.

In essence, this council will provide a single access point to the private sector of the construction industry. This will enhance communication with government and lead to greater transparency, enabling the sector to plan better for the future.

Conclusion

The construction industry impacts positively on the local economy through fairly high direct, indirect and induced multipliers. The long-term benefit, however, is more appropriately seen in what has been termed supply-side effects. The industry creates the infrastructure that enables supply-side industries to operate competitively, unlocking bottlenecks related to transport of goods and people. In the long run, infrastructure provides the foundation for numerous spin-offs, e.g. building a main street where there was none, which will enable increased activity in the retail sector or tourism, and so forth.

Due to lagging infrastructure investment over the past 30 years and positive economic growth sustained for the last 28 quarters, enough momentum has been gained to ensure greater focus on GFCF and to bring it in line with levels in other developing countries. Serious concerns around the status of current economic infrastructure stock, as well as new economic and social infrastructure, will translate into greater spending over the next decade.

Increased spending at the levels envisaged will lay bare the vulnerability within the industry related to the delivery capability of the public sector, availability of skills, quality and quantity of material supply, foreign interest and the industry's ability to overcome these challenges as a collective rather than on a fragmented basis. It is crucial for the industry to address challenges at the micro level, as this will determine the efficiency of its contribution at the macro level.

The sector provides an escalator service within the dual economy that characterises South Africa at present. This in turn will bring about an escalation of the developed economy, with the long-term supply-side effects of job creation and greater access to economic opportunities inevitably pulling the developing economy up with it.