THE ROLE OF MULTINATIONAL ENTERPRISES (MNEs) IN CAPE TOWN'S COMPETITIVENESS[•]

Background paper for the study on Cape Town's future competitiveness and the global knowledge economy

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Executive summary

This paper undertakes a comparative analysis of the role multinational and other leading firms play in enhancing the city's global competitiveness through access to knowledge, technology, skills, and markets, and of location-specific assets, namely whether economic and business conditions in the city make Cape Town an internationally attractive investment location or not.

The competitiveness of cities depends on the transfer and diffusion of knowledge, involving firms and other actors. In the context of competitiveness, knowledge often takes the form of technology. It is important not just to foster existing capabilities but also to try and build new capabilities with which to respond to, or possibly anticipate, the opportunities technical change brings.

The source of relevant knowledge is often external. No city can afford to ignore what goes on outside its borders and indeed in the rest of the world. Since much global knowledge is controlled by multinational enterprises (MNEs), the relationship with these firms is an important arena for policy in support of economic development. A key issue is the quality of knowledge flows which in turn depends on the congruence between technological and other demands of foreign investors, and local capabilities.

The interaction between global competition and local capabilities underlines the importance of localized knowledge spill-overs. Local assets influence knowledge spill-overs especially in activities characterized by location economies where geographic proximity plays a role for competitiveness. Since many local assets in turn depend on city governance, it is instructive to engage with firms about their views in this regard.

The challenge for public policy is not just to improve created assets but also to create the kinds of networks that help foster the integration of SMMEs into global value chains and, thus, an inclusive growth trajectory. Since this is only possible in a focused way, "smart specialization" which builds on evident local strengths and avoids unwinnable competition offers a promising way ahead.

Strategies and capabilities vary between firms and sectors in the city, but all firms interviewed are subject to some degree of global competition, either because they face foreign competitors in their home market or because they rely largely on exports, or both. Especially domestically owned firms are at different phases of possibly similar globalization trajectories that first see them compete primarily in the local market, then expand into surrounding Sub-Saharan African economies, and finally take on advanced economies where their competitive advantages are more difficult to establish and defend.

All firms try to tap into external knowledge and to internalize it in order to upgrade. This is a conscious effort, supported by the requisite resources, and thus different from learning-by-doing. For some firms, this learning is an individual process whereas for others it takes place in networks. This varies in terms of horizontal and vertical linkages and also between sectors.

Ownership does not seem to make much difference to the strategic recognition that learning is essential to (global) competitiveness. What differs is the ease with which such processes are managed. Subsidiaries of foreign MNEs have lower search costs in identifying relevant knowledge, and lower transaction costs in exploiting it.

A key difference across sectors regards the relationship between learning and space. Firms in some sectors report that they absorb knowledge through distant or mobile sources, be they trade fairs, immigrant knowledge workers, or simply the import of capital goods. Firms in other sectors rely on geographically close interaction.

Not all results of the research can be neatly attributed to either firms or sectors but rather to a set of generic capabilities that exist in the city. There are certain kinds of skills invested in the city that are significant for the broader economy and not just for specific economic activities.

Knowledge controlled by foreign MNEs does not exist only in some kind of enclave in Cape Town. In many instances the activities of lead firms have benefits for the local economy in the sense that they generate backward linkages or help suppliers to upgrade. But if inclusive growth entails the integration of large numbers of unskilled people into the labour force, there is no evidence that this is happening as a corollary to the pursuit of global competitiveness. Hence the pursuit of global competitiveness and social inclusion are often trade-offs which must be acknowledged and managed.

The availability, accessibility, and quality of local created assets are key. Since skills and competences are created assets that must precede the formation of relational assets, Cape Town's education and skill problems are probably one reason why on the whole there is not much evidence of networked activity among firms or between firms and other actors, such as universities or research institutes.

There is no evidence of a comprehensive local innovation *system*. The key question with respect to the city's role in the global knowledge economy is not whether one can do things in Cape Town, but whether one can do them better here than elsewhere or, ideally, whether one can do them *only* here. Hence a local innovation system would favour specialized local assets that by definition are specific, hard to move or replicate, and hence conducive to anchoring foreign investments in a longer-term perspective.

Across the sectors there are strong absorptive capacities. Existing capabilities can be grown, especially if human resource bottlenecks are addressed. There is also evidence that the activities of MNE subsidiaries and other lead firms generate localized knowledge spillovers that help other, including small firms, to upgrade their activities and, occasionally, get directly involved in global competition.

Cape Town has serious disadvantages in human capital, infrastructure, and governance. These factors affect different firms and sectors to a different degree. Overall, the perception of the city is not as a business-friendly environment, or that it has built the created assets that would allow its firms to compete successfully in the global knowledge economy.

In agro-processing, global orientation is high and smart specialization is an option. Key created assets include human capital and efficient infrastructure. With the exception of rail and seaport, the City has considerable leverage over and capabilities in infrastructure and can also intervene by facilitating a better match between training and skill supply and demand in select activities.

In oil and gas, global exposure is high. However, the City does not have much influence over the seaport, nor is it clear that it would master the organisationally very demanding task of working towards the establishment of some form of offshore supply base. Since the development of an OSB clashes with other development priorities, this would altogether be difficult, and in this sense oil and gas is not "low-hanging fruit".

In construction and property services, global exposure is low and opportunities for smart specialization do not really exist.

The creative and design sector is highly oriented toward and exposed to global competition. Cape Town has a number of created assets that make the city attractive for creative firms. Exceptions include, prominently, IT bandwidth and the more strategic pursuit of opportunities for co-location of relevant firms to unlock networks effects. In both areas, the City has a lot of leverage and also relatively high capabilities.

In retail, exposure to global competition is much lower than in the other sectors reviewed here, with the exception of construction and property services. It is possible for the City to make a case for locating select strategic retail functions in Cape Town, but there are weaknesses both with respect to skills and the regulatory environment.

In tourism, local firms are very exposed to global competition and Cape Town has an opportunity to specialize in business tourism. The City could support targeted activities in local education institution in order to address key bottlenecks, build on recent improvements in public transport to create a truly attractive system that largely obviates the reliance on individualized motor transport, and deepen the services on offer at CTICC through an expansion of its facilities.

The combination of opportunities for smart specialization, requisite assets, the in-principle option to leverage political capital and invest the City's capabilities favours the agro-processing, creative and design, retail, and tourism more than oil and gas or construction. IT bandwidth has horizontal relevance across sectors.

1 Introduction

1.1 Purpose and structure of this paper

The purpose of this paper is to undertake a comparative analysis of multinational enterprises (MNEs) and other leading firms with investments in Cape Town. This concerns the relationship between the dynamics of international business -- the role MNEs play in enhancing the city's global competitiveness through access to knowledge, technology, skills, and markets -- and location-specific assets, namely whether economic and business conditions in the city make Cape Town an internationally attractive investment location or not. The questions the overall study addresses to which this paper contributes, include the following:

- Are leading firms in Cape Town globally competitive?
- If so, how is this achieved?
- What is the role of (the latest available) technology?
- What are the direct (e.g. technology transfer) or indirect (spill-overs) effects for the Cape Town economy?
- What opportunities exist for entrepreneurship?
- What attributes of Cape Town help or hinder economic success?
- How important is the location of firms within Cape Town?
- Do the institutional arrangements and the policy environment support or hinder competitiveness?
- How does Cape Town compare with other cities?[1]

Theoretically and conceptually, this paper is informed by the literature on the role of the knowledge economy in the global competitiveness of cities, and especially the relationship between (foreign) technology and (local) absorptive capacity, summarized by the first background paper submitted to this study (Lorentzen 2010). The following section briefly reiterates key insights from the literature review for the design of the empirical part of this paper. Methodology and data are explained next. The main empirical part consists of an analysis of firms in some of Cape Town's most important economic sectors.[2] Cross-sectoral themes such as skills, physical infrastructure, and government policy are included in each sector discussion. The concluding section addresses the above question across all sectors and discusses the findings in the context of the literature on urban global competitiveness.[3]

[1] The location of these comparator cities in South Africa, the southern hemisphere, or anywhere else in the world depends on competition in the relevant markets and thus differs across sectors and also with respect to the capabilities of the firms involved.

[2] See Turok (2010) for a companion background paper that focuses on additional sectors.

[3] This is one of a suite of background papers, including analyses of small and medium-sized firms and the institutional and policy environment, as well as a benchmarking report. The partial insights of all these papers will be integrated for the final report that completes the analysis. Only then can recommendations for policy be made.

1.2 How this analysis relates to what we know about urban global competitiveness[4]

Knowledge is a key element in global competition. The competitiveness of entities, including cities, depends on the transfer and diffusion of knowledge, involving firms and other actors that may be geographically proximate or distant. Knowledge flows can be incidental when they spill over from a more advanced to a follower firm, or they can be the outcome of cooperation between firms or between them and other actors. In the context of competitiveness, knowledge often takes the form of technology. Acquiring knowledge or mastering technology through a process of learning relies on local capabilities which differ not just across firms but also across activities and sectors. In the face of continuous -- and especially of accelerated -- technical change, new opportunities emerge that must be recognized, understood, and internalized. It is therefore important not just to foster existing capabilities but also to try and build new capabilities with which to respond to, or possibly anticipate, the opportunities such change brings.

The source of relevant knowledge is often external. This means that no city, especially if it has ambitious aspirations, can afford to ignore what goes on outside its borders and indeed in the rest of the world. "Rest of the world" does not imply that events anywhere concern Cape Town equally. For example, Hollywood is more much more relevant to Cape Town's film industry than competition from Bollywood or Nollywood (cf. Barnard and Tuomi 2008), and the CTICC has formidable competitors in far-away places like Australia and Canada more so than in, say, Durban. But in other activities competition is closer by, for example regarding headquarter locations in a large number of sectors whose primary markets are in or around Johannesburg.

Since much global knowledge is controlled by MNEs, the relationship with these firms is an important arena for policy in support of economic development. This refers not just to attracting them -- and certainly does not mean that they should be attracted at all cost -- but also to ensuring that their presence benefits the local economy in view of an upgrading trajectory within which local firms improve their capabilities and develop new ones. In this context a key issue is the quality of knowledge flows which in turn depends on the congruence between technological and other demands of foreign investors, and local capabilities. Much of this dynamic plays out in increasingly complex global production and innovation networks which, while not obviating local attributes that favour the competitiveness of a specific place, make competitive dynamics less place bound at the city scale.

The interaction between global competition and local capabilities underlines the importance of localized knowledge spill-overs. Where they are realized, a city will be more likely to be able hold onto existing and gain new investments. In turn, such spill-overs are likely to emanate from the more important regional industries. The availability, accessibility, and quality of local assets influences knowledge spill-overs especially in activities characterized by location economies where geographic proximity plays a role for competitiveness. Since many local assets in turn depend on city governance, it is instructive to engage with firms about their views in this regard.

[4] This section draws on Lorentzen (2010).

At a general level, key local assets include human capital and infrastructure plus other forms of the built environment all of which are of course influenced by (local) policy and the quality of its implementation. The challenge for public policy is not just to improve created assets but also to create the kinds of networks that help foster the integration of SMMEs into global value chains and, thus, an inclusive growth trajectory. Since this is only possible in a focused way, "smart specialization" which builds on evident local strengths and avoids unwinnable competition offers a promising way ahead.

This is a brief summary of the principal insights that emerged from the literature review (Lorentzen 2010). They underline why it is important to integrate MNEs and other leading firms in Cape Town's principal economic activities prominently into this study, and why firm interviews must look at the dynamic co-evolution of knowledge flows and local capabilities and assets. While this paper and another by Turok (2010) focus on large firms, the background paper by Harrison and Boulle (2010) analyses conditions for entrepreneurship and the integration of SMMEs in global value chains. Taken together, these enquiries will make possible an assessment which networks exist as well as where they are absent, and why. This, in turn, will identify opportunities for public policy in support of inclusive growth.

1.3 Methodology and data

1.3.1 The choice of activities and firms

The literature review explains why it is important to focus on leading sectors and, within them, on leading firms -- they are more likely to give rise to relevant knowledge flows, to possess advanced capabilities, and to have the possibility of generating networks that can in principle advance backward linkages. In other words, they are instrumental to a discussion of global competitiveness. This is why the approach chosen for this study -- key informant interviews with representatives of leading firms and other entities -- is appropriate. The firm sample included in the paper is not statistically representative nor are the firms "average"; on the contrary, as leaders they have capabilities that are well above those of an average firm in the respective sector.[5]

This paper covers data obtained from 44 entities interviewed for the study. They involve foreign MNEs and leading locally owned firms as well as related industry bodies, including special purpose vehicles aimed at lifting selected economic sectors onto a higher growth trajectory by providing certain public goods in six of Cape Town's principal economic activities, namely agro-processing, oil and gas, retail, property services, the creative and design sectors, and tourism.[6] They make up a significant portion of the value generation in Cape Town and, together with financial and business services and higher education reviewed in Turok (2010), account for the most important economic activities in the city.

[5] If a random sample from the Business Registry had been chosen, it would have shown that some proportion of firms is not competitive at all, least of all globally. But this is known and not terribly interesting. The point of the study is not to prove that some butternut farmer, garment manufacturer, or coffee shop owner is not globally competitive, but to probe how advanced capabilities possessed by specific firms can help the local economy as a whole become more globally competitive.

[6] The background paper by Turok (2010) includes business process outsourcing, financial services, and higher education.

These sectors reflect the diversity of the urban and regional economy, spanning resource-based, manufacturing and service activities. Services in Cape Town have come to account for more than 70 per cent of regional GDP. Financial services and retail trade, catering and accommodation alone make up almost one half of the local economy by value. But although agriculture-related activities contribute only a small and diminishing share of provincial product, they still account for almost a fifth of exports. They also provide inputs to manufacturing, especially agro-processing. Manufacturing also still matters -- roughly one in six jobs in the province is blue collar.

But more important than these static assessments is the future potential of these activities, because an economy could of course be massively invested in the "wrong" kinds of specializations. The Organisation for Economic Cooperation and Development (OECD 2008) identified the following key value chains and emerging clusters in Cape Town: (i) agro-food, (ii) tourism and hospitality, (iii) wholesale and retail, (iv) construction and housing, (v) financial and business services, (vi) logistics, and (vii) creative and knowledge-intensive industries. Firms from all these activities are covered in this and the companion background papers (Turok 2010, Harrison and Boulle 2010).

The firms interviewed for this paper employ almost 17,000 people in Cape Town and its surrounds.[7] Their South African headquarters are mostly in Cape Town but also other South African cities, notably Johannesburg. They all interact more or less intensely with the global economy either as exporters or because they absorb external knowledge flows. The choice of firms reflects this; many are members of Accelerate Cape Town, an industry association that represents large, internationally active firms in Cape Town. Harrison and Boulle (2010) concentrate on small firms – where possible, this field work tried to probe for backward linkages and thus bridge the two empirical parts.

1.3.2 The interview instrument and process

Interviews took place between January and April 2010, mostly in Cape Town and a few in Johannesburg. Interviewees were sent a template for a semi-structured conversation about factors that influence Cape Town's competitiveness, past, present and future. The template includes questions about the basic profile of the firm (name, location(s), Group HQ, major activity, and size (workforce and turnover)), the nature of the firm's markets, reasons for (not) investing in Cape Town, knowledge absorption or technology transfer, strategies for learning and upgrading, and institutional and policy support.[8] The template design was informed by the literature review in that it tried to capture the essence of the relationship between external knowledge flows and local capabilities in the context of the existing urban infrastructure and policy environment. It was also designed to address the key research questions listed in Section 1.1.

One or two members of the research team then visited the interviewee for one or two hours. The open format of the template allowed interviewees ample space to concentrate on what

[7] All firms interviewed with headquarters in Johannesburg or other parts of the country also had offices in Cape Town.

[8] We agreed to keep all information confidential that could be used to reveal a respondent's identity, including firm identifiers such as turnover and workforce. The interviewees signed a consent form to this effect.

they considered to be the most important factors influencing their future success. Within the given time constraints a standard set of topics was addressed across all firms. The researchers recorded the interviews and wrote a synopsis of the most important points which they sent back to the interviewee for corrections, clarifications, and vetting. Occasionally this vetting process went through several iterations.[9]

1.3.3 Limitations of the approach

The choice of activities surveyed and firms interviewed was commensurate with the objective of the study (see Section 1.3.1). It is also important to identify what the chosen approach can and cannot deliver. Section 1.3.1 discussed why a random, statistically representative sample of firms would not have been appropriate for conducting this study. By implication, this means that the results reported here are not a comprehensive assessment of the activities in a specific sector and the constraints under which it operates. Instead, they highlight key insights gained from leading firms that are important for Cape Town's global competitiveness. More precisely, our analysis does not conclude that a specific sector is or is not globally competitive. However, it shows how leading firms in that sector experience and adapt to global competition in the local environment, and how their activities and strategies can help foster Cape Town's ambitions to become a globally competitive metropole.

Reporting the views of firms more or less at face value must not be misconstrued as a necessarily objective perspective on reality. For example, firms who complain about the lack of skills in the workforce may confront the problem of an undereducated and undertrained pool of human resources. Yet they might also try to shift the burden of training exclusively onto the public sector, even though a trained workforce clearly also generates private benefits to the employer. Likewise, firms who report that skills are not a problem may either de facto not have a problem or be stuck in a sub-optimal equilibrium where they get by with low-skill, low-return type of activities that secure their survival but have little to do with the aspirations motivating this research, namely competitiveness in the global knowledge economy. Skills supply in Cape Town is the topic of another background paper (Kruss, forthcoming).

Similarly some firms, especially in the property sector, made very critical remarks about the officials in charge of property and planning in the city bureaucracy. It is obviously important to establish what the relevant officials have to say in this regard (see Boulle and Harrison forthcoming). But what ultimately matters most is to identify the reason for such perceptions and how they can be addressed. Hence, firm-level data is only the first step of a longer process of investigation and analysis.

But the evidence presented here has value. Firm surveys are undertaken all over the world and are powerful instruments to understand the determinants of private sector activity. The resulting evidence should be interpreted critically in the light of what other firms say and of what is known about the industrial organization and dynamics of the sector at large they belong to. For example, if Firm A in Sector 1 reports skills problems whereas Firm B does not, the actual problem might have more to do with the strategy of Firm A than with human

[9] In order to guarantee anonymity, the synopses were only made available to the core research team.

capital as such. In other words, there may be intra-sectoral differences. It may also be the case that Firms A and B in Sector 1 report one set of skill problems (for example, at the artisan level) while Firms C and D in Sector 2 suffer from another set of problems (for example, at the executive management level), indicating inter-sectoral differences.

Finally, regardless of their direct exposure to global markets through exports all firms that produce tradables are subject to some degree of global competition. Accordingly, the views of firms in a country need to be assessed in the context of industrial dynamics that characterize the sector at large. This is because many industrial activities are increasingly subject to world quality standards, which means that there is no longer a market for inferior products. Therefore it is important to assess the technological gap between follower and leader firms and whether this gap is widening or narrowing.[10] A widening gap would suggest that the firm or the sector in question are losing competitiveness. Aggregated to a whole country it would mean that the relevant economy is not catching up but falling behind.

In sum, this paper offers an analysis of the role of leading firms located in six important economic sectors for Cape Town's global aspirations, reflected in the context of their respective industry dynamics. The results draw on the views of carefully selected firms whose capabilities and strategies have implications for their own competitiveness and for the larger metropolitan economy.

2 Results

Results are presented sector by sector, starting with the resource-based activities (agro-processing), followed by manufacturing and services. The discussion of each sector is led by a description of the respective global sector dynamics which provides context to the empirical analysis. Information from the field work is then assessed against three broad cross-cutting issues, namely human capital, physical infrastructure, and government policy. Human capital is analysed in terms of (basic) education for unskilled workers, three skill bands for medium to highly-skilled personnel (artisan, technical personnel, and management), and the specific category of black professionals. The evaluation of physical infrastructure comprises generic locational attributes (public transport, roads, port, airport, telecommunications, electricity, and logistics), the regulatory environment concerning property and land supply, and sector-specific infrastructure. Government policy includes the degree of engagement with the economy, horizontal policies (e.g. human capital), vertical policies (i.e. sector-specific), the nature of the regulatory framework (other than concerning property and land), institutional arrangements, and city leadership and vision. For anonymous firm testimonials, see Appendix 1.

2.1 Sector results

2.1.1 Agro-processing

2.1.1.1 Sector overview

Agro-processing is a set of techno-economic activities, applied to any produce, originating from agri- or aquaculture sources and forests and aimed at their conservation, handling and value-addition to make them usable as food, feed, fibre, fuel or industrial raw materials

[10] The technology gap is specifically addressed in another background paper (Lorentzen et al forthcoming).

(Kachru 2009). Agro-processing can be categorized into the predominant food and the non-food industries. Non-food agricultural products are processed through various intermediates before reaching the final stage in form of fuels, lubricants or cosmetics (FAO 1997). The two are interlinked as the use of synthetics combined with natural materials and artificial substitutes is very common in non-food industries such as packaging. Because of the value added at each of these successive stages of processing, the proportion of the total cost represented by the original raw material diminishes steadily.

"Upstream" industries are engaged in the initial processing of agricultural commodities, for example rice and flour milling, oil pressing and fish canning. Downstream industries undertake further manufacturing on intermediate products made from agricultural materials such as bread, biscuit and noodle making; textile spinning and weaving; paper production; clothing and footwear manufacturing; and rubber manufactures (Felgenhauer and Labella 2009).

In this study, the focus is on food industries and tobacco. South Africa is a net exporter of agricultural products and, with only few exceptions, is self-sufficient in primary foods. With over 4000 food production companies, the country has the most developed food processing and manufacturing sector in Southern Africa. It also has a competitive horticultural sector, producing wine, fresh fruits and vegetables. Quality fruit is exported to the world's largest markets in Europe, the Far East, and the Americas. In 2009, exports of fruit, vegetables, pastes and juices amounted to R2.8bn. Well-known brands include Ceres fruit juices which are shipped primarily through the Cape Town port to other parts of Africa, often following the expansion of the Shoprite retail chain there, and further afield. Export quality standards are governed by legislation enforced by the South African Bureau of Standards, the Department of Agriculture, and the Perishable Products Exports Control Board. Innovation in the fruit industry is based on the development of new cultivars in support of pest and disease resistance, storage ability, shelf life, and product improvement. The industry also experiments with multi-layered plastic technology to substitute cans (Henderson 2010).

Tobacco consumption is on the increase in developing countries, with about one billion smokers worldwide, and five million in South Africa. Six MNEs dominate the industry globally. In South Africa alone, the industry employs 35,000 people. South Africa's major manufacturer is British American Tobacco which has 84 per cent of the legitimate local and 15 per cent of the global market. Along with agricultural production generally, tobacco production has fallen in the last few years. Local farmers compete against cheaper products from Zambia and Malawi. But there is growing demand both locally and for exports, and expansion programmes are in place. The industry is researching new products in the form of less harmful alternatives to tobacco, such as smokeless Snus (Fox 2010).

Agro-processing contributes 10 per cent to GDP and employs five per cent of the economically active population (DTI 2006). The food part alone accounts for more than three per cent of GDP (Henderson 2010).[11] The sector has attracted a number of international and local companies that use South Africa as a base to reach the domestic market as well as other countries in Africa (Republic of South Africa 2006; see Table 1). The major players include Unifoods, Nestle, National Brands, Tiger Brands and Premier Foods,

[11] Agro-processing also includes non-food products such as fibre, (bio)fuel, and industrial raw materials.

Clover, Pioneer Foods, Foodcorp, Illovo and Langeberg Holdings. The large local players are much smaller than their global counterparts (e.g. Felgenhauer and Labella 2009). The increasing presence of food products from multinationals on domestic markets has intensified local competition and places pressure on local firms to innovate in terms of what products they currently offer, and how they produce them. Whereas large agro-industrial firms have the resources to invest in process and product innovation, smaller firms do not always, and their linkages with larger firms are generally weak (Felgenhauer and Labella 2009), meaning that they are becoming increasingly vulnerable.

Table 1 – International and local companies operating in the South African agro-food industry

Company	Country	Industries
Unilever	Netherlands	Processed foods
Coca-Cola	USA	Beverages
Parmalat	Italy	Dairy, beverages
Nestle	Switzerland	Processed foods
Danone	France	Dairy, beverages
Kellogg	USA	Cereals, processed foods
HJ Heinz	USA	Processed foods
Pillsbury	USA	Beverages
Virgin Cola	UK	Beverages
Cadbury-Schweppes	UK	Processed foods, beverages
Minute Maid	UK	Beverages
McCain Foods	Canada	Processed foods
Dole	USA	Fruit and vegetables
Del Monte	USA	Fruit and vegetables
Catmark	France	Fruit and vegetables
South African Breweries	UK	Beverages
Bulmers	UK	Beverages
Tiger Brands	South Africa	Cereals and beverage, culinary, confectionary and health care products
Premier Foods	South Africa	Processed foods
Clover	South Africa	Dairy products
Pioneer Foods	South Africa	Cereals, processed foods
Foodcorp	South Africa	Processed foods
Tongaat Hulett Group	South Africa	Sugar
Langeberg Holdings	South Africa	Processed foods
National Brands	South Africa	Processed foods
Illovo Sugar	South Africa	Sugar

Source: Emongor (2008)

Some firms cover numerous parts of the value chain. Tiger Brands is vertically integrated into both primary production (grain milling) and retailing. Tongaat-Hulett has backward

linkages into primary production of raw materials for processing into food commodities (TIPS 2009).

The growth of the domestic market over the years has compelled MNEs to explore opportunities in neighbouring countries. For example, SABMiller originated in South Africa and now has brewing and beverage interests in 30 African countries. Coca Cola employs 16 per cent of its labour force in Africa (Felgenhauer and Labella 2009). The combined revenue of the 111 largest African agro-food companies places the sector second after the oil, gas and fuel industry in the continent (Felgenhauer and Labella 2009).

Parts of the agro-food industry have adopted a business model that links small scale farmers into the supply chain by assisting them in passing barriers to entry, mostly related to quality and safety standards. Contract farming schemes provide security of supply and monitor and ensure integrity of the product through better planning of cycles and limiting exposure to global market fluctuations. For example, British American Tobacco sources tobacco leaf directly from smallholder farmers (Felgenhauer and Labella 2009). But this only works for those smallholders who manage to adhere to the product variety and quality standards imposed downstream. Large supermarkets often source food products directly from their preferred supplier who can meet their volume of demand and food safety and quality specifications. Hence while modern retail structures generally benefit urban-based consumers, they can be intensely challenging to upstream producers (cf. Jacobs 2009).

The competitive dynamics of the agro-industrial sector have resulted in an unprecedented need for specialized professional competencies, including in new bio- and nanotechnological materials and applications. The level and magnitude of professional expertise that is available to enterprises largely determines their position within the sector's increasingly globalized value chains. The education systems of most developing countries are not, however, producing sufficient numbers of graduates with the skills required to meet the technical and competitive challenges posed by a rapidly evolving agro sector, in part because their curricula are slow to adapt to technical change characterising the industry (Wilkenson and Rocha 2008).

In the Western Cape, food, beverages and tobacco is the second most important manufacturing activity in terms of both value and employment. In manufacturing, it accounts for roughly a fifth of output and one in five jobs. Its relative contribution to provincial income is higher than in any other province (Kaiser Associates 2006). In 2008 its products led provincial exports with close to R10bn. The sector employs a large number of people with low and medium skills. Due to spatial saturation of agricultural production, the agro-food value chain has been evolving to more capital-intensive forms of production and niche markets.[12] Especially in the wine sector, linkages with knowledge producers help to make the industry globally competitive (cf. Lorentzen forthcoming). Although dominated by large players, there are opportunities for small capital-intensive manufacturers of niche food products. However, SMEs tend to be disadvantaged by a regulatory environment developed primarily for large firms. Overall, the potential of the sector is held back by a lack of linkages

[12] Spatial saturation has not prevented some farmers from selling land to developers of housing or golf estates. Urban edge legislation therefore has a direct bearing on the land constraint.

between food production and other relevant activities within the agro-food value chain, such as transportation, logistics, tourism, and so on (OECD 2008).

2.1.1.2 Interviews

Six mostly large firms in agro-processing participated in the study, ranging from 50 to more than 4,000 employees. Two are subsidiaries of foreign MNEs, four are South African MNEs. With one exception they are all based in Cape Town. One subsidiary sells only to the domestic market, all others export. One company only exports. Their competitors are other MNEs and in some instances retailers who source their supplies directly.

Reasons for their presence in Cape Town (or Johannesburg) include one or more of the following.

- The first is history. They were originally established in Cape Town or surrounds and their continued presence has more to do with their past than with an optimal solution to a search among alternative locations. Although it would in some cases be possible to replicate their location elsewhere, it would entail significant transaction costs that are not worth incurring.
- The second is proximity to input or output markets. This refers, inter alia, to grapes and other kinds of fruit (e.g. apples and pears) and to customers of the products retailed through supermarkets and other retail outlets.
- The third is Cape Town's attractive living and natural environment. This makes it easy to attract and retain staff. Also, in the context of products that are associated with nature, the natural beauty of Cape Town's surroundings bestows marketing advantages (see Box 1).

Box 1

The Western Cape in general is an advantageous location for the firm. The natural beauty of the landscape is a major asset. For example, if we host a potential client from Russia on one of our estates, the complete experience of waking up and breakfasting to the view of the surrounding mountains, driving through the winelands, and eating out in Franshoek means that the client is often sold even before they have tasted any wine.

Agro-processing, Paarl

All firms report some problems with human capital (see Table 2). One firm complains about poor education and alcoholism of low-skilled staff. Two identify a general shortage of technical skills. Three firms (including the one in Johannesburg) report that high-level skills must be recruited internationally and two say that it is easy to attract expats to Cape Town. Two firms (including the one in Johannesburg) identify finding qualified black candidates, especially at senior level, a big challenge. On the positive side, two firms find suitably qualified people at universities throughout the country and at Cape Peninsula University of Technology (CPUT) and Stellenbosch University (SUN) in the Western Cape.

The interviewees report various problems with infrastructure. This includes the lack of IT bandwidth, the cost of overland transport, and the poor condition and slow operation of the

sea port. In addition, the inefficiency of the transport system is seen to impede business partnering and adds to the cost of hired labour.

Three firms have more or less formal relationships with a few universities. In three cases this involved research partnerships. For the Johannesburg-based firm, the University of Cape Town (UCT) was the single most important university in the Cape; for the others, it was SUN but the University of the Western Cape (UWC) and CPUT also play a role. One firm laments the absence of a trade-free zone whose establishment could incentivize inter-firm relationships. Another suggests that a partnership between the city, the universities and the private sector should address the skills problems in a networked way.

Regardless of the distance to the global technology frontier, the external environment is key for learning and upgrading. All firms reporting in-house research also underline that they learn from external knowledge which they access through their group, in the form of equipment imports, or on international trade fairs. Local universities play a role here by supplying contract research. For three firms in-house research leads to new products on which their competitive advantage lies. Disadvantages for the Cape-based firms result from the water scarcity of the Western Cape and the energy intensity of the production process (such as guaranteeing temperature-controlled environments in cold chains etc.).

All but one firm make critical comments about government, though not primarily at the municipal level. Overregulation and inefficient operation of the sea port is a prominent issue. One firm suggests that the city could play a role in facilitating discussions for interested firms to run a dedicated freight train service to Johannesburg to reduce outbound transport costs relative to road haulage.[13]

There is no evidence of a collective industry response to any of these problems. As far as human capital is concerned, firms train in-house and then provide incentives to keep their staff from moving elsewhere. When it is not possible to find suitably qualified employees locally, they bring in expatriates. This often solves the immediate problem but merely defers solutions to equity, BEE accreditations, and so on. One firm suggested that a partnership between the private sector and academic institutions, coordinated by government, might address the skills shortages. The Cape Higher Education Consortium (CHEC) could play a role here.

Shortcomings in affordable public transport are addressed through subsidies to ensure that workers do not spend a disproportionate amount of their wages on commuting.[14] But no firm on its own has the clout or resources to address shortcomings in infrastructure. One firm thus suggested a joint initiative between interested firms to organize a regular dedicated freight train for the service from Cape Town to Johannesburg.[15] Others try to raise problematic issues with government officials. What applies to all these problems is that they impact on current operations but are likely also to be a constraint on future growth.

[13] Such an arrangement would obviously only be viable if there were interest in using the service for inbound traffic as well.

[14] The provincial government subsidises Golden Arrow buses but fare increases on popular routes have led to questions how effective the subsidy is in facilitating affordable transport.

[15] How feasible and sustainable this would be would depend among other things on the nature of goods (perishable or not) and whether or not they are subject to seasonal cycles.

Table 2 -- Cross-cutting themes and issues in agro-processing

Human capital	
Basic education	The basic education of workers is poor.
Artisans	See technical personnel.
Technical personnel	In agriculture there is a shortage of technically trained people, including at the very high end (e.g. winemakers).
Management	Junior management have a high turnover rate. Middle management lacks experience. Senior management do not have enough global exposure. The human resource pool is generally too small.
Black professionals	Recruitment of black managers is a big challenge (including in Jhb).
Physical infrastructure	
Public transport	Public transport is too expensive for workforce. Goods transport by rail is largely dysfunctional.
Roads	Overland transport in SA is very expensive.
Port	Delays in the vetting and clearing of fruit for export diminish fruit quality and raise storage costs. Congestion and day-time only operation impedes throughput.
Airport	No issues.
Electricity	Electricity price increases affect electricity-intensive perishable food operations.
Telecommunications	The high cost of telecommunications and broadband raises cost of coordination of MNE operations from Cape Town.
Logistics	See public transport and port.
Property and land supply	No issues.
Sector-specific infrastructure	
Other	The metropole's infrastructure is not sufficiently integrated to facilitate a higher degree of business partnering between firms in e.g. the CBD and outlying areas.
Government: economic policy issues	
Degree of engagement with the economy	No specific issues reported.
Training and skills policies	No issues reported, but see above under human capital.
Sector-specific policies	No issues reported.
Nature of the regulatory framework	Department of Agriculture's detailed inspections of exports delay port clearance of overseas shipments.
Institutional arrangements	No issues
City leadership and vision	No issues

All firms interviewed for this study compete globally, either directly or through the multinational group to which they belong. A central element in their strategy and in their success is that they invest in learning and upgrading. This takes different forms. It includes in-house research on higher quality or new products and packaging. R&D alliances with international leaders, including parts of the same MNE group, lead to advanced knowledge absorption of the local partners. This is not an automatic process but the outcome of systematic searches. The location-specific asset that allows for such partnerships to materialize is the relatively low cost of research and development (R&D) personnel compared to advanced economies. Proximity of involved firms and tertiary education institutions, especially SUN, facilitates localized knowledge spillovers in the form of a better

understanding of what is technologically feasible in connection with what is commercially desirable.

For example, one firm undertook a joint venture with a European company that located biotechnological R&D related to fruit in Stellenbosch. The European firm draws on highly qualified scientists from SUN and a sophisticated local fruit market. The local firm gets access to expertise in biotechnology. Relevant departments get an opportunity to engage in commercially relevant research. The scope for such activities is related to the degree of heterogeneity of the relevant markets. For example, where tastes are nationally idiosyncratic or where soil and climatic conditions are highly specific, a local subsidiary must have scope to develop a commensurate product. But such products may then become attractive also in external markets.

Other firms rely more heavily on re-engineering products that have proven successful in the market. Rather than competing at the technology frontier, their strength lies in absorbing knowledge and adapting the resulting product, while trying to reap economies of scale. The product in question is then not inferior to the one that first made it to market; it is merely introduced with some delay.

Most firms employ processes that are based on capital equipment which is world-class. Its introduction is often facilitated by engineers from the foreign manufacturer that train local operators. Hence the production environment is little different from that of their advanced peers -- this also explains why it happens that products developed in South Africa by a MNE subsidiary are subsequently introduced to other parts of the world through the group.

In the agro-industry, smaller players avoid low-cost competition which they cannot win against their overseas competitors, especially from Asia, by targeting niches with highly customized, higher-value products. Key for such strategies is to be tuned in to global knowledge flows and tap into the latest developments by, for example, attending relevant trade fairs. Another factor that accounts for success is the presence of a relatively large local market.[16] Especially for the development of more sophisticated products it is important to have a critical mass of discerning customers (cf. Porter 1990).

Certain agro-processing firms benefit from the presence of other activities in the province. For example, the wine industry shares an interest with the tourism sector in promoting the region. The experience of the region by tourists influences the marketing of wine. Another company has "in"sourced back office functions of the group, thus exploiting the emerging strength of Cape Town as a BPO location.

Not only do localised knowledge spill-overs exist, but there are also backward linkages. For example, large beverage or dairy and bakery manufacturers source from ingredient manufacturers which are exposed to both local and international competition and so have an incentive to upgrade quality while keeping prices competitive, and to look for new ingredients.

[16] The OECD (2008) alluded to the importance of urban consumption as an economic driver.

Limited opportunities for entrepreneurship exist. The size of the companies interviewed, the complexity of their value chains, the quality requirements of their products, and their global distribution imply that many source mainly from relatively large suppliers, and not from really small enterprises that are unlikely to meet the demanding requirements of the respective value chains. But there are exceptions. One firm, based in Johannesburg, developed a particular food product in response to nutritional deficiencies typical for South Africa's poor population. Because this product was subsidized and could therefore not be sold through traditional large outlets, the firm devised an innovative micro-distribution system that involved formerly unemployed people who were first trained and then given an opportunity to distribute the product in townships. Such a system would be viable in Cape Town provided the product were manufactured in the Western Cape which it currently is not, because transport costs from Gauteng are too high for local distribution.

The interviewed firms are based in different locations, namely Bellville, Paarl, Stellenbosch, and Westlake. In addition to the reasons mentioned above, logistics play a role for the location of additional establishments around the city (such as Parow or Epping Industria), in the province or nationally.

Institutional arrangements that matter for the competitiveness of some firms include the absence of government support for research into problems that affect a subsector at large, for example water scarcity, and not just individual producers.

The difference between Cape Town and Johannesburg lies in different kinds and manifestations of agglomeration economies. Johannesburg represents a larger share of the national market. It is also closer to some suppliers (e.g. dairy from KwaZulu-Natal) but proximity to suppliers is less important in large parts of this sector. Cape Town is closer to other suppliers (e.g. grape growers) whose product is best processed close to source. Some Cape Town based firms therefore maintain sales offices in Johannesburg. But firms in both cities benefit from knowledge inputs that are not necessarily local in origin in that Gauteng-based universities supply research to firms based in the Western Cape, while universities in Cape Town do the same with firms in Johannesburg. Hence it is important not to exaggerate the role of proximity between knowledge producers and users for competitiveness in this sector. There is evidence of localization economies in Cape Town, as alluded to above, especially in the wine industry. One company is headquartered in Cape Town, manufactures in Gauteng, and ships its products to its customers in other parts of Southern Africa by road or through the Durban port. Hence it is not the case that firms targeting the Southern African market necessarily have to be located in Johannesburg.

2.1.2 Oil and gas

2.1.2.1 Sector overview[17]

The production of oil and gas is divided into upstream, downstream, and retail economic activities. The first refers to exploration and extraction, the second to refining, and the third to the customer interface (such as petrol stations). On the whole, firms work in one of these areas. However, the global apex firms in the sector - the so-called supermajors - are vertically

[17] This overview draws largely on Norwegian Marine Technology Research Institute (2010).

integrated from upstream to retail: ExxonMobil (USA), Royal Dutch Shell (Netherlands), BP (UK), Chevron (USA), ConocoPhillips (USA), and Total (France).

The supermajors are placed at the top of a highly tiered industry, or in other words a hierarchy of supplier and sub-supplier relationships. Several of the second tier suppliers to these firms are large multinationals in their own right, for example Haliburton and Schlumberger. These firms co-ordinate a network of third, fourth, fifth, etc tier firms. In South Africa there are few first or second tier firms; the local supply base is mostly third tier or below. More specifically, the sector in Cape Town is largely comprised of third (and below) tier firms servicing the needs of upstream service providers to supermajors and other first tier firms operating on the West coast of Africa. South Africa has exploration, some production, and refining in Mossel Bay. Cape Town also has a refinery. In addition to these established operations, new opportunities arise out of new upstream activities in South Africa and especially the West African operations.

The recent financial crisis had a significant effect on expenditure on oil and gas exploration and production. But oil and gas activities in West Africa actually grew slightly during this period (ODS Petrodata and Baker Hughes, 2009). This is partly because of the general economic recovery in late 2009, and partly because of heavy investment from India and China. In fact, growth in the Africa region is expected to continue – the major growth regions in the offshore oil and gas sector in the medium term will be Africa, including East Africa, and Latin America (Westwood 2009). African offshore spending from 2009 until 2013 is projected to amount to approximately $270 billion, of which capital expenditure is estimated to around $160 billion.

A total of $53 billion was invested in the oil and gas sector in Africa in 2007; of this, $15.6 billion was directed to West Africa, largely to Nigeria (UNCTAD 2008). Nine percent of all known oil reserves and 12 percent of oil production are found in Africa, and over the past 10 years Africa has accounted for 25 per cent of the world's newly proven oil reserves (EIA 2009). Africa's proven oil reserves of 117 billion barrels amounts to 8.7 per cent of the world total of 1,342 billion barrels. Major oil producing countries in Africa include Angola, Cameroon, Chad, Congo, Equatorial Guinea, Gabon, Nigeria and Sudan. The largest of these are Nigeria and Angola. The Western Cape is geographically well positioned to tap these large and growing markets for upstream support services.

Key competitiveness factors for firms and cities in the upstream offshore supply sector vary by sub-sector, but largely consist of the availability of specialised skills and technologies, geographical proximity (to oil fields, ports, and land transportation), the availability of infrastructure, and political factors. The technological requirements of the industry have grown progressively more challenging as exploration opportunities are pushed into ever more challenging terrain. However, technologies vary substantially by sub-sector. For drilling firms, specialised drilling technologies (usually brought in from international parent companies) and the availability of suitable engineers, geologists and artisans to operate these technologies are critical. Catering firms, IT systems firms, ship maintenance firms, and so on each have a different profile of technologies that are critical to the sub-sector. It is therefore difficult to isolate a particular set of technologies determining competitiveness in the sector as a whole.

Several key requirements for offshore supply bases (OSBs) are intertwined (e.g. proximity to operations, specialised knowledge, and technical and technological solutions for product and service offerings). Cities can thus create advantage by co-locating firms in a supply base, or even going further than this by integrating their services through an OSB operator. In addition, OSBs can act as facilitators, for example by responding to calls for tenders from oil majors or platform owners.

Cape Town, however, does not have sufficient facilities or firm capabilities to be considered a fully-fledged OSB. Instead, the industry in Cape Town is more focused on maritime engineering than specialised oil and gas sub-sectors. This is a natural consequence of South Africa's historical capabilities and the limited size of the domestic offshore industry. After the ship-building industry in Cape Town collapsed in the early 1990s in the face of the emergence of highly competitive industries in Asia, only ship repair and maintenance capabilities remained.

In 2008 South Africa produced 195,000 barrels per day (bbd) of oil, the large majority of which was synthetic liquid processed from coal and natural gas. Total exports in 2007 were 127,000 bbd. The offshore industry in South Africa is currently limited to PetroSA's operations in the Bredasdorp Basin (off Mossel Bay) and a small West Coast gas field operated by Forest Oil. However, a number of firms have obtained offshore licences and are currently conducting or planning to conduct exploration activity (as indicated below).

In the African context, when compared to regional oil economies such as Angola and Nigeria, South Africa has done comparatively little to develop its oil and gas resources through exploration activities. This is largely because of previously unfavourable legislation. However, the Mineral and Petroleum Resources Royalty (administration) bill was passed in 2009, which brought the South African regulatory framework in line with global standards. It is expected that the sector in South Africa will grow. Companies active in the country have resumed operations that were put on hold while the laws were being changed, and other companies have since moved to secure exploration rights both onshore and offshore:

- The Petroleum Agency of South Africa awarded exploration licences for two of South Africa's offshore areas to Shell and to Singapore-based Silver Wave Energy.
- The Southern Outeniqua Basin is currently being explored by Canadian Natural Resources.
- The deeper part of the Orange Basin is being explored by BHP Billiton and Shell.
- A production licence has been awarded to US-based Forest Exploration International to start producing gas from its Ibhubesi project off the South African West coast (in partnership with PetroSA), with a view to first output in 2013. Forest plans to feed this gas into a 700-MW electrical power plant. The idea of a gas pipeline to Cape Town is also being explored.
- PetroSA is developing the Jabulani gas field off the South coast of the country, with first gas expected in 2012.

Moreover, there are large unexplored areas of South African territory, including far-offshore areas. Geologically, there is a possibility of oil and gas in many areas, including geological structures similar to those found in vast gas deposits of the Kuku field off the coast of Namibia.

The upstream oil and gas sector in Cape Town exists primarily to support offshore operations on the west coast of Africa, with a secondary function of supporting upstream activities within South Africa, and a small role in supporting East African offshore exploration. The membership base of the South African Oil and Gas Alliance (SAOGA) is classified into the following categories: exploration and production; fabrication, construction of new buildings & conversions; repair, maintenance & modifications; engineering & project management; equipment; general services; and materials, spares & consumables. The clients of the SAOGA firms are mostly tier 1 or tier 2 firms operating in West Africa. However, service providers in the area of exploration largely work for tier 1 or tier 2 firms exploring East African oil fields (e.g. Schlumberger), although they also have some domestic clients such as FA-Field, Oribi, Oryx and Sable oil fields in the Bredasdorp Basin.

Fabrication and construction activities range from conceptual design and front-end engineering design to feasibility, engineering, procurement, fabrication, construction, installation and commissioning. Specific technologies employed include fixed systems, floating systems, topside modules, sub-sea systems, mooring systems and sub-sea pipelines. However, the majority of SAOGA firms are in the sub-sectors of marine engineering and construction, including mechanical and electrical engineering services for ship repair and maintenance. This is because Cape Town is used as a base for standard upgrades and maintenance of offshore vessels, particularly of submersibles. Major international service providers also use Cape Town as a regional hub for supply and support services, which accounts for the large number of 'soap, rope and dope' suppliers[18] based in Cape Town.

Cape Town's shipyard facilities are located in the mixed-use area of the Waterfront and inside the commercial port proper, including three dry docks and the use of the A-berth as a dedicated area for ship repair, upgrades and maintenance. This berth has been dedicated by the National Port Authority (NPA) to the offshore oil and gas industry, and has since been leased to DCD Dorbyl. Dorbyl are currently undertaking a major upgrade of the A-Berth's facilities. This includes storage facilities, a stacking yard, workshops and crane facilities. Under an agreement with the NPA, 50 per cent of the berth's facilities will be made available to other firms in the sector. However, even the planned upgrades by Dorbyl will not be sufficient to bring the infrastructure in line with global standards, largely because of space and building restrictions.

The largest dry dock, the Sturrock, was state of the art when it was built during World War II, and is still the largest dry dock in Africa. However there have been few modifications or upgrades since it was built, and no investment or maintenance in recent decades. The smaller Robinson Dry dock currently mostly serves smaller fishing vessels.

The potential for the expansion of these facilities is limited by a conflict of interest with the National Port Authority (NPA), which focuses on developing container facilities and expanding the harbour for tourism.[19] The NPA aims to streamline and enhance container

[18] These are suppliers of all the day-to-day essentials on vessels.

[19] Conflicts are not just sectoral -- container or tourism or cruise liners versus oil&gas -- but also intragovernmental; although the City is evidently influenced by developments at the port, national planning does not systematically involve inputs by the City.

operations and infrastructure in order to achieve alignment with international maritime industry standards. Also, the container business generates most of the NPA's revenue and is important to Transnet's bottom line. Cape Town has the potential to act as a transit hub between South America and Asia, as well as a feeder hub for regional operations. The NPA's port development plans also aim further to develop the area to cater better for the development of the tourist industry, since this generates more revenues directly and indirectly through employment in related industries, for example the V&A Waterfront. In 2009, approximately 209,000 people were employed in the tourism sector in Cape Town, as opposed to a maximum of 13,500 in the ship building and repair sector (Statistics South Africa 2009). There is evidently a conflict of interest which may be one reason why the oil&gas sector is facing an uphill battle.

Tourism activities have elsewhere been pitted against oil and gas development. In cities such as Singapore and Shanghai, as well as port areas such as Canary Warf in London, old ports have given way to office construction and tourism development, and their port functions moved elsewhere, mostly to newly constructed facilities nearby. The Marintek report argues that it would be very difficult, if not impossible, for the medium to long run development of Cape Town's sea port to allow for the development and expansion of tourism, the container port, and the oil and gas industries simultaneously (Norwegian Marine Technology Research Institute 2010). This view raises the question of where a potential greenfield facility could be based. Saldanha is one option, but this is currently rendered unfeasible by iron ore dust from the Kumba export operations, which would cause ongoing and significant damage to the instrumentation used in an oil and gas supply hub.

Moreover, while the NPA at a local level is the owner, operator, and manager of these facilities, the NPA's financial decisions are based at a higher-level budget and revolving 5-year strategic plans which are influenced in turn by Transnet's business model and strategic plans.

Against this background it is unsurprising that Cape Town's facilities do not match the needs of a modern OSB. The key infrastructure shortfalls include the size and availability of lifting infrastructure (especially 'Goliath' cranes) and a shortage of port warehousing facilities. Since there is little space allocated within the port to the industry, it has become highly fragmented (with the largest cluster in Paarden Island). There are little or no key support infrastructures for the oil and gas industry located close to the harbour where the major upgrades, repair and maintenance work are done. This includes workshops and stacking areas. Finally, the very poor condition of the dry dock is a cause for ongoing complaints; it is nowhere near meeting the docking requirements of modern rigs and drilling vessels.

Due to their heterogeneity, the exact contribution of oil and gas activities to provincial product has never been estimated, including in the context of the MEDS which commissioned studies of the sector in the middle of the last decade. According to Quantec data, in 2008 gross value added of petroleum products, chemicals, rubber and plastic (SIC 331-338) amounted to roughly four per cent of city and province gross value added (GVA), but this is not an appropriate proxy for this sector. In November 2008, the South African Oil and Gas Alliance estimated that the local ship repair industry amounted to 78 firms, employing about 3,500 people, from unskilled labourers to highly qualified engineers.

2.1.2.2 Interviews

Five firms and a SPV participated in the study. Three firms are foreign MNEs, one a South African MNE, and one a domestic firm. The foreign firms are leaders in their areas of activity. Major industry players are among their customers. Three firms are headquartered in Cape Town and two in Johannesburg. They are involved in activities along the value chain – from the construction of upstream and refinery facilities, drilling support, ship repair and maintenance, refinery and back office support. These firms are all large but their workforce in Cape Town ranges from under one hundred to several thousand. They all compete globally although a few concentrate on various markets on the African continent.

The major reasons for those firms with headquarters or specific divisions locating in Cape Town are the port with its relative proximity to the West African exploration activities and the clustering of both upstream and downstream oil and gas activities in Mossel Bay, Saldanha, and Cape Town itself. In addition, Cape Town has strong skills in BPO and affords a pleasant lifestyle. By contrast, Johannesburg is chosen as SA's corporate heartland with its associated commercial linkages and also because it has better access to black staff.

The sector seems to have more problems with low-level and artisan skills than high-level skills (see Table 3). Firms report that high-level skills are either available (but this does not apply to black people) or can easily be imported. Local staff are also sent for training abroad. Gaps also exist for planning engineers, estimators and project managers. The absence of marine engineering degrees at local universities exacerbates this. The real bottleneck is artisans. Although such skills can be trained locally and thus are even in boom periods not an operational challenge, they are a constraint on growth.

All firms are unequivocal about the seaport (see Box 2). They complain about dilapidated equipment, inefficient operation, and unresponsive management. One firm occasionally trucks supplies to East Africa overland in order to avoid port delays. In sum, the port delivers substandard services at high cost. One firm opined that Cape Town is competitive only because Singapore is so far away. Transnet is accused of treating the port like a parking lot that generates fees instead of exploiting its considerable potential for economic development in the region. The BPO operation additionally criticizes the lack of sufficient bandwidth.

Firms differ in respect of their links with universities. Some do not have any, although for example the BPO operation demands that the education system be linked more closely to the needs of the sector. Others source graduates several universities in the country and send them abroad for training. In exchange for access to recruiting, one company sponsors equipment at a local university for a programme whose graduates they are interested in. This has the advantages that graduates emerge already trained in the relevant proprietary equipment. There are also dedicated marine management courses, and some collaboration on research of geological formations with another local university that then provides highly trained graduates. There is also some training cooperation with DTI, MerSeta, and the SPV.

Box 2

The current dry dock facilities are not kept up to date, have not been modernized or upgraded for the past twenty years, and the facilities are deteriorating badly. When a crane brakes down it is not repaired. It is simply moved to a corner and left to rust. The port authorities neither have attitude or the aptitude to fix the cranes. They just use the dock as a cash cow and do not re-invest in the facilities. 20 years ago dry dock equipment included four cranes, a power supply, compressed air, and a fresh water supply. These services are not available any more; meanwhile the rest of the world has invested and technologically advanced. Now ship repair firms must bring in and pay for mobile equipment to supply mobile pumps, mobile generators, mobile cranes, etc. This makes the docking fee in Cape Town the most expensive in the world. Obviously, when prospective clients arrive to inspect local facilities they are less likely to award contracts to local ship repair firms.

Ship repairs, Cape Town

The foreign MNEs source most of their knowledge internally through the group. This can be bi-directional, especially insofar technologies move with people. Perhaps the single most important channel for technological upgrading in all firms is the import of capital equipment. In-house innovation also plays a role. The one firm that is a world leader in its field massively invests in R&D in the group. Cape Town's cost structure is relatively competitive with respect to similar operations in Europe or North America, but lies considerably above places like Manila or Buenos Aires.

One firm professes to have a good relationship with provincial government. The others criticize government entities for a variety of reasons. Coordination between the different tiers of government is seen as poor. Transnet is perceived essentially to neglect the dry dock facilities and is generally an intransigent counterpart. It is also remarked that, at the municipal level, Cape Town does not have a "welcoming committee" in form of a one-stop shop for foreign investors to lower initial transaction costs.

The key (related) problems in the sector are Transnet, the Port Authority, and the dry dock. Sidelining by Transnet, poor performance by the Port Authority, and a physically crumbling dry dock are immediate operational problems and also long term constraints on growth. Firms have tried to develop strategies to minimize the negative effects in the short term, for example opting to forward goods by truck, which is far more expensive but more reliable. Firms have also attempted to engage with Transnet through their industry body. However, with little leverage over the problematic actors, there is not much that firms can do to change the situation.

The main market of the sample firms is the West Africa upstream oil and gas sector, and the main clients are MNEs in this arena who can source the relevant services from firms in Europe, the US, and even Asia.. These firms therefore all compete internationally. A set of local advantages contribute to their competitiveness. Cape Town's port is geographically relatively well positioned to service the West African oil and gas sector, the city has access to the requisite skills, and the attractive lifestyle makes it easy to bring in senior executives and their families.

Table 3 -- Cross-cutting themes and issues in oil and gas

Human capital	
Basic education	No issues reported.
Artisans	Artisans often have poor skills at lower levels, which necessitates re-training. The availability of artisans varies inversely to the business cycle, which is a problem in periods of growth. Absolute numbers are also too small to support the initiation of large greenfield projects, which has previously put the brakes on large labour-intensive investments.
Technical personnel	Technical skills are generally available, and where they are not locally available it is not a problem to recruit from abroad. However there are gaps in selected areas and sub-sectors, for example mid-level skills, planning engineers, and project management skills in the ship repair sub-sector.
Management	Generally skills are locally available. Otherwise it is easy to recruit internationally.
Black professionals	Some (but not all) firms have difficulties attracting senior black staff.
Physical infrastructure	
Public transport	No issues reported.
Roads	No issues reported.
Port	Problems with the dry dock are related to Transnet's business strategy. Poor maintenance and management are causes of lost opportunities for growth and employment, particularly in the ship repair and maintenance sub-sector.
Airport	Lack of direct global airlinks is a problem for MNEs.
Electricity	No issues reported.
Telecommunications	No issues reported.
Logistics	Transnet is a major obstruction to employment and output growth of the sector, having prioritised container-moving networks and tourism development over oil and gas. Moreover, the Port Authority is inefficient, slow, unreliable, and overly bureaucratic.
Property and land supply	Insufficient space in the port allocated to oil&gas related activities.
Sector-specific infrastructure	See under port.
Other	
Government: economic policy issues	
Degree of engagement with the economy	Transnet is indifferent to regional development objectives and the needs of firms in the oil and gas sectors.
Training and skills policies	The curricula of local educational institutions need to be more closely informed by industry requirements.
Sector-specific policies	No issues reported.
Nature of the regulatory framework	No issues reported.
Institutional arrangements	Transnet is at odds with the industry. The coordination between the three tiers of government is weak. SOAGA helps with lobbying.
City leadership and vision	City authorities, perhaps in conjunction with other entities, need to engage with Transnet more aggressively.

However, there are many ways in which Cape Town is uncompetitive in relation to other cities. The port is congested, poorly managed, and expensive (see also Norwegian Marine Technology Research Institute 2009). The dry dock is in poor shape and thus expensive to use, which adds costs to the services of the ship repair and maintenance sub-sector, which are allegedly ten times the international benchmark. Limited berth space is available for the

sector. Clients opt to use the services of Cape Town based firms because the geographical and skills advantages outweigh these disadvantages. Yet considerable growth potential is suppressed because of these infrastructural weaknesses, some of which are manifestations of institutional failure rather than strategic choice.

The sector hosts leading MNEs which source world-class technology from within their group. Technological spillovers occur in the relationship between higher-tier firms with their suppliers. Other benefits include the generation of low-skills employment opportunities, particularly in the ship repair and maintenance sub-sector.

Opportunities for entrepreneurship appear to be limited. The industry is dominated by large firms, and at the higher tiers it is dominated by MNCs. There are opportunities for specialised consultancies, but the local higher education system does not currently develop high-level skills in this area.

Geographically, the firms are clustered around the city centre, including locations at the Waterfront, foreshore, harbour, and CBD, as well as in Montague Gardens. In sub-sectors that require the services of the port, proximity to the harbour is a key factor in their decisions about geographical location. In fact, a study commissioned by SAOGA (Marintek 2009) found that the location of the support outside the harbour across many sections of the city makes for inefficient operation and hence militates against what would distinguish a well functioning offshore supply base.

Two firms compete not just as individual entities but their service is intimately linked to Cape Town's location and assets, notably the port and the burgeoning BPO sector. Competitor locations include Bangalore, Budapest and Kuala Lumpur for BPO, and ports in Brazil, Lisbon, Rotterdam, and Singapore, as well as emerging OSB operations in Angola, Nigeria, and Namibia.

2.1.3 Property and construction services

2.1.3.1 Sector overview

The construction and property development professional services sector includes companies providing the services of contractors, builders, engineers and consultants. These companies are involved in the construction, alteration or renovation of residential, commercial, infrastructural and industrial structures. Infrastructural projects cover road, air and rail networks, bridges, water supply (such as dams), sewers, and power grids. Engineers in the sector are primarily civil engineers. Property development services concentrate on companies leasing or selling new, improved or renovated real estate for residential, commercial or industrial uses.

Due to the broad spectrum of construction related activities and a large proportion of contract and informal employment in the industry, estimates of global construction sector output vary. According to Betts et al. (2010), the global construction market is worth $7.5 trillion, representing 13.4 per cent of global GDP. Much future growth will likely come from emerging markets in India, China, Asia Pacific, South and Central America, Middle East, Africa and parts of Eastern Europe. Residential property is the largest sub-sector within the construction industry, contributing approximately 40 per cent to its output.

The top ten global building and construction contractors are from France (Vinci, Bouygues), China (China Railway Group Ltd, China Railway Construction Corporation, China State Construction Engineering Corp., China Communications Construction Group), Germany (Hochtief AG), Spain (Grupo ACS, FCC SA), and Sweden (Skanska AB). No South African firm is among the world's top 225 firms based on revenue. The country's most important firms are Aveng (including Grinaker-LTA), Murray and Roberts, Group 5, Wilson Bayley Holmes Ovcon (WBHO), Stefanutti Stocks, and Basil Read. Numerous companies with an international presence are involved in property development in the Western Cape, for example Pam Golding Properties, Old Mutual Investment Group Property Investments, and Dubai World Africa.

The South African construction sector makes up 3.51 per cent of national GVA (Quantec Easydata 2010) and has been one of the fastest growing sector of the economy. Between 2002 and 2007, average annualized growth was 12.6 per cent, more than double the rate of the economy at large. Approximately 63 per cent of the South African construction labour force is formally employed. There was little employment growth between 1980 and the late 1990s. The residential sector began creating jobs between 2000 and 2005 but of late the global economic crisis has had a severe effect on this activity (British High Commission South Africa 2009). More recently government construction has become the main engine of employment in the sector. Approximately one half of the on-site workforce in the industry is made up of unskilled workers, and the other half of semi-skilled, skilled and supervisory positions (CIDB 2007).

During the recent building boom, skills shortages became acute. Government infrastructure projects under the AsgiSA programme, amounting to some R787bn and focusing on infrastructure in the transport, energy and communication sectors, construction for the 2010 World Cup tournament, and on basic service delivery commenced as the private property boom was still underway. It highlighted skills shortages in the form of engineers, supervisors, and skilled trades. South Africa also competes with many foreign countries for trained artisans and engineers. Construction industry lecturers and trainers are scarce as well. In addition, government office vacancies are high, with shortages at all levels. This impacts on the government's ability to deal with approval processes, and identify, define and deliver projects (UK Trade & Investment 2008).

The upshot of the massive and continued public investment programme is that the construction sector has shown some resistance to the global economic crisis (British High Commission South Africa 2009, Singh 2008). Most major construction companies have become reliant on government work to maintain revenues. Beyond 2010, public investment is supposed to continue in electricity and water infrastructure, port development, airports, roads, railways, prisons, electronic communication and a multi-purpose fuel pipeline between Durban and Gauteng (UK Trade & Investment 2008, South African Government Information 2010).

There are significant barriers to entry for international contractors in South Africa's construction sector (BDO 2010). Lead contractors rely on local suppliers and skills, and local firms dominate the market in South Africa. Occasionally local firms may form joint ventures with each other or international partners (UK Trade & Investment 2008). Foreign firms are

used on projects where specialist skills are required that do not exist in South Africa. The French contractors Bouygues, for example, were brought into South Africa to work on elements of the Gautrain Rapid Rail. The involvement of German architects in the design of the Greenpoint Stadium is another example. Foreign firms often form relationships and alliances with local firms to help overcome regulations and meet BEE requirements on state funded projects (BDO 2010).

It is most common for construction work to be tendered against a full set of construction drawings and bills of quantities. This is the traditional procurement strategy, although the Engineering Procure and Construction Management (EPCM) strategy[20] is also used occasionally, especially on larger projects where the use of professional construction managers is preferred. The public-private partnership (PPP) model has also been put to use on some larger projects. Currently six per cent of public sector projects are procured through PPPs; the Government's target is to achieve 15 per cent. The Gautrain rapid rail integrated transport network is a R25 billion project and the largest PPP project undertaken in South Africa (UK Trade & Investment 2008).

In developed countries, the construction sector accounts for up to 40 per cent of all energy consumption and similar proportions of carbon emissions. Technological innovation in the industry therefore focuses on energy and resource use efficiency (Betts et al. 2010). Building efficiency can be increased and waste reduced by new methods of comprehensive planning of the structure being built. Building Information Modeling (BIM) is a computer-based construction planning method that allows all parties involved in a construction project continuously to update a single, data rich, planning model throughout the construction lifecycle. Used mainly in large and complex buildings, BIM increases information sharing and decreases costly errors and waste.

Other efficient building practices cover a broad spectrum of design techniques, materials and technologies that aim to reduce energy and resource use, and are often considered "green". New practices will often use recycled materials and recycled construction waste. In terms of production management they are inspired by lean manufacturing principles pioneered in Japan in the automotive sector. Production processes, vendors, suppliers, and subcontractors are seamlessly integrated using supply chain management, information sharing, and just-in-time techniques. One example of a relatively new building technique is "tilt-up". Improvements in mobile cranes make it possible to assemble wall panels cast horizontally on floor slabs. Panels do not have to be transported from other sites and give architects a degree of flexibility and freedom to modify designs. Other examples of efficient practices are pre-cast, modular or prefabricated construction. With these techniques buildings can use common products and customise the building façade. The downside of assembling prefabricated parts on location in the South African context is that this innovation involves less labour than traditional techniques. In this sense, the mere adoption (as opposed to subsequent adaptation) of such techniques would pit "green" against "more jobs". In other words in this area local companies cannot simply copy new technologies developed elsewhere without exacerbating the problem of jobless growth. Instead, indigenous solutions that reconcile labour absorption with green and efficient practices are asked for.

[20] EPCM strategy involves full project management, design, cost management and construction management services.

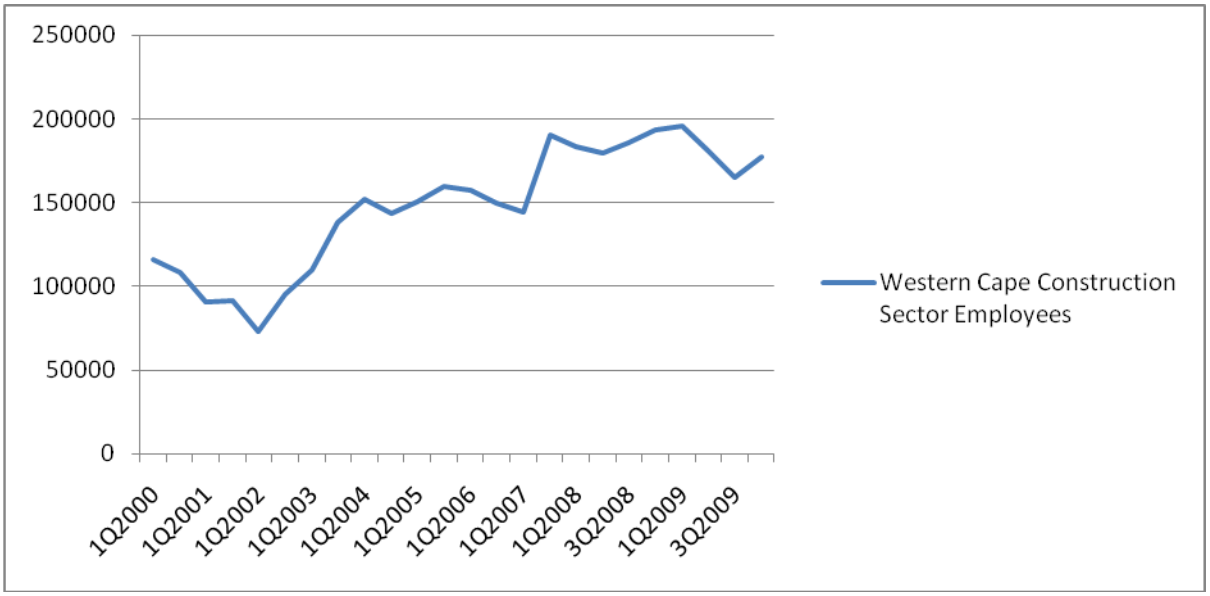
In the assessment of buildings, their lifecycle impact rather than simply the impact of the initial building process is calculated. The use of lighter and stronger, energy-efficient, and recyclable materials can lower costs and improve sustainability. These developments benefit from new standards such as the Leadership in Energy & Environmental Design (LEED) green building certification system. The Green Building Council of South Africa (GBCSA) became the thirteenth full member Council of the World GBC in September 2008. To date, South Africa lags countries such as the UK, Germany, and the US in the shift towards green building practices.

GBCSA has introduced a rating system, setting standards and benchmarks, and is promoting the use of green technologies. In addition the Council for Scientific and Industrial Research (CSIR) is aiming to test and debug green technologies in South Africa. But a shift towards first-world technologies and green building would require a major shift in building design, materials, production, assembly, and a shift from unskilled to skilled labour. This would require greater investment, better qualified human resources and an overall change in the industry's mindset. It is for these reasons that the building and construction industry will continue to use traditional bricks-and-mortar in the foreseeable future and change is likely to be slow (CIOB Africa 2008). If construction projects in Cape Town demanded the use of such techniques and materials in order to reduce the city's carbon footprint, the city might reap benefits in terms of being recognized as a "greening" entity.

It is estimated that of the R158.6bn invested in South African building and construction in 2006, R95.1bn went to the materials sub-sector. Most of the building and construction materials required by the South African construction industry are manufactured locally. Imports of the major inputs are low and generally occur only when shortages arise. Imports are higher for high value products such as ceramic tiles, taps and sanitary ware. Imported products are predominantly sourced from China, Eastern Europe and Latin America at lower costs than similar locally produced products. Local builders and service providers are used by the major contractors, although specialised skills may be sourced from foreign countries on occasion (CIDB 2007).

The construction sector contributes just over four per cent of total GVA in the Cape Town Municipality (Quantec Easydata 2010). Due to its labour intensity and relatively high absorption of unskilled labour, it is important for job creation and for promoting inclusive economic growth. Employment in the Western Cape in this sector has grown rapidly since 2000 and increased by a factor of 2.7 by early 2009, accounting for 9.3 per cent of the labour force in the Western Cape (StatsSA 2000-2009, see Figure 1).

Figure 1 -- Construction sector employment, quarterly growth 2000-2009



Source: StatsSA Labour Force Survey (2000-2009)

An important issue concerning construction and property services in some areas of the Cape Town metropolis is land scarcity due to the specific urban geography. Different areas within Cape Town are experiencing varying degrees of demand for property after the recent property boom. The best performing areas were those with land scarcity, especially those fringing Table Mountain National Park. The Cape Town-Fishhoek-Simonstown sub-region, for example, showed no house price deflation 2008-09 whereas the Milnerton-Melkbosstrand region had a year on year house price decline of nearly 9.5 per cent in 2009 (Loos and Kellerman 2010).

2.1.3.2 Interviews

Six firms and one industry body participated in the study. They are involved in construction, development or property services. All firms are domestically owned, two are multinationals. All but one are headquartered in Johannesburg but all also have offices in Cape Town. The Cape Town operations are responsible for the Western Cape and other provinces or undertake back office functions. They are large firms with 78 to 1,000 employees in the Cape and up to more than 10,000 in the country. The majority only operates in the domestic market, but two supply services in the rest of the world and especially elsewhere in Africa and India. They compete against each other, against SMEs who underbid bigger operators on local projects, and against foreign firms from China and Malaysia that have made inroads into Africa.

The location of these firms is determined by their most important growth markets. Hence even firms whose headquarters were originally in Cape Town followed demand to Johannesburg. Of note is that expansion into Africa is perceived as easier from Gauteng. Retaining a presence in Cape Town is mostly for regional work and to continue to liaise with local customers.

Obtaining experienced staff, is problematic for all firms, albeit to differing degrees (see Table 4). Skills are in short supply across the board. This was especially evident during the boom period when artisans were lacking. CPUT was mentioned in particular as training graduates with useful practical knowledge but engineering and design skills must be sourced both nationally and internationally. All four local universities supply graduates. In-house training, supported by external service providers, supplements these efforts. One company supports prospective engineers with bursaries to study at three local universities (plus the University of Pretoria) and intern placements. Internships are intended to help bind promising students to a company and expose them to the demands of the workplace. Although no firm mentioned it, the emigration of skilled coloured artisans to Dubai or Australasia probably exacerbates the skills shortage in net terms.

Regarding infrastructure, one firm complains about urban sprawl which places a burden on otherwise good bulk services, and an ambiguous commitment to densification. Another criticizes IT bandwidth. The industry body further underlines the inadequacy of the public transport system. Transnet is criticized for not really understanding the requirements of port expansion which is why so little is happening on the port front.

Cape Town Partnership in conjunction with the City and the CCID is credited for spearheading the very successful drive to improve the CBD's investment climate by rejuvenating the inner-city. This is borne out by rising property values and very low vacancy rates in an environment where comparable assets in other cities lost in value.

But the firms in this sector are for the most part very critical of the city bureaucracy (see Box 3). In part this seems to be due to lack of capacity, especially with respect to experienced engineers. In addition, there is a high turnover of officials, making it difficult to maintain working relationships and to create institutional memory. Firms complain of high vacancies -- one alleged example is the real estate department with a staff complement of 15 than ran with only two staff in 2009. One interviewee volunteers the opinion that the resulting lack of service is dangerous in that it may induce developers to obtain what they need through other means.

Box 3

The approval of building plans that do not ask for any derogation from existing zoning and comply with national legislation should be straightforward, say within six weeks. But the city council staff can take nine months to do it.

Property services, Cape Town

The planning department is singled out as particularly problematic. An illustration cited by several firms is the recent calculation of the cost of the bus rapid transit system which underestimated the required resources approximately by a factor of three. In the eyes of the firms, this incident is symptomatic of more systemic problems. In addition, firms maintain that Cape Town is the slowest city in the country with respect to plan approval, with officials regularly asking for extensions of up to a year. This affects developers primarily but has

knock-on effects on construction companies. Plan approval rates improved with the recession but the firms fear that backlogs will materialize as soon as demand increases. The city is also alleged to levy unusually high charges on developers. In one instance, a firm claimed that the city charged R1.6m to close 11 parking bays during construction for a year, and thus "recovered" a multiple of the amount foregone had they remained open. Other performance areas that are weak by international standards are functions such as the rates clearance of sold buildings. Repeated discussions of these issues with the city have reportedly been to little avail.

Table 4 -- Cross-cutting themes and issues in construction and property services

Human capital	
Basic education	No issues reported.
Artisans	There are not enough artisans, especially in boom periods.
Technical personnel	There is a general scarcity of civil engineers and other technical personnel in the country.
Management	No issues reported.
Black professionals	No issues reported.
Physical infrastructure	
Public transport	The existing public transport system does not support plans to densify the city.
Roads	No issues reported.
Port	No direct issue with the port. But prime property between the port and Milnerton that belongs to Transnet could be used for development if it belonged to the city.
Airport	No issues reported.
Electricity	No issues reported.
Telecommunications	Bandwidth is insufficient and too costly.
Logistics	No issues reported.
Property and land supply	The issue is not with land supply per se but with city (planning) processes. See below.
Sector-specific infrastructure	No issues reported.
Government: economic policy issues	
Degree of engagement with the economy	Officials are rarely available to help address bottlenecks in council.
Training and skills policies	Firms use learnerships to address their training needs.
Sector-specific policies	No issues reported.
Nature of the regulatory framework	Planning and approval processes of the city highly problematic: slow, occasionally ineffective, not sufficiently transparent.
Institutional arrangements	The Cape Town Partnership has played an important role in improving the CBD.
City leadership and vision	The vision of the city for densification and a more compact city is not clear. The city also doesn't market Cape Town properly to international investors.

According to most firms interviewed, Gauteng performs much better (although one firm claims that this is because officials there do not follow the rules, such as environmental impact assessments, while those in Cape Town do). In the past, this was made worse by political interventions in the bureaucratic process. But firms remark that even today civil officials at times seem to be at cross purposes with political officials. They also report that

officials are not readily available for clarifications or to solve problems, despite public declarations to the contrary. Understaffing contributes to this problem. Based on these perceptions it is difficult to claim that Cape Town is business friendly.

The property industry in Cape Town does not know whether the city has a clear plan for densification. The relatively good infrastructure of Cape Town suffers with urban sprawl which is why this issue needs to be addressed. Of course, developers are themselves pushing the urban edge, too. It is a complex issue because densification can only work with an efficient public transport system which in turn would act as a catalyst for further densification. The Integrated Zoning Scheme needs to be completed as well to create more transparency and reduce uncertainty for investors. For example, currently regulations still require four parking bays per 100 square metre of office space. This contradicts the needs of a compact city because it would translate into impossibly deep parking garages for buildings of a certain height. Such regulations do not provide incentives for people to switch to public transport.

Firms also suggest that the city could market Cape Town better to international investors. The perception of crime should be addressed especially.

In sum, construction and property firms deal with a number of challenges. Skills shortages manifest themselves with particular urgency in boom times and hence are less of a problem in the current recessionary environment and with many World Cup driven projects having been completed. Firms manage this by investing in training. This involves unskilled hourly labour, learnerships for semi-skilled workers, and bursaries for prospective engineers. Such students have often been previously screened as interns. Firms with offices in more than one location move staff around to where it is most needed. Attracting people to Cape Town is generally easy. Firms also train external workers through supplier development programmes. When bottlenecks persist, firms head hunt the required personnel, including from abroad.

There is no evidence that firms "manage" the planning and authorization difficulties referred to above, although a few interviewees alleged that corruption is one of the outcomes of the absence of speedier processes. One interviewee contends that negotiations with city officials generally bear little fruit. These issues are "managed" only in the sense that firms end up bidding on fewer tenders than they otherwise might simply because resources are tied up in each bid that may last a long time to resolve. The slow speed of and the delays in planning processes are related to the business cycle. They are therefore less of a problem at the moment but are likely to become more serious again. A not-yet-practiced but possible solution to address weaknesses in city planning would be to undertake more PPPs, with developers being involved in projects from inception.

Since the majority of the firms interviewed in this sector service the domestic market exclusively, they are by definition not globally competitive. However, two companies are active in international markets, and several indicated plans to expand into Africa where they will compete against large international construction companies, principally from China and other developing countries, but presumably in due course also from the developed world. The relevant question therefore is whether they have capabilities that will allow them to weather this competition.

It is clear that South African construction firms are aware of, but do not yet widely use the latest available building techniques.[21] More efficient building techniques for residential homes such as factory built, modular, pre-cast or prefabricated panels are not yet accepted by the local market. In addition, the regulatory system does not favour "green" building materials and technologies, thus foregoing incentives to promote technical change in the sector. At the same time, the firms learn about these techniques from their competitors and on international trade fairs or also from other cities. Hence, although there is a substantial technology gap, they are aware of activities at the frontier. Mastery of such techniques would require a certain scale of usage which is not yet in the offing in South Africa, except in the context of the public infrastructure programme where local firms learnt state-of-the-art techniques from their international partners. Internal innovation management systems exist to identify relevant new processes or products and diffuse them throughout the organization. Capital equipment is often imported from advanced economies and is world class.

Knowledge within large construction firms has benefits for smaller firms in the economy. This is in part because large developments massively rely on subcontracted tasks, with all the attendant opportunities for entrepreneurship. Suppliers benefit indirectly through the adoption of good practices, especially when they have longer-term relationships with a large firm, and directly through supplier development programmes. In turn, the existence of many smaller construction firms introduces competition in the local market, and the majors also learn from their suppliers. Individual workers who might otherwise be unemployed also benefit because contracts normally stipulate that a certain percentage of local workers must be hired in the area where the development takes place.

The single biggest obstacle to investor certainty appears to be the planning processes in the city. Although this may not drive firms away, it reduces the attractiveness of the city to investors. At the same time, Cape Town's attractiveness as a location, and especially the vibrant and safe CBD, offer developers and construction companies a lot of opportunities.

Compared to Johannesburg, Cape Town reaches a smaller market. This is in part because neighbouring African countries are easier to reach from Gauteng. However there is one firm with interests in other African countries whose main office is in Cape Town and whose staff regularly commute to its other office in Johannesburg. Capetonians allegedly prefer and are more loyal to local companies than to their competitors in Johannesburg or elsewhere. Cape Town's bureaucracy is allegedly relatively less efficient than Johannesburg's, and a claim is made that this is also true in comparison with relevant global cities, be they in Brazil, Eastern Europe, or Asia. Whereas approvals in Johannesburg may take some six months, similar applications in Cape Town can sit for up to four years. Other cities around the world, including in emerging markets, implement their development schemes more consistently and are thus relatively more attractive to foreign investors. A parallel with other sectors is that the construction industry prefers to keep its back office functions in Cape Town. This is relevant for the BPO sector (see also Section 3 in Turok 2010).

[21] Of course there are exceptions, such as the stadiums newly erected for the World Cup.

2.1.4 Creative and design

2.1.4.1 Sector overview

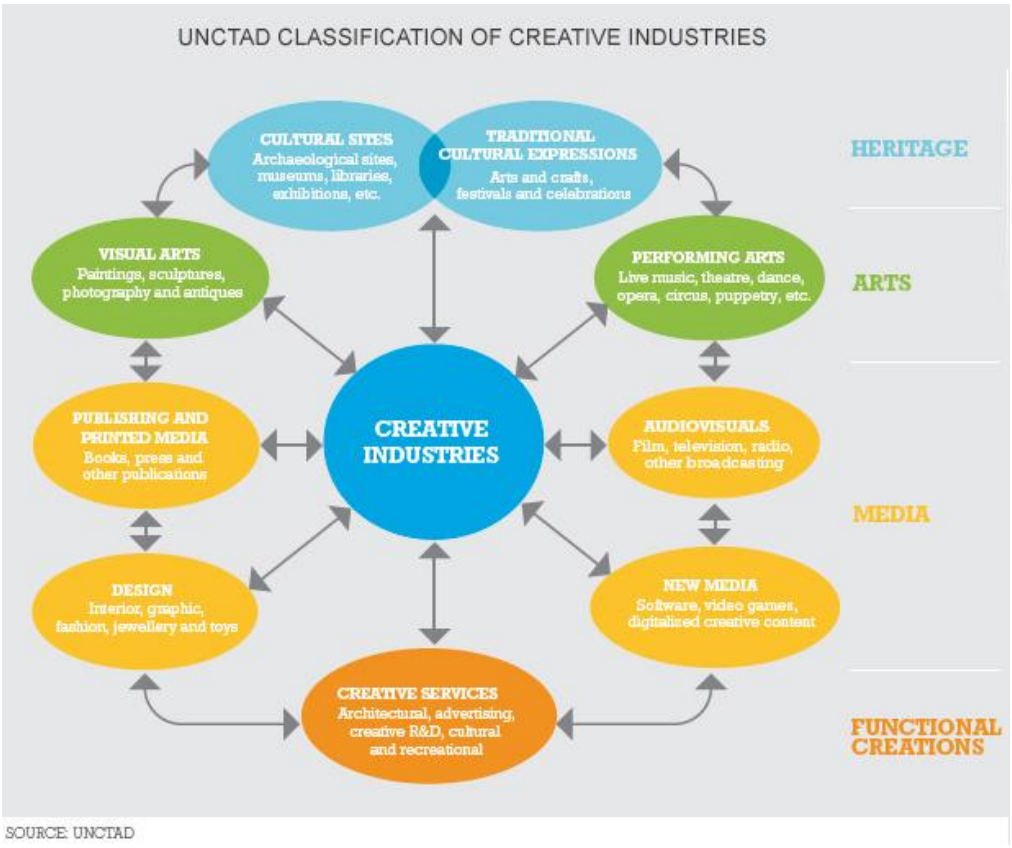
The creative sector or the creative industries do not have a generally agreed upon definition. Moreover there are both differences and overlaps between the terms creative industries, cultural industries and creative economy (Hesmondhalgh 2002, 11-14, UNCTAD 2008, 12). Most common definitions of the creative industries include R&D as a creative activity. This is in line with one of the popular yet controversial texts in this area, *The Rise of the Creative Class* (Florida 2002), which conflates notions of creativity in the arts and creativity as expressed in innovative activity. For example, Lash and Urry (1994, 117) suggest that a core property of the creative industries is "the exchange of finance for rights in intellectual property" (see also Landry and Bianchini 1995, 4 and Howkins 2001, 88-117).

For the purposes of the Cape Town Competitiveness study, it makes sense to separate these two notions in order to retain the use of the creative industries as representing a sector (cf. Hesmondhalgh, 2002, DCMS 2006). One definition is "those industries which have their origin in individual creativity, skill and talent and which have a potential for wealth and job creation through the generation and exploitation of intellectual property" (DCMS 2001, 4). This definition recognises eleven creative sectors: advertising; architecture; arts and antique markets; crafts; design; designer fashion; film, video and photography; software, computer games and electronic publishing; music and the visual and performing arts; publishing; and television and radio (DCMS 2006, see Figure 2).

A particular set of economic properties is more strongly evident in the creative industries than other sectors. According to Caves (2000), these are:

- *The nobody knows principle*: Demand uncertainty exists because consumers' reaction to a product are neither known beforehand, nor easily understood afterward.
- *The art for art's sake principle*: Workers care about originality, technical professional skill, harmony, etc. of creative goods and are willing to settle for lower wages than offered by "humdrum" jobs.
- *The motley crew principle*: For relatively complex creative products (e.g. films), the production requires diversely skilled inputs. Each skilled input must be present and perform at some minimum level to produce a valuable outcome.
- *Infinite variety*: Products are differentiated by quality and uniqueness; each product is a distinct combination of inputs leading to infinite variety options (e.g. works of creative writing, whether poetry, novel, screenplays or otherwise).
- *A list/B list*: Skills are vertically differentiated. Artists are ranked on their skills, originality, and proficiency in creative processes and/or products. Small differences in skills and talent may yield huge differences in (financial) success.
- *Time flies*: When coordinating complex projects with diversely skilled inputs, time is of the essence.
- *Ars longa*: Some creative products have durability aspects that invoke copyright protection, allowing a creator or performer to collect rents.

Figure 2 -- UNCTAD classification of creative industries



Source: UNCTAD 2008

Globally, the creative industries (excluding R&D) accounted for around four per cent of world economic output in 1999. In recent years this is estimated to have risen to seven per cent, representing some $1.3 trillion in value. In 2005, global trade in creative products and services amounted to $424 billion or 3.4 per cent of total trade. This is expected to rise. The complex supply chains in the creative industries make it difficult to calculate accurate figures for the gross value added by each sub-sector. For example advertising is tied to other creative sub-sectors, such as print, film, television, radio, online media, and design. South African total advertising expenditure in 2007 amounted to R23.5bn. The share of developing countries in global creative exports rose from 29 per cent in 1996 to 41 per cent in 2005 but to date Africa's participation has been marginal (UNCTAD 2008). The creative industries thus play an increasing role in developing countries, with potentially significant consequences for the development of new export markets and significant multiplier effects throughout the broader economy (Cunningham et al 2009).

The dominant players in the global creative economy are comprised of the major firms in each of the sub-sectors. These firms are not all large but also include SMEs in specific locations, especially in other creative cities, and it is the firms in their environment that influence competitiveness. In one of several fairly arbitrarily constructed league tables, UNESCO's global Creative Cities Network includes the following cities, by creative sub-sector:

Literature: Edinburgh, Scotland; Melbourne, Australia; Iowa City, United States
Film: Larne, Northern Ireland
Music: Bologna, Italy; Seville, Spain; Glasgow, Scotland; Ghent, Belgium
Folk Art: Aswan, Egypt; Santa Fe, U.S.A.; Kanazawa, Japan
Design: Berlin, Germany; Buenos Aires, Argentina; Montreal, Canada; Larne, Northern Ireland; Nagoya, Japan; Kobe, Japan; Shenzhen, China; Shanghai, China
Media Arts: Lyon, France
Gastronomy: Popayán, Colombia; Chengdu, China

The convergence of multimedia and telecommunication technologies has allowed integration of the means by which creative content is produced, distributed and consumed and has, in turn, fostered new forms of artistic and creative expression. At the same time, the deregulation of previously state-owned enterprises has paved the way for growth in private sector investment. Thanks to digital technology, the range of media through which creative content is conveyed to consumers, such as video-on-demand, music podcasting, streaming, computers and the provision of television services via cable, satellite and the Internet, has expanded. New communications technologies (digital, mobile and Internet) allow a new generation of consumers not only to expand their range of cultural experiences, but also to adding their own input, thus becoming creative in their own right. Technology advances have also led to cost reductions in this area.

In many countries, creative industries are concentrated in the largest cities (see Lazzaretti, Boix, and Capone 2008 for evidence on Italy and Spain). However, this does not necessarily imply that space is somehow uniformly related with creativity across the industry. For example, in design consultancy which requires a wide range of different types of knowledge, it is the interactions between different sites – rather than a single creative space – that synthesize knowledge to produce new designs. This underlines the importance of firm competences and client relations as opposed to the cultural environment per se as drivers of success (Sunley et al. 2008). A recent study of the creative industries in the Netherlands found outside Amsterdam little evidence for measurable spillovers from creative industries per se, but underlined the role the creative class can play for employment growth *across* sectors (Stam, De Jong, and Marlet 2008; see Mok 2009 for an analysis of Hong Kong's creative sectors to the local economy).

Cape Town's Central City area – from Greenpoint in the West to Salt River in the East – hosts a number of creative industries and also comprises most of the areas labeled as creative hubs, where entire buildings or parts of districts are dedicated to creative industries, including 210 On Long, The Old Biscuit Mill, Media Hive, Bandwidth Barn and The District (Joffe and Newton 2007).[22] Cape Town's creative potential is due to various structural factors in its favour. The "creative class", whose primary economic function is to create new ideas, new technologies or creative content, in turn relies on technology, talent and tolerance. Technology relates to the local innovation system; talent relates to having the appropriate lifestyle to attract and retain creative workers; and tolerance of diversity is necessary to

[22] Creative Cape Town has produced a series of GIS-enabled maps that illustrate this. See www.creativecapetown.net/creative-cape-town-maps/.

attract a mixture of people and create an open environment conducive to new ideas (Florida 2002).

Several of South Africa's top advertising agencies are located in Cape Town, including Ogilvy, BBDO, Saatchi & Saatchi, FCB, and The Jupiter Drawing Room. Also, some of the country's best known advertising schools are based in Cape Town, namely Red and Yellow, AAA, and a branch of Vega Brand Communication.

The creative sector also includes online media. Online media is driven by increased internet penetration and usage. South African advertising expenditure on the internet grew from R135m in 2004 to R254m in 2007, a growth of almost 90 per cent. This is on the back of a rapid growth in the number of individual internet users active in the market, up from 3.4 million in 2007 to 4.9 million in 2008 alone. The primary driver of the online media sector is advertising expenditure. This is channeled through online sites which draw in users with their content, for example news sites, social networking sites and special interest sites. Dominance of this market was initially taken by firms specializing in print publishing that already had competences that could be transferred to the online area – for example Naspers, Independent Newspapers, Avusa, Caxton and the Mail&Guardian. However specialist online firms have since emerged to become significant independent players. Other types of online media have a business model that charges for content or information, for example e-learning, academic journals, and e-books.

Although the South African market is under-developed, it is not insignificant. In 2008 the South African online media market was twice the size of Ireland's and comparable to Norway's. As in the print media sector, online media is dominated by Media24, a division of Naspers. Its website, 24.com, came into being in 2006, and has since become the country's top website in terms of unique hits. All the major South African newspapers have online sites, most prominently IOL, which draws its content from the Independent Group of newspapers. Despite initial fears that online media would damage the newspaper industry, they are now perceived to be complementary – a view in which online content is seen as the core business of media firms, amplified by print activities.

Naspers has used its local success to pursue an aggressive global acquisitions strategy. Since 2008 it has bought stakes in Grupo Abril, Brazil's second-largest media company; South African messaging service MXit Lifestyle; Russian website Mail.ru; UK-based internet auctioneer Tradus, which operates in eleven European countries; mobile TV services in Namibia, Kenya and Nigeria; MIH Holdings (an international content provider active in 50 countries); Tencent, a leading Chinese internet business; Ibibo, an Indian social networking start-up, and Sanook!, a leading Thai portal. These purchases have expanded the already large Naspers Group, which is now a thoroughly global player with group revenue of R26.7 billion in 2009 (Google's 2009 revenue was $23.9 billion, or approximately R180 billion, while media giant Facebook earned only $300 million, or R2.3 billion). For some of the key players in the South Africa, see Table 5.

Table 5 – Online media in South Africa

Rank	Website	Unique Browsers March 2008	Unique Browsers March 2007	% Unique Browsers growth since March 2007	Publisher
1	news24	1,127,796	782,835	44%	Media24
2	MSN	747,371	-	-	MSN
3	MWeb	618,133	578,139	7%	MWeb
4	Webmail	599,584	503,793	19%	Interface
5	Hotmail	597,854	-	-	MSN
6	iol	585,374	509,422	15%	Independent Online
7	24.com	518,903	-	-	Media24
8	CareerJunction	310,710	231,136	34%	CareerJunction
9	SuperSport	290,290	143,340	103%	SuperSport Zone
10	Yellow Pages	262,340	174,220	51%	Yellow Pages South Africa

[Source: OPA - Nielsen Online, ZA Market Intelligence, March 2007 – March 2008]

The potential of the creative sector has drawn the attention of policy makers at provincial and city levels. The Micro Economic Development Strategy (MEDS) identified creative industries as a key priority area for investment and development and estimated that jobs in the sector amounted to at least 50,000 (2007). Given that other cities have made the creative sector a central pillar of their development strategies and place marketing, there are lessons to be learned. Creativity has spatial-organisational driving forces and the question is whether and how they can be steered by public administration. In Berlin, for example, its many communities of practice have the potential of self-organisation and self-governance, yet there is tension between the autonomy of creative production on the one hand and the need for professionalization on the other (Lange, Stöber, and Mieg 2008). Which mix of public and market mechanisms best frame policy in support of the creative industries is not just context-specific but also depends on industry-wide trends such as consumers that become co-creators of value in the context of networks that in turn become important as generators and stores of value (Hearn, Roodhouse, and Blakey 2007).

Institutional frameworks at central and local level also constrain the development of creative and cultural industries in Beijing and Shanghai. Each city's own historical, socio-economic and political institutions influence why cities differ with respect to subsectoral competitiveness and structure. Which sectors succeed particularly well is an outcome of thickening a particular set of place-bound cultural and creative institutions. In China, it is the state that builds those institutions but of course this can be different elsewhere (Liu 2008; see also Chang 2008). For example, in the London Borough of Hammersmith and Fulham where the BBC is located which is supposed to be an anchor for other creative activities, the rejuvenation of a neglected place called White City is residential-led (Creative in White City 2008).

At the city level, the Creative Cape Town initiative operates within the public-private partnership structures of the Cape Town Partnership. The Initiative conducted a survey in

2008 that identified 750 creative enterprises in the central city. The largest sectors, as measured by number, were the film industry, visual arts, advertising, and design. There is little economic data for these firms, but as an example, the film industry alone had a turnover of R2.03bn in 2006, when it was one of the biggest growth sectors of the city's overall economy (Mitchell 206 quoted in Wentzel 2009, Davenport 2009).

UCT, SUN, and CPUT provide education and training in creative fields. CPUT houses one of the largest design faculties in the country, including one of only two industrial design programmes. Disciplines include fashion, surface design, interior design, multimedia and architectural technology. Other design-oriented schools in the City include the College of Cape Town, Red & Yellow, AAA, Vega Brand Communication, the Advertising College of Southern Africa, Inscape, City Varsity and the Fab Lab at the Cape Craft and Design Institute.

The Cape Town Design Network 2010 is an informal network that enables designers from different disciplines to interact with each other. The network is co-ordinated by Creative Cape Town in collaboration with The Cape Crafts and Design Institute, Cape Fashion Council and CPUT's Faculty of Informatics and Design. This is a one year initiative that assists the work of Creative Cape Town in promoting the Cape Town central city as a design centre through the East City Design Initiative. This initiative champions a design-friendly district east of the City, where the Central City meets District Six, specifically the area between the Grand Parade and the Good Hope Centre. The aim is to foster incubators (subsidised studio spaces for emerging designers and access to technical resources, such as rapid prototyping facilities), showrooms and exhibition spaces, broadband, affordable housing, networking, and information-sharing.

Creative organisations that have been in this area for a while or have recently settled there include The Cape Craft and Design Institute and the Fabrication Laboratory, the Cape Town Fashion Council, several small fashion and interior designers' studios, ICT firms, sound studios and film-related companies, advertising businesses, film producers and photographic studios, the new Fugard Theatre, the Book Lounge, the Assembly live music venue, the Central Library in the restored Drill Hall, the Grand Parade (site of the 2010 FIFA Fan Fest), and the Cape Peninsula University of Technology's Faculty of Informatics and Design. Cape Town has also been hosting international events in the different creative sectors for many years, such as the Cape Town International Fashion Week, the Cape Town International Jazz Festival and the Design Indaba, which attracts 30,000 visitors every year to a world class design conference.

A recent initiative is the construction of the R430m Cape Town Film Studios (CTFS) in the Southeast of the city. The complex will be the first of its kind in Africa, with state-of-the-art support services. The major shareholders are Anant Sing, Marcel Golding, the City of Cape Town and the Provincial Government. To date, this is the largest single investment in the film industry. It is hoped it will ensure the existence of permanent film infrastructure in the province and increase investment in the sector. Construction of the studios should provide employment for more than 8,000 people, and these workers will come mostly from the neighbouring areas, such as Khayelitsha, Blue Downs, Crossroads, Gugulethu and Mitchells Plain. This investment is an example of overcoming spatial segregation by creating

productive activity closer to where people live, thus alleviating the constraint of the transport system.

2.1.4.2 Interviews

Five firms and three SPVs participated in the interviews. Three firms are domestically owned, two are a domestic and a foreign MNE, respectively. Activities include advertising and marketing, media, (architectural) design and urban planning, and film. The industry bodies represent film, craft, and fashion firms. Two firms are headquartered both in Cape Town and in Johannesburg, the others in Cape Town only. Employment ranges from fewer than 20 to a few thousand. All firms compete both in the domestic and the global market.

Two of the domestic firms are headquartered in Cape Town for historical reasons. The third relies on the natural diversity and long summer daylight hours of the area, replete with highly competent human capital, including artisans. Others confirm the existence of sophisticated complementary assets and the creative, cosmopolitan environment. The MNEs also appreciate the quality of life in the city which makes it easy to attract talented staff. For one firm proximity to customers has become problematic due to the relocation to Johannesburg of two of its major accounts.

Skills on the whole are not a major issue (see Table 6). In advertising, local skills are good and international staff are easy to attract. Staff turnover to freelance is high, but local universities produce a ready supply of new recruits. The only problem is senior black staff who do not like to live in the Western Cape. Local architects are not as highly trained as their best international counterparts, but creative people like to come and work in Cape Town so there is no real bottleneck. In film, graduates are often too theoretical and not sufficiently versed in the practical aspects of work. In addition, animation skills are lacking. Post-production skills, i.e. sales and distribution, are also a problem. In the fashion world, especially the private training institutes turn out qualified graduates. In craft, although skills are rarely formal, people are creative and take advantage of skills training programmes.

Design firms are unanimous that bandwidth is insufficient for them to send what regularly amounts to large volume data transmissions (see Box 4). This undermines their competitiveness when time is of the essence. In addition, the film industry complains that government owned buildings are not available for shoots whereas the private owners charge exorbitant fees. The city's transport system is problematic for the craft sector. It does not facilitate connectivity and discriminates against poor people who, for example, find it difficult to attend fashion events at night.

Design and creative firms are very well networked with the higher education sector. Cooperation includes teaching and internships. Technological upgrading differs from activity to activity and with respect to the sophistication of the core activity. In fashion, designers are given access to sewing machines they would not be able to afford themselves. Promising graduates are drawn into Fashion Week to give them exposure. In media, international knowledge workers are important because firms claim that local engineers are not of the same calibre as their counterparts. Technical change is driven internally as well as absorbed through the participation in global knowledge flows, including through copying. The domestic MNE has R&D centres in Europe that feed back into the group.

Box 4

The only significant technological impediment is the lack of available bandwidth. Since most outputs are digital, this creates a problem, especially internationally. For example, sending a fully rendered broadcast-quality movie abroad is a very slow process, which is problematic in a deadline-driven industry that is also highly iterative in its client interactions. We are putting in place digital asset management systems and work flow processes to try to mitigate this, but this has limited effectiveness in the context of low bandwidth availability.

Creative, Cape Town

The competitive advantage of this sector relies mostly on the depth of creative talent found locally. Creative firms report that Cape Town has a tolerance of new ideas with a strong cosmopolitan influence. The city's social heterogeneity is also an asset in that it allows to develop challenging perspectives on life in contemporary South Africa. The creative environment benefits both small and large firms, as well as those aiming at niche markets and those in the pursuit of mass appeal.

The firms in this sector are rather critical of government, both because it does not do (well) what it is supposed to be doing and because it does not match the existing creative environment with a creativity of its own, for example in urban planning and economic development. Thus, in the case of one firm, over a period of a decade, slow decision making and bureaucratic paralysis in the context of political instability have convinced it not to undertake an investment which would have created thousands of jobs. In addition, city government is said not to have a vision in which to foster growth in the creative sector, despite its considerable spillover and linkage effects. Although city and provincial government may be more responsive than national government, the City is not perceived as a strategic partner in development, despite the fact that there are various policies and incentives supporting individual creative sub-sectors, including SPVs, rebates (for example for film production), and organisations such as the East City Design Initiative. However, co-ordination and co-operation between the diverse institutions supporting the creative fields is inadequate.

The biggest problem for firms in this sector is infrastructure related. Slow and expensive broadband compromises competitiveness and is a long-term constraint on growth. Firms feel fairly powerless in the face of this challenge. However, the arrival of the Seacom cable and the second national operator gives them hope that conditions will improve in the medium term. Some firms manage the problem by taking interim steps, such as establishing data management systems that make transfer slightly faster, but the resulting improvements are relatively small. Firms argue unanimously that the installation of fibre-optic cables and related broadband infrastructure in the city would make a big difference to the sector's competitiveness.

Table 6 -- Cross-cutting themes and issues in creative and design

Human capital	
Basic education	No issues reported.
Artisans	No issues reported.
Technical personnel	With a few exceptions, sufficient technical skills are available.
Management	Cape Town is a desirable location for the creative class and easily attracts management talent.
Black professionals	Difficult to attract to Cape Town.
Physical infrastructure	
Public transport	The absence of a comprehensive public transport system discriminates against poor creative workers in peripheral areas.
Roads	No issues reported.
Port	No issues reported.
Airport	No issues reported.
Electricity	No issues reported.
Telecommunications	Expensive and slow broadband is a major constraint on many creative activities, including advertising, film, and online media.
Logistics	No issues reported.
Property and land supply	Slow response times in the planning department depress investments.
Sector-specific infrastructure	A render farm would be useful for any data-intensive creative sectors, particularly those rendering code into 3d images, such as advertising firms, the film sub-sector, online media, etc.
Government: economic policy issues	
Degree of engagement with the economy	There is some engagement but in select instances neither elected officials nor civil servants are available to address issues for protracted periods.
Training and skills policies	The SPVs provide training and this is positive.
Sector-specific policies	Support for individual sectors could be better coordinated to elicit synergies.
Nature of the regulatory framework	No issues reported.
Institutional arrangements	The many entities that support the creative sector do good work but are not embedded in a joint, comprehensive strategy in support of the creative city.
City leadership and vision	Cape Town promotes creative activities but does not have a vision of itself as a creative city.

The slowness and unhelpful attitude of the planning department is another problem. Firms have little or no leverage with which to manage this problem. They attempt to build relationships with the city and individual officials, but to date to limited effect. Some claim that officials in the City block each other.

Despite differences in size and ownership of the interviewed firms, they all face international markets to a greater or lesser extent, and share a global outlook. For some firms the global outlook results from a lack of scale economies that their competitors in Johannesburg can achieve thanks to Gauteng's larger markets. While Johannesburg-based firms can therefore afford to be oriented to the domestic market, firms in Cape Town must look abroad to be viable. In this sense, Cape Town competes with cities such as Seattle more so than with Johannesburg.

Capetonian creative firms are able to compete on the international stage for three principal reasons. First, the physical environment is an asset for several creative sub-sectors, for example film. Second, the lifestyle attracts creative workers and knowledge workers from South Africa and abroad, thus giving firms access to the requisite skills. These skills are cost-competitive with developed economies, and have the advantage of widely-spoken English; moreover, the city attracts creative and knowledge workers from all over the world which is an asset when facing international markets. Third, firms actively pursue global markets rather than focusing on domestic markets in competition with similar firms in Gauteng. The technologies required in the creative sector are for the most part easily transferable, and are becoming more so. In the film post-production sector, for example, purchasing world-class hardware that cost millions of Rands just a few years ago, is now available for a fraction of the price.

Spillovers and opportunities for entrepreneurship are substantial in the creative sector. Demand-generating firms, such as advertising agencies and foreign film studios rely on several tiers of suppliers and service providers. This supports Cape Town's established network of small support firms and individual freelancers and consultants.

The three SPVs were all located in the Eastern part of the City Bowl, within the area designated for the East City Design Initiative. Of the firms, two were located in the central CBD, and the remaining three in areas peripheral to the central city (Woodstock, Observatory, and the Waterfront). Choices of location were partly influenced by the creative environment of the central city and flanking districts. For example, a firm in Woodstock reported that the dynamic and varied street culture stimulated creativity.

2.1.5 Retail

2.1.5.1 Sector overview

Retailers sell finished consumer products which they purchase from wholesalers, manufacturers or farmers in bulk and sell to consumers in smaller quantities. The emphasis in this study is on formal retailers, selling to end-users through supermarkets, discount stores, convenience stores, and hypermarkets.

The retail sector accounted for approximately nine percent of global GDP in 2006 (ATKearney 2006). In 2008, the US market was $4.1tn and China's $1.6tn, three times as large as Germany's ($0.5tn). South Africa ($88bn) was comparable with Argentina ($77bn). In 2010, South Africa has the twentieth-largest retail market globally and is the largest market in Sub-Saharan Africa by a wide margin (EIU 2010b).

South African retailers have started expanding into the largely untapped African market. There are risks such as long supply chains and currency volatility. Developing local procurement has also proven difficult and the vast majority of dry foods and fruit and vegetables are sourced from South Africa. On the other hand retailers can often obtain higher profit margins. A secondary motive for expansion is obtaining first-mover advantage. The largest retailers, Shoprite, Pick'n Pay, SPAR, and Woolworths have all established a presence in other African countries (Winter 2007).

The Deloitte Touche Tohmatsu and STORES Magazine Global Powers of Retailing report for 2010 ranks Shoprite Holdings Ltd., Pick n Pay Group Ltd., Massmart Holdings Ltd., and SPAR Group as the 130th, 143rd, 166th and 169th largest retailers in the world respectively, based on 2008 retail sales. These four firms plus Metcash, all locally owned, make up 80 per cent of retail sales in South Africa. Shoprite, Massmart and SPAR were also ranked 40th, 48th and 49th respectively when positioned on compounded annual growth rates between 2003 and 2008. Shoprite had an average growth rate of 17.4 per cent. Massmart and SPAR both had average growth rates of 15.8 per cent. Fast moving consumer goods (food in particular) are the focus of most top retailers; this is also true in South Africa.

South African wholesale and retail trade accounts for some 12 per cent of gross value added. In 2008 South African retail sales totaled R728.5 billion and were made up of 54.3 per cent food and 45.7 per cent non-food items. In the past few years a growing black middle class, high rates of urbanisation, increasing disposable income, shopping centre development, increased car use, more working women, infrastructure investment, mass housing, rising population densities, and stores offering credit in a low interest rate environment have bolstered retail growth. Retail sales fell by 9.1 per cent in 2009 owing to the global credit crisis, a lagged effect of increased borrowing costs between June 2006 and June 2008, conditions imposed by the 2007 National Credit Act and increasing inflation up to this period (EIU 2010).

Retail in South Africa has been experiencing a number of trends that also characterize the sector internationally, such as an increasing concentration and centralisation and a decline in the number of outlets in rural areas. During the 1990s centralisation first affected dry goods, then fresh goods, and finally chain supermarkets. The majority of goods now go through distribution centres owned by supermarkets. Wholesalers have also become more specialised and standardised with growing economies of scale. A number of wholesalers have also become vertically integrated with restrictive contracts and joint ventures. Woolworth's wholesalers are a case in point (Blottnitz 2007).

Preferred supplier contracts and wholesaler joint ventures have resulted in independent wholesalers losing ground. Local or regional wholesalers may be particularly affected as supermarkets move towards centralised procurement systems. An example in Cape Town is the city's decision in 2002 to lease out the Epping market, long the Western Cape's largest wholesale market for fresh produce. The market, despite its size and fame, was under pressure from supermarkets sourcing fresh produce directly from suppliers or using their own wholesalers.

More recently discount stores have also been acquiring a growing share of the retail market (Blottnitz 2007). Currently the average distance of a supermarket from a South African residence lies at less than two kilometres (Winter 2007, 4). Supermarkets make up only two percent of all food retail outlets, yet account for 55 per cent of national food sales and are the most important distribution channels for food suppliers. Pick 'n Pay, Shoprite, SPAR and Woolworths dominate grocery retail sales (Blottnitz 2007). The slow movement of larger retailers into townships is seen as a future growth area and will likely put many smaller retailers out of business (EIU 2010).

Small-scale retailers have shown some resilience in both low income settings and high income settings. In low income settings the small-scale retail saves on transportation costs and often has a personal touch. Less mobile groups tend to have reduced choice for shopping, although households may buy groceries in bulk and share the cost of a trip. In high income settings ethical, environmental and health concerns can favour small scale retailers. Convenience stores with higher prices are also often favoured by consumers with high incomes, busier lifestyles, longer working hours and little free time (Blottnitz 2007). The same factors are behind South African consumers' increasing demand for convenience foods (ready-to-eat meals and chilled prepared foods) (EIU 2010).

Due to a high degree of food self-sufficiency in South Africa, the majority of produce in supermarkets is sourced from local suppliers. Supermarkets still require imports of unique products and fruit and vegetables when out of season (Winter 2007). Both domestic and foreign players make up the processed food sector in South Africa. The two main local companies are Tiger Brands and Foodcorp; Unilever (UK/Netherlands), Nestlé (Switzerland) and Danone (France) are foreign MNEs. The consumer goods sector, especially clothing, white-goods and PCs, is poorly developed and largely relies on imports. PC imports are dominated by US companies Hewlett-Packard, IBM and Dell. Amalgamated Appliances imports, manufactures and distributes branded household appliances; LG Electronics (South Korea), Samsung Electronics (South Korea) and Nu-World (South Africa) are other large players (EIU 2010).

E-commerce is an important technological change in the industry. In principle it exposes retailers to a larger number of suppliers and customers to a larger number of retailers, and aims to improve customer relationships and lower procurement costs. In South Africa the full potential of online retailing is hampered by a relatively weak postal system and the high cost of broadband. In fact, companies in South Africa have been slow to adopt e-procurement. The main focus in the Western Cape remains on keeping transactions between suppliers and retailers cheap, rather than focusing on transactions between retailers and customers (Cloete and Warden 2003). However e-commerce is still growing quickly, albeit from a small initial figure; in 2006 and 2007, respectively, online sales grew at 30 and 35 per cent to R929 million. Pick 'n Pay, Woolworths, Kalahari.net, Exclusive Books, M-Web ShopZone, and Digit Mall have developed online retailing sites (EIU 2010). Other innovations include multi-channel retailing (MCR) and electronic data interchange.[23]

Within the metropole, wholesale and retail trade accounted for 14 per cent of urban GVA. After business services and financial services and insurance, wholesale and retail is the third biggest economic sector. The Western Cape has the second highest per capita retail density in the country after Gauteng, at fewer than three businesses per 1000 population (Blottnitz 2007). Gauteng and the Western Cape are seen as the most saturated markets for formal retail in South Africa. The 8200 fast moving consumer goods (FMCG) stores in the Western Cape make up 17 per cent of the national turnover for this sector.

[23] See the forthcoming background paper on the technology gap for more detail (Lorentzen et al, forthcoming).

2.1.5.2 Interviews

Five firms that are either domestically owned MNEs or part of a foreign owned MNE participated in the study. One is headquartered in Durban, another one shares headquarters between Cape Town and Johannesburg, all others are based in Cape Town. Their product portfolio ranges from fruit, vegetable and other food to clothing, general merchandise, furniture and appliances. Firm employee totals range from 600 to 10,000 in the Western Cape alone, and 30,000 for all outlets across the whole country. Sales through own outlets take place nationally, in neighbouring parts of Southern Africa, but also in Australia and the Middle East. Sourcing of supplies varies by product portfolio; whereas the food retailers use mostly national and local, including small suppliers, the others import up to 50 per cent of their wares.

The headquarter location of all five firms is due to a mixture of historical reasons – this is where companies started out – and proximity to major markets, both suppliers and customers. One Cape Town-based firm in particular benefits from the proximity to the clothing manufacturers. Another that operates a decentralized retail model says that HQ location is not that important; it is in Cape Town despite the fact that its largest market is in Gauteng and that it makes more use of the ports in Port Elizabeth and Durban than the one in Cape Town. Importantly, this does not lead to a consideration to relocate HQs.

The retailers give a rather differentiated view of human capital (see Table 7). Some report no problem with skills and are satisfied with the calibre of graduates from the local universities. They merely reiterate that it is difficult to recruit senior black staff. Others find that skills shortages are pervasive, that attempts to rectify the situation through the SETAs are cumbersome and ineffective, and that in-house training is expensive, partly because of the threat of poaching. Yet another firm says that workers from the Eastern Cape, including those with matric, lack very basic technical education which must be compensated by in-house programmes, whereas more senior administrative and marketing skills are relatively easily available. Senior black staff are easy to find in functions such as HR and marketing, but not in IT. Finally, Cape Town's living environment is a big drawcard for highly skilled people.

Firms using the seaport experience delays but disagree on how easy it is to resolve such issues. In general the port is much less of an issue for the retail sector. The road network is regarded as satisfactory. Not all firms are involved in networking with HEIs or government. Those that do pursue these kinds of relationships systematically have cooperative programmes with CPUT centering on internships and dedicated course delivery. One firm additionally has links with local designers and the Fashion Design Institute.

The external environment is important to all firms in terms of learning and upgrading. They learn from practices of international retailers in Europe and the US. In the absence of direct competition, this knowledge is shared freely, including with other domestic retailers. International suppliers also act as sources of inspiration; the resulting insights and ideas are then passed on to their local counterparts. IT systems help upgrade processes and are both imported and sourced locally. Suppliers are monitored so as to guarantee quality and upgrade it over time. One firm reports that product upgrading is more easily done with local

suppliers even though the ideas behind such processes often originate in international markets.

The competitive advantage of these firms is not always directly attributable to their location. They report problems with the high cost structure, including labour, oligopolistic suppliers (such as banks), and electricity and looming water shortages, which are not specific to the Western Cape. They base themselves on supply chain technology and models, including a preference for local sourcing, as well as on privileged relations with suppliers they maintain throughout the country.

Table 7 -- Cross-cutting themes and issues in retail

Human capital	
Basic education	Even workers with matric have very few (technical) skills.
Artisans	No issues reported.
Technical personnel	Skills for outsourced support services (e.g. IT) are easy to find.
Management	Retail (management) skills are scarce across the country. Staff retention at higher levels is difficult. This leads to headhunting and poaching.
Black professionals	It is difficult to attract black professionals to the city.
Physical infrastructure	
Public transport	No issues reported.
Roads	Road infrastructure is satisfactory.
Port	Port customs procedures cause delays which are problematic for perishables. Other consumer goods are less affected.
Airport	No issues reported.
Electricity	Price hikes will affect profits and growth.
Telecommunications	Data-intensive communication is less relevant than in other sectors and therefore less of a problem.
Logistics	No issues reported.
Property and land supply	No issues reported (but see below under regulatory framework).
Sector-specific infrastructure	No issues reported.
Government: economic policy issues	
Degree of engagement with the economy	Officials are not seen aggressively to address issues with the regulatory framework (see below).
Training and skills policies	Engagement with the SETAs involves high transaction costs and is therefore not very attractive.
Sector-specific policies	Protection of selected agricultural products raises cost of imports and depresses quality of product portfolio.
Nature of the regulatory framework	Plan approval processes are long-winded and not transparent. Rate management is unsatisfactory. Overcoming delays requires the use of consultants and is therefore costly. Municipal entities generally not responsive within clear and acknowledged timeframes. Nationally, there is a lot of red tape.
Institutional arrangements	No issues reported.
City leadership and vision	No issues reported.

One firm is frustrated with delays it experiences with plan approval processes at the city (see Box 5). It surmises that council and senior staff have a vision and are committed, but that

lower level staff are not motivated. This dissatisfaction echoes the views of firms in other sectors, especially construction.

Box 5

Before we built our new establishment, we had to pay an architect with the right contacts who physically took documents from one desk in the council to another to help the approval process along. Now that we've been going for two years, we have not yet received a rate bill. Of course we make provisions every month but we have no idea what the eventual invoice will come to. This creates uncertainty and is really not something we should have to worry about.

Retail, Cape Town

In human resources, firms face skills shortages that affect their current operations. They address them through internal training aimed at capacitating people within the company, including grooming selected individuals for senior positions. They also provide for flexible relocation of employees in an attempt to retain critical skills, or to address shortages in specific locations. Partnerships with tertiary education institutions aim to enlist graduates through an induction that begins with an internship and can lead to more long-term employment. Finally, they headhunt from other fast-moving consumer goods firms. One company addressed the issue of poor public transport by locating its main local establishment in an area where most of the work force resides.

None of the retailers mentioned here compete directly all over the world. But they are either associated with a group that does, or compete in selected international markets in the Southern hemisphere where they have acquired stakes in local firms or undertaken greenfield investments. Global competition presents itself to them mostly in the form of global retailers such as Walmart or Tesco that have looked at the South African retail market for a possible take-over target. The consensus opinion among the interviewed firms is that the professional management of the industry and the intense competition in the market will make it very difficult for international suitors to identify inefficiencies or other shortcomings that would allow them to propose a more convincing value proposition.

The sector's competitiveness is achieved through a combination of factors. Learning from international retailing trends, adapting external concepts and processes to the local market, and effectively diffusing resulting innovations through the organization and the supply chain, feature prominently among them. Localised knowledge spill-overs matter in so far as the sourcing of supplies is decentralized around a number of distribution centres and even to individual outlets. Even retailers in direct competition learn from each other thanks to the open organization of their operations, rather than through the deliberate sharing of knowledge. Cape Town has a sophisticated market within which to test new ideas before spreading them to other parts of the country.

Competitiveness is based not just on existing world-class technology such as better IT systems which streamline the relationship between retail outlets and distribution centres, but also on the search for new, locally relevant knowledge. Two areas in which this is very relevant include attempts to reduce resource usage (e.g. saving electricity through running

cold storage chains differently and saving fuel through reorganizing distribution systems) and in future possibly the need to adapt to more stringently enforced water quotas for farmers. There is also evidence of user-driven innovation where demands for new products or other ideas by customers is fed back to suppliers.

Threats to competitiveness are in part due to market structure in which a few very large suppliers (i.e. food manufacturers) or service providers (e.g. banks) exercise pricing power. Also, different to global chains, parts of the local retail industry have limited capabilities for controlling supplier quality unless they are more or less co-located. This tends to favour local suppliers even when there may be more competitive companies outside the country.

As much as possible, the retailers source their products locally evidently benefits the local economy and themselves in the sense that the loss of local jobs would translate into a reduction of demand for their products. For some products, for example in emerging fashion design, proximity is essential; for example in quality assurance fashion designers and retailers regularly check the output of their suppliers in situ..

The retailers either set or enforce quality standards that provide an incentive for their suppliers to upgrade their operations. In the absence of supplier development programmes, this effectively discriminates against smaller producers, especially small farmers, for whom the barrier to meeting such exacting requirements may be too high. Hence the distribution of the benefits of integration in such value chains is uneven, and does not necessarily favour inclusiveness. That said, some small suppliers have grown into operations that now export successfully, having built their capabilities incrementally through the involvement with their local retail clients. Indeed, a few retailers themselves have grown from very humble beginnings into the large operations they are today. Entrepreneurship is also favoured by the very low barriers to entry that allow individuals to become a store owner -- without incurring franchise fees -- of one of the large retailers. Benefits also result from their expansion into other Southern African markets that then source a large part of their products from existing suppliers in South Africa.

Cape Town is attractive to retailers mainly because of its large consumer market which, for certain products, is also relatively sophisticated. Market segmentation is accommodated by different retail models that cater to different income groups. Relative to other sectors, concerns about infrastructure are felt much less, although delays in port operations are an issue.

Retail headquarters are located both in the CBD and in other nodes (e.g. Kenilworth, Woodstock, Philippi). This is determined mainly by the availability and cost of land as well as logistics, for example to escape congestion in a previous location (Montagu Gardens) and in one case by proximity to the workforce.

One firm in particular echoed the criticism of the city's planning processes evident in other sectors as well. But on the whole the retail sector is much more satisfied with the existing institutional arrangements than firms in other sectors.

As in many other sectors, Cape Town is a smaller retail market than Gauteng. But unlike in other sectors, this has not led to firms relocating to Johannesburg or planning on doing so in

the near future. One firm has decentralized its operations to the individual store level to such an extent that the location of headquarters has become incidental and could be almost anywhere; the fact that it still in Cape Town is therefore due mainly to the fact that this is where it started out. Others can afford to concentrate their strategic functions at some distance from its main market. Another again has enough critical size to be able to replicate core functions in at least two locations and for senior management to commute between Johannesburg and Cape Town. A big difference between Cape Town and Johannesburg is the salary level.

2.1.6 Tourism

2.1.6.1 Sector overview

Tourism is not a clearly defined industry in the International Standard Industrial Classification of all Economic Activities (ISIC), but rather an amalgamation of industries such as transportation, accommodation, food and beverage services, recreation and entertainment and travel organisations (Rogerson 2005). This is because industries are classified according to the goods and services they produce, while tourism is a consumption-based concept.

The World Tourism Organization estimates that tourism generates some $500bn globally, making it the highest value activity in the world. It has experienced fast growth over a period dating back to the middle of the last century. Business tourism is one of the fastest growing segments. South Africa's current share in global business tourism amounts to 1.3 per cent, but the country hosts 43 per cent of Africa's business tourism events. Local tourism accounted for more than eight per cent of GDP in 2008, and this share is expected to rise. South Africa's importance as a destination has risen over the last decade until the recession, with 9.5 million arrivals in 2008. The large majority of visitors comes from other African countries, especially the SADC region. The downturn in the industry has led to job losses, primarily in the country's luxury hotels. The significant increases in rates and electricity charges will negatively affect profitability. Passing these increases on to the guest might deter tourism.

Tourism activities can make a significant contribution to poverty reduction. They provide an important opportunity for developing countries to move up the value chain toward the production of higher value-added services (Blanke Chiesa and Herrera 2009). However, SMMEs face numerous challenges, such as access to information about markets and their requirements, access to finance, lack of reputation, lack of critical size to qualify as suppliers to tour operators, and lack of access to affordable business services (Barnard 2010).

According to the World Travel and Tourism Council, the sector created more than a million new jobs in the last 15 years and saw the emergence of tens of thousands of new businesses (Barnard 2010). However, the travel and tourism sector has been facing many challenges from concerns over terrorism, the global financial crisis, and the high cost of fuel. Public-private cooperation might be necessary to address the slump (Girbis and Braham 2009). In general, government's role in promoting tourism is more important in developing countries than in developed countries where it is widely recognized that, for tourism to develop in a sustainable manner, an appropriate physical, regulatory, fiscal, and social framework is required. On the whole, however, given South Africa's limited exposure to overseas travelers

and the significant number of African visitors, it is expected that it will weather the slump better than many other destinations.

With increased competition, tourists have become more sophisticated in their destination choices and expect a more complex tourist product. The structure and operation of the global industry consists of tour operators, travel agents and transport services selling integrated packages to tourists, containing complex linkages to various tourist activities. The more diversified a destination's portfolio of tourism products, services and experiences, the greater its ability to attract different tourist segments. This portfolio includes the natural resources, heritage and culture available, and created resources such as infrastructure, including internet connectivity, and special events. In addition, increasing numbers of consumers are looking at the reputation and responsibility of the companies from which they buy. Thus, responsible tourism must be based on sustainable practices.

Tourists look for experiences which enable them to get closer to the perceived real living culture at destinations and to experience their diverse natural and cultural heritage. Hence history, institutions, customs, architectural features, cuisine, traditions, artwork, music, handicrafts, and dance at a destination attract prospective visitors. Tourists who come to Africa do not do so only for sun, sea and beach holidays, but also to experience its culture, wildlife and diversity (Naude and Saayman 2004).

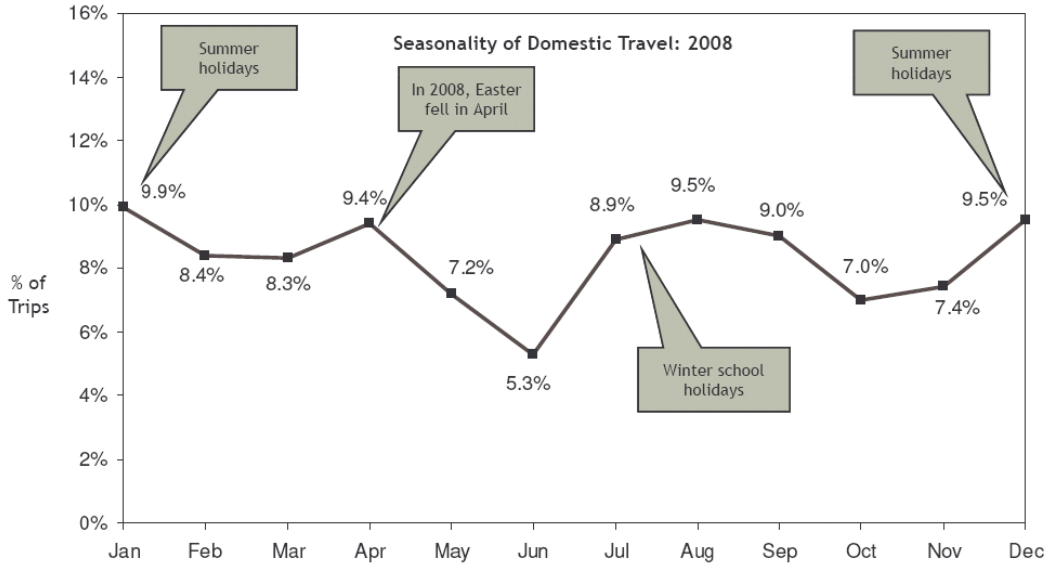
According to the World Economic Forum's *Global Competitive Tourism Report* which ranks countries on the basis of indicators reflecting those expectations, destinations such as Switzerland, Austria, Germany and France have been most successful in attracting tourism. Contributing to their high ranking is the significant number of World Heritage and cultural sites. Moreover they are well maintained and promoted by their destination countries. South Africa is ranked 22nd for its natural resources and 45th for its cultural resources, based on its many World Heritage sites and its rich fauna and flora. Although the country is a relatively unspoilt destination, there are fears that overexploitation of natural resources may endanger sustainable tourism development (WTTC 2002). South Africa's air transport infrastructure is ranked 23rd out of 133 countries, but only 45th with respect to general infrastructure (Blanke, Chiesa, and Herrera 2009). In this light, the improvements in transport infrastructure related to the 2010 World Cup are an important development that should reinforce South Africa's competitiveness.

An important technical change in the industry is due to the use of the internet. Seven out of ten trips are researched online, and half of all travel is booked online. Online travel has tended to be more recession-proof than traditional bookings. It is therefore important for host entities to have well-functioning and attractive websites.

Skill shortages affect the South African tourism sector. Limited and not thoroughly satisfactory new skill entry compounds the problems due to emigration of skilled staff. A range of skills is concerned, from management to chefs and front-of-house customer service. If human capital cannot be replenished and improved, service standards will drop and both will be a constraint on growth (Barnard 2010). Addressing the issue is made more difficult by the weak linkages between industry and training institutions (Department of Environmental Affairs & Tourism 2006).

Due to its beautiful coastline, majestic mountain ranges, rare flora and fauna, the Western Cape provides a myriad of tourism opportunities. 75 per cent of provincial tourism accrues to Cape Town. Although the number of tourist arrivals in 2009 declined somewhat, the overall economic value of tourism as a destination has increased to R20.8bn (CTRU Annual Report 2009). The most important tourism source countries are South Africa's neighbours – Lesotho, Swaziland, Botswana, Zimbabwe, Mozambique and Namibia – and UK, Germany, Netherlands, US and France (SA Tourism 2009). The real bedrock of South African tourism, however, is domestic travel which is subject to seasonality (see Figure 3). Tourism has created opportunities for smaller firms; more than half of regional SMEs are active in catering and hospitality (OECD 2008).

Figure 3 – Seasonality in South African tourism



Source: SA Tourism

2.1.6.2 Interviews

Seven firms, three SPVs, and one industry body were interviewed. Five firms are domestically owned, and one each is a domestic and foreign MNE, respectively. Two firms are headquartered in Johannesburg. The product portfolio ranges from the provision and marketing of accommodation to general visitor information, conference hosting and organization, rental cars, the operation of local attractions, to airport management. Employment is at least in part seasonal and does not exceed 500 for any one firm at any point in time. Products and services are marketed to leisure and business tourists in South Africa, Africa, and the rest of the world.

In so far as all these products are intensely location-bound, they compete with other destinations (i.e. not just firms) such as Rio de Janeiro, Buenos Aires, Melbourne and Sydney. In terms of events, Cape Town has some competition for more business-oriented conferences in Johannesburg and generally cheaper events in Durban.

The reasons for investing in Cape Town and Johannesburg differ. The Johannesburg-based firms underline the proximity to their most important suppliers and customers. The event-related organizations in Cape Town refer to the history and the legacy of the city plus its marketability to international visitors, alongside world-class facilities. Hence whereas investing in Johannesburg is based on agglomeration benefits, in Cape Town it is much more immobile location-specific assets that matter.

Given the diversity of the tourism product portfolio, comments on the adequacy of skills also vary (see Table 8). Conference organizers used to rely exclusively on learning by doing and only recently formalized internal HR management and upskilling, partly through the influence of foreign partners. Even when local skills are good, they need to be globally exposed to become world-class. In-house training is important also because event management diplomas from the local universities are too theory focused. On the other hand, local universities do provide a ready supply of qualified graduates. Only one firm bemoans the general decline in education quality. Senior black staff are almost impossible to find on the open market and thus must be nurtured internally. Operators who are in need of artisans and electrical or mechanical engineers echo firms in other sectors in noting skills scarcity. In the absence of specific knowledge-intensive skills (including chefs), foreigners are brought in. Due to lifestyle attraction, it is generally easy to entice people to come and work in Cape Town.

Many firms agree that bandwidth and connectivity are a problem. Another problem is the absence of a functioning public transport system to allow air travelers to get to the city and to allow workers to commute cheaply and safely between their places of residence and work (see Box 6). Two respondents remark on the lack of direct international flight connections to Cape Town.

Box 6

It makes no sense to confine visitors to the CBD or the convention centre. Due to the absence of a public transport system, this is what effectively happens, even though visitors would often like to explore other locations. We should have a public transport link between the airport and the city. It is a nightmare for us to arrange for transport for thousands of delegates to conferences.

Tourism, Cape Town

Most tourism providers network with players inside and outside the industry. Accommodation providers have links to the higher educations institutions (HEIs) to recruit interns. Others lecture on the courses provided by HEIs. To differing degrees, they make use of the SPVs and the industry associations to access new clients and the like. Some directly negotiate cooperation with other providers in view of pursuing joint products. Collaborating with municipalities is said to be problematic because of the prevailing zero-sum mindset where any collective initiative is seen to detract from individual gain by town managers from the greater Cape Town region. Others comment that although the city is party to the Cape Town Responsible Tourism Charter, nothing has yet been done to implement it.

Table 8 -- Cross-cutting themes and issues in tourism

Human capital	
Basic education	There is no shortage of tourist guides but their quality is generally low. More generally, basic education standards are slipping which makes it difficult to meet employment equity targets. Specialised security personnel is not generally available; even former police officers must be retrained.
Artisans	Similarly as for engineers; see below.
Technical personnel	Support personnel such as IT technicians are readily available and good. Some need international exposure to become world-class. Mechanical and electrical engineers (this is a niche requirement) and aviation skills are difficult to find. Chefs are also in short supply.
Management	Entry-level positions are unproblematic. Senior positions are difficult to fill, at least in the public sector due to the remuneration gap with the private sector.
Black professionals	Black staff at senior managerial level are hard to find locally and are difficult to entice to relocate from Johannesburg.
Physical infrastructure	
Public transport	The absence of a convenient public transport system, including a shuttle service from the airport, raises the cost to visitors. It further reduces the possibility to make areas outside the CBD benefit from business tourists. In addition, by making it costly to workers to commute to work, it affects productivity. It does of course benefit car rental firms.
Roads	There is not enough parking in the city. (This is the flip side of the lack of a functioning public transport system)
Port	No issues reported.
Airport	The absence of direct international air connections is a drawback, especially to business tourists not inclined to transfer through Johannesburg.
Electricity	No issues reported.
Telecommunications	Bandwidth is insufficient and below the expectations of both leisure and business tourists. Asynchronous transfer mode lines are only a stop-gap measure.
Logistics	No issues reported.
Property and land supply	No issues reported.
Sector-specific infrastructure	The CTICC is a world-class facility. The city would benefit from another multi-purpose facility, preferably close to the CTICC, to host entertainment or dinners, including for CTICC guests.
Government: economic policy issues	
Degree of engagement with the economy	See below under regulatory framework.
Training and skills policies	No issues reported.
Sector-specific policies	See below under institutional arrangements.
Nature of the regulatory framework	Even relatively simple permissions from the planning department can take years to process. The authorization of licenses (e.g. for tour operator vehicles) takes up to three months. The new liquor bill (not yet promulgated) is guesthouse unfriendly in that it would forbid the trade of liquor after 9pm.
Institutional arrangements	Lack of cooperation and coordination between tourism officials is a break on tourism growth. It constrains the effectiveness of the relevant entities as well as the firms they are supposed to service. It is also harmful to the international reputation of the relevant entities. But bodies such as CTRU or FEDHASA do play a positive role in linking local firms to international market opportunities. Coordination across departments in the city -- for example roads and environmental affairs -- is unsatisfactory and also leads to delays.
City leadership and vision	There is neither a vision nor clear strategies for promoting the city. In particular, there is no events strategy aimed at evening out seasonality effects through a "winter brand".. There has to date also been no attempt to identify niche markets, such as English language instruction.

Learning and upgrading take place through diverse channels. Firms learn from their competitors and suppliers. Technology is transferred through the import of equipment and is also embedded in mobile knowledge workers who tend to come from more developed countries. What is important is that the absorption of external knowledge presupposes a certain level of local capabilities.

Cape Town's competitive disadvantage for tourism consists of perceptions of crime, seasonality, social division and segregation, the fragmentation of tourism service providers (e.g. CTRU and CTT), and expensive 5-star accommodation. Also, its leisure rather than business character implies that flights to Cape Town are less profitable than those to Johannesburg which attract more business passengers. On the upside Cape Town offers a diverse cosmopolitan society with a rich cultural heritage and very capable firms that exploit the opportunities the city offers.

In the evidence collected, the city authorities are generally portrayed as not having a vision for Cape Town as a tourist destination. It was said, for example, that there is no events strategy to counter seasonality. In addition, industry players say that the Council does not invest enough in the tourism product and is unresponsive to issues raised by them. Processing of permits and licenses takes a long time. In addition, there is the unproductive infighting between Cape Town Routes Unlimited (CTRU) and Cape Town Tourism (CTT).

For most firms skills are an immediate problem and act as a potential constraint on future growth. They deal with this in various ways. One is to promote staff internally through in-house training and mentoring, especially to senior positions where scarcity is most pronounced. Some firms purchase customised training at local or international training providers and send their staff abroad for training, or bring in international experts to train locally. They also make intern positions available to give graduates (e.g. from CPUT) practical experience and hold on to the most promising among them. Where graduates are too removed from the practical requirements of the workplace, they hire talented generalists. Staff are also moved in those companies that have more than one establishment, especially when short-term needs arise. Where staff cannot be sourced at all locally, foreign experts are employed.

It cannot be said that the interviewed firms "solve" the transport infrastructure issues mentioned. They manage them, albeit suboptimally, for example by circumventing the insufficient public transport system with individualized solutions (rental cars, shuttles, etc.). They currently suffer rather than manage the absence of an event strategy or a more coherent attempt to brand Cape Town internationally.

Firms in Cape Town do compete globally for tourism, both leisure and business. The CTICC is Africa's foremost convention centre in terms of international events hosted, and is a player in the long-haul market. It is instructive that Cape Town does not compete on price -- such as Durban -- in order to attract international convention business. The city also has a world-class airport, world-class hotels and a very competitive guesthouse sector that keeps standards high. There is anecdotal evidence of overpricing, especially in the very luxury accommodation categories, and across the sector in the run-up to the World Cup. Another issue that depresses the city's potential as a destination is the perception would-be visitors have of crime, not necessarily in Cape Town but in the country at large. For the industry, the

problem is that crime is perceived out of context, and not in its likelihood, say, to affect the staging of an international convention or the people that participate in it.

Leading firms involved especially in business tourism make use of the latest available technology. They invest heavily in staff training, IT infrastructure, and software systems. If necessary, technology transfer and training are supported by international experts. In this sense, they are no different from their peers and competitors abroad, even if they are not part of a multinational group. The single biggest exception is connectivity. In addition, Cape Town Tourism's website is not transactional which means that it cannot be used to accept and process bookings. Evidence of the industry's achievements include accreditation by relevant international industry bodies such as the International Association of Professional Conference Organisers that set performance standards.

Benefits from tourism, especially from business tourism, accrue mostly to the sector itself. For instance, hotels, restaurants, caterers and other service providers benefit from convention visitors. Many corollary services are outsourced which provides an opportunity for entrepreneurs to offer everything from transport or food to audiovisual services. CTT affords small companies exposure through listing on its website. Some interviewees caution that more would have to be done to develop and improve service levels in the industry at this level.

The absence of an attractive public transport system, the scarcity of direct air links, and low level of bandwidth are drawbacks that reduce the city's competitiveness. Its natural beauty, the quality of accommodation facilities, and the business tourism infrastructure are in its favour. Most firms interviewed for this paper were located in or close to the CBD. Yet guesthouses increasingly provide services to business visitors in the city's other nodal points and in the suburbs.

The institutional arrangements in the sector are problematic. There is too little coordination and indeed often conflict between the various marketing agencies. More importantly, the absence of a more comprehensive vision implies that Cape Town has no recognisable brand, especially one that transcends the leisure image predominant during the summer months. The city would have to identify attractions that make the Cape Town a desirable destination in the hitherto low-activity winter months, and then build an events strategy accordingly. Australia, for example, publishes an events calendar a year ahead of time.

As a business tourism destination, Cape Town generally compares well to other long-haul destinations such as Sydney and Melbourne or Rio de Janeiro during the summer months, although anecdotal evidence suggests that business tourism offerings in some of these cities as well as Buenos Aires or Bangkok are cheaper. Different to other cities in Africa, for example Benghazi in Libya, the CTICC does not need to be subsidized to attract business to the city. One advantage cities in Australia or New Zealand have over Cape Town is that they use a single marketing organization which oversees the country's brands, marketing, and logos. This leads to efficiencies in international marketing that municipal entities struggle to attain individually.

Nationally, Johannesburg is geographically better positioned to attract business community (as opposed to association) conferences. The higher number of business visitors means that

inbound traffic to Johannesburg is generally more profitable for the airlines. Durban aims at bigger and cheaper events. Compared to Johannesburg where a lot of effort has gone into renewing its tourism attractions such as the Constitutional Court, Apartheid Museum, Sterkfontein Caves, Maropeng and Wits Origin Centre, Cape Town has merely retained its traditional product portfolio over the past decade.

The headquarters of national tourism service providers in the car rental or airline business tend to be located in or around Johannesburg because that is where the largest demand is, and most key suppliers are also there. Such agglomeration dynamics obviously do not affect place-bound firms that are by definition local service providers.

3 Summary

This study comprised domestically owned but globally exposed firms, some of whom were emerging MNEs in their own right, and subsidiaries of foreign MNEs. The research focused on their capabilities and strategies, and how the specific urban environment within which they pursued them influenced their performance. As was to be expected, strategies and capabilities vary between firms and sectors. Some focus on the local market whereas others at least in principle compete anywhere in the global economy. To be sure, these are differences of degree: all firms interviewed are subject to some degree of global competition, either because they face foreign competitors in their home market or because they rely largely on exports, or both. Time plays a role here in that especially domestically owned firms are at different phases of possibly similar globalization trajectories that first see them compete primarily in the local market, then expand into surrounding Sub-Saharan African economies, and finally take on advanced economies where their competitive advantages are more difficult to establish and defend (for a conceptual framework discussing such trajectories, see Cantwell and Barnard (200?).

With respect to the absorption of global knowledge, there are more similarities than differences between the firms. To varying degrees, all try to tap into external knowledge and to internalize it in order to upgrade. This is a conscious effort, supported by the requisite resources, and thus different from learning-by-doing. The evidence presented in Section 2 shows that several firms in all sectors have the kinds of absorptive capacities that allow for high quality learning.[24] For some firms, this learning is an individual process whereas for others it takes place in networks. This varies in terms of horizontal and vertical linkages and also between sectors. For example, in retail learning involves knowledge passed on from supermarkets to suppliers. In construction, it is suppliers that provide information which may induce large firms to invest in new techniques. At the same time, there is little learning along horizontal linkages between the firms involved in these sectors because they compete against one another. Horizontal learning linkages do exist in the wine sector because the impossibility to replicate terroir means that sharing knowledge is not perceived as a zero-sum game. Sectorally, the evidence of networks varies. They seem more pronounced in the creative sector and in business tourism than most others. We found no evidence of networks that provide disincentives to learning and thus to adaptation to change.

[24] More evidence on technological upgrading will be available in Lorentzen et al (forthcoming).

Ownership does not seem to make much difference to the strategic recognition that learning is essential to (global) competitiveness. What differs is the ease with which such processes are managed. Subsidiaries of foreign MNEs have lower search costs in identifying relevant knowledge, and lower transaction costs in exploiting it. This is essentially because they can largely rely on internal sources of knowledge that they acquire within their group. Much of this knowledge is intellectual property and thus not openly accessible to non-group firms. It also cannot always simply be bought. Individual firms which are not part of multinational groups must identify such knowledge elsewhere, including in networks where it is being co-developed by a number of actors that are not linked through equity.

A key difference across sectors regards the relationship between learning and space. Firms in some sectors report that they absorb knowledge through distant or mobile sources, be they trade fairs, immigrant knowledge workers, or simply the import of capital goods. Firms in other sectors rely on geographically close interaction, mostly with their suppliers but occasionally also with their customers, in order to detect and exploit technological opportunities. There seems to be a virtuous cycle -- new ideas created in Cape Town provide more opportunities for learning which in turn leads again to new ideas that may eventually show up as innovations. Such dynamics especially describe activities where human capital and thus interaction matter strongly, for example in the creative sector where it has led to some clustering of activities.

Not all results of the research can be neatly attributed to either firms or sectors but rather to a set of generic capabilities that exist in the city. For example, many firms report that they run their back-office functions in Cape Town even if they are headquartered elsewhere. Since this does not necessarily imply outsourcing to dedicated BPO firms, it means that there are certain kinds of skills invested in the city that are significant for the broader economy and not just for specific economic activities.

Our research produced no evidence that knowledge controlled by foreign MNEs exists only in some kind of enclave in Cape Town, either because MNEs insist on a pure form of internalized technology transfer or because their investments are too sophisticated for local absorptive capacities to interact with them dynamically.[25] In fact, in many instances it was clear that the activities of lead firms had benefits for the local economy in the sense that they generated backward linkages or helped suppliers to upgrade. This involved SMEs in a major way.[26] But if inclusive growth entails the integration of large numbers of unskilled people into the labour force, there is no evidence that this is happening as a corollary to the pursuit of global competitiveness, as for example proponents of the investment-led development path (IDP) suggest for developing economies at earlier stages of industrialization (Narula and Dunning 2000). This is no surprise -- an unskilled or badly skilled workforce is inimical to global competitiveness at all scales. This underlines a point made in the literature review (Lorentzen 2010) that the pursuit of global competitiveness and social inclusion are often trade-offs which must be acknowledged and managed (for a critical review of the City

[25] Examples of MNEs operating in enclaves exist in many sectors. See Akbar and McBride (2004) for the Hungarian banking industry, Bowen, Leinbach, and Mabazza (2002) for air cargo services in the Philippines, or Kelegema and Foley (1999) for the garment industry in Sri Lanka.
[26] The background paper by Harrison and Boulle (2010) verifies this claim.

Improvement District and contestation surrounding the neo-liberal global city agenda in this regard, see Miraftab 2007).

The research further underlines the importance of the availability, accessibility, and quality of local created assets. Although the Western Cape as a whole and Cape Town more specifically are often described as knowledge-intensive, such assessments are at best inaccurate and at worst naïve if -- as they often are -- based on comparisons with the rest of the country. They certainly do not contribute to understanding how the city can use external knowledge to lift the local economy onto a different growth trajectory, and what role Cape Town can play in the global knowledge economy. Many firms interviewed for this study regard human capital as a major constraint, and they do not spare high-level technical or managerial competences. Since skills and competences are created assets that must precede the formation of relational assets, Cape Town's education and skill problems are probably one reason why on the whole there is not much evidence of networked activity among firms or between firms and other actors, such as universities or research institutes.

An interesting finding with respect to human resources is not only that many firms identify specific skills gaps in the labour market, but that at least some are able to solve the attendant problems through in-house training, drawing on expatriates, and participating in curriculum design and delivery as well as on-the-job training in partnerships with local universities. Some firms face problems of a magnitude they are unlikely to solve by themselves. A notable case is the absence of suitably qualified artisans which is a bottleneck in boom periods and even more so should some of the sectors with above-average growth potential really take off. Also, no firm will be able to solve the widespread perception that Cape Town is not a welcoming environment for black people. But there is a large degree of heterogeneity with respect to the incidence of human resource problems. Thus, firms in the creative and design sectors have hardly any skill problems at all. Since development policy is easier when based on an economy's realized or incipient strengths as opposed to targeting as yet unrealized opportunities, this makes these activities a prime candidate for consideration of "smart specialization".

Firms interviewed for this study did not give the impression of being part of a local innovation *system*, or a series of productive interactions that are not merely ad-hoc but coordinated in the interest of a greater collective urban good. The key question with respect to the city's role in the global knowledge economy is not whether one can do things in Cape Town, but whether one can do them better here than elsewhere or, ideally, whether one can do them *only* here. Hence a local innovation system would favour specialized local assets that by definition are specific, hard to move or replicate, and hence conducive to anchoring foreign investments in a longer-term perspective. Specialisation, both in the country and globally, entails the advantage that it reduces the number of (generic) competitors and thus makes it easier to reach economies of scale, especially if the associated knowledge resources are sticky because they are co-specialised.

Many interviewees, including from publicly funded entities, remarked on the absence of a vision for the city which would allow for investments into tangible and intangible infrastructure, along with promoting specific activities. Such a vision would make Cape Town a relatively unique place for global knowledge investments. It is less important whether such a strategy would aim to accelerate the exploitation of global knowledge,

intensify the interaction with MNE subsidiaries so as generate knowledge spillovers, or participate in path-breaking global activities that push the technological frontier. What is important is that any such strategy relies on coordination by government because it involves the provision of public goods, such as dedicated spaces where technologically cognate firms can cluster, adequate dedicated or general infrastructure, and a properly trained workforce.

The research also demonstrates the relationship between natural and created assets. The single most prominent non-created local asset of Cape Town is its natural beauty and the associated living environment. The mountain, the sea, and the hinterland of the city are its biggest draw card both nationally and globally. The spectacular setting attracts globally mobile knowledge workers who in turn provide a link to the city's created assets, from high-quality university education to innovative activities pursued by firms that have invested in the city. This is a virtuous cycle that currently contributes to the city's global competitiveness. Whether targeting newcomers or those who have been here for some time and are subject to locational inertia, cultivating rootedness and place identification is one way for the City to hold onto economic activities.[27]

Whether this remains so in the future depends on the stewardship of this natural asset. Infrastructure in the city has been taking strain from population growth. Diseconomies from this growth in terms of congestion are problematic: urban sprawl, if not contained, is likely to affect the very elements that make the city an attractive place to live at present. It is clear from comments by industry that the public transport system is inefficient and that it prevents economic benefits accruing especially to those members of society who need them most. Existing building regulations effectively provide disincentives for investments into public transport. If buildings were allowed to be erected without or with less parking space, the relative cost of parking would rise, the relative attractiveness of public transport would consequently also increase, and that in turn would lead to more investment in public transport, which would then make it possible for more people to come and work in town.

The evidence produced here helps to shed light on the role MNEs play in enhancing Cape Town's global competitiveness through access to knowledge, technology, skills, and markets, and how this, in turn, is influenced by economic and business conditions in the city. The research therefore addresses the question in which activities Cape Town is a more or less globally competitive location which is the objective of the study. The conclusion thus introduces a differentiation across sectors covered in the paper. Answering the question can be taken further by complementing case studies of leading firms as undertaken in this paper with benchmarks of suitable indicators that capture business conditions in other relevant locations.

4 Conclusion

The summary argued that specialization is important. Although this is only a background paper, it can suggest a way to go about identifying feasible specializations and to support them. The first is the identification of a critical mass of relatively unique requisite firm capabilities, followed by an identification of the created assets and other local attributes that

[27] Cold, wet winters and very complex social problems are of course also part of Cape Town's reality, and a combination that turns people away. This implies that the city cannot be sanguine about its physical assets.

are required for global competitiveness to emerge or become stronger. In activities where localization economies matter, it is further necessary to create conditions for knowledge spillovers so that network externalities can take hold. Such an assessment needs to take the capabilities of the public sector in assuming a facilitating or coordinating role into account. Although "smart specialization" must be based first and foremost on firm capabilities, it is no good aiming to create co-specialised assets that exceed the capability of the policymakers and bureaucrats in the city and that stretch the sophistication of the local innovation system more generally.

Hoping to transform (or even sloganise) Cape Town into any of an "agro-food hub", "Africa's marine workshop", the "Southern hemisphere's shopping paradise", a "global business tourism node", "Sub-Saharan Africa's MNE headquarters location", a "creative city" or more broadly the "Apple of Africa" all entail competition with alternative locations in the country and the world. It is important to be realistic about this. For example, reinforcing and exploiting agglomeration economies in creative activities seems easier than, say, trying to lure the world's shoppers from Dubai to the Waterfront.[28] Likewise, it makes no sense to compete with Johannesburg for local or foreign investments which do not permit (1) the organizational separation of strategic from operational functions in activities where Gauteng has -- or is close to -- the largest relevant markets or (2) a largely decentralized model of operation in which agglomeration factors play little role.

The interviews show that across the sectors there are strong absorptive capacities.[29] Firms have done well despite -- and possibly thanks to -- heightened global competition. Existing capabilities can be grown, especially if human resource bottlenecks are addressed. There is also evidence that the activities of MNE subsidiaries and other lead firms generate localized knowledge spillovers that help other, including small firms, to upgrade their activities and, occasionally, get directly involved in global competition. Whether and how this could be broadened, is for another background paper to explore (see Harrison and Boulle 2010).

The research also shows that Cape Town has serious disadvantages in human capital, infrastructure, and governance. These factors affect different firms and sectors to a different degree. Some firms manage well with the existing stock of human capital but suffer from the lack of bandwidth. Others struggle with personnel yet express no difficulties with infrastructure. Some deal with what they perceive as an unhelpful city bureaucracy. Overall, the perception of the city is not as a business-friendly environment, or that it has built the created assets that would allow its firms to compete successfully in the global knowledge economy. Many firms do so anyway, but despite these hindrances, and they do not exploit their full potential.

Table 9 synthesizes these issues in relation to the six sectors from which firms were interviewed for this sector. It relates global competition to the opportunity for smart specialization and identifies which created assets are most needed to achieve or sustain global competitiveness. It also identifies whether the city has leverage over the relevant

[28] Although UNCTAD (2008) reports that worldwide some 60 cities define themselves as creative.
[29] How they differ across sectors is the subject of another background paper, on technology gaps (Lorentzen et al, forthcoming).

issues, that is whether local government has jurisdiction. Finally, in light of these inputs, it suggests what capabilities the city has for addressing the identified problems.

Global exposure is high in a number of sectors. In most cases smart specialization is in principle an option, even if only for selected corporate functions. This obviously involves choices in that the city could by definition not be smartly specialized in a wide variety of activities. Where the sectors differ substantially is in the scope and scale of created assets that are currently problematic but at the same time crucial for their future success. For example, whereas in some sectors specific skills are amiss, in others human resources are lacking across the skill bands. It is clearly more difficult to address education and skill deficits from basic to tertiary education, than merely to solve niche gaps. The city is also constitutionally not in the same position with respect to the shortcomings of the necessary created assets. For example, while it could design and implement a better public transport system -- and has indeed started doing so with dedicated bus and taxi lanes on the N2 and the BRT -- it cannot do much directly about the seaport or the railways. Finally, even where it can intervene, the city has different and limited capabilities. It can solve some things better than others and certainly not all, at least not at once.

In agro-processing, global orientation is high and smart specialization is an option, especially with respect to headquarter location. Parts of this sector is linked to the tourism industry which can yield network effects. Key created assets include human capital and efficient infrastructure. With the exception of rail and seaport, the City has considerable leverage over and capabilities in infrastructure and can also intervene by facilitating a better match between training and skill supply and demand in select activities.

In oil and gas, global exposure is high. Opportunities for smart specialization exist in logistics and regional supply (mainly for West African based operations) for oil companies as well as major service providers. Among other things, this would require a major and urgent upgrade of port infrastructure. However, the City does not have much influence over the seaport, nor is it clear that it would master the organisationally very demanding task of working towards the establishment of some form of offshore supply base. Since the development of an OSB clashes with other development priorities, this would altogether be difficult, and in this sense oil and gas is not "low-hanging fruit".

In construction and property services, global exposure is low and opportunities for smart specialization do not really exist -- Johannesburg is overall the more attractive location for these firms, with the exception of BPO-type activities. The City is not in s strong position to address artisan shortages, but it can improve the operation of the regulatory environment. Whether it manages to do so depends in part on its ability to fill vacancies.

The creative and design sector is highly oriented toward and exposed to global competition. Cape Town has a number of created assets that make the city attractive for creative firms. Exceptions include, prominently, IT bandwidth and the more strategic pursuit of opportunities for co-location of relevant firms to unlock networks effects. In both areas, the City has a lot of leverage and also relatively high capabilities.

In retail, exposure to global competition is much lower than in the other sectors reviewed here, with the exception of construction and property services. It is possible for the City to

make a case for locating select strategic retail functions in Cape Town, but there are weaknesses both with respect to skills and the regulatory environment. Although the City is in a good position to address the latter, it has less leverage and capability in helping to solve the scarcity in retail skills, especially in so far as there is no guarantee that beneficiaries would necessarily opt to remain in the area as opposed to moving to other parts of the country, especially Gauteng.

In tourism, local firms are very exposed to global competition and Cape Town has an opportunity to specialize in business tourism. Although as in other sectors the City does not have leverage over the education and training system as a whole, it could support targeted activities in local education institution in order to address key bottlenecks, be they in marketing, other senior management skills, or others. It could also build on recent improvements in public transport to create a truly attractive system that largely obviates the reliance on individualized motor transport. Finally, it could deepen the services on offer at CTICC through an expansion of its facilities, for example a multi-purpose hall for entertainment associated with events.

Although this is not a final recommendation for policy, the data therefore suggests that the combination of opportunities for smart specialization, requisite assets, the in-principle option to leverage political capital and invest the City's capabilities favours the agro-processing, creative and design, retail, and tourism more than oil and gas or construction. It is also clear that some issues, such as IT bandwidth, have horizontal relevance across sectors.

The challenge is to integrate these findings with the research on SMEs, the institutional arrangements, and how exactly the city compares across many of the problematic indicators highlighted in Section 2 to other economically relevant places in the world. These are all topics of forthcoming background papers in this study. It will help to complete missing data in the above table and eventually produce a decision tool that reconciles the capabilities and needs of firms in their environment with the capabilities and the aspirations of the city.

Table 9 -- Global competition, smart specialization, created assets, and city leverage and capabilities

Global orientation and exposure	Smart specialization an option?	Critical created assets	City leverage	City capabilities[30]
		Agro		
High	Yes, for strategic corporate functions (e.g. HQs) and for select subsectors (e.g. wine) more generally, including with tourism linkages and BPO competences	Human capital across the board	Generally low. Opportunities in targeted activities (e.g. coordination of customized courses in local education institutions)	Medium. Some experience in this regard exists (e.g. Cape Boatbuilding Academy).
		Efficient public transport	High	Medium to high
		Efficient rail and port infrastructure and operation	Low	Low to medium.
		Bandwidth	High	Medium to high
		Oil and gas		
High	Yes, including for BPO competences	Artisans	Generally low. Opportunities in targeted activities (e.g. coordination of customized courses in local education institutions)	Medium
		Port infrastructure and operation	Low	Low to medium.

[30] This refers to incipient or "in principle" or incipient capabilities. The column needs to be verified; see Boulle and Harrison (forthcoming).

Global orientation and exposure	Smart specialization an option?	Critical created assets	City leverage	City capabilities[30]
		Construction and property services		
Low, but growing	No, except indirectly for back-office functions	Artisans and technical personnel	Generally low. Opportunities in targeted activities (e.g. coordination of customized courses in local education institutions)	Medium
		Efficient, transparent and effective regulatory environment	High	Low to medium. City is engaged in improving processes. High vacancies are likely to prevent rapid progress.
		Creative and design		
High	Yes	Bandwidth	High	Medium to high
		(Inter-firm) networks, co-location of relevant firms	High	Medium to high. Individual SPVs are fulfilling important functions already.
		Retail		
Medium	Yes, for strategic corporate functions	Low and high-skilled human capital.	Low. (Lack of opportunity for co-specialisation implies that workers could move from Cape Town after training.)	Low.
		Efficient, transparent and effective regulatory environment	High	Low to medium

Global orientation and exposure	Smart specialization an option?	Critical created assets	City leverage	City capabilities[30]
		Tourism		
High	Yes, especially in business tourism	Human capital	Generally low. Opportunities in targeted activities (e.g. coordination of customized courses in local education institutions)	Medium
		Attractive public transport system	High	Medium to high
		Bandwidth	High	Medium to high

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Appendix 1 -- Firm testimonials

Box A.1 -- Human capital

Human resources are not a problem in either Cape Town or Joburg. We can generally find the people with the skills we require. But we are concerned about the declining quality of education and it is difficult to meet employment equity criteria. On the whole, however, recruiting people in Cape Town is really easy – every time we advertise a position, we have a queue of people applying.

Car rental, Johannesburg

Recruiting in Gauteng is very difficult. Senior managers available in South Africa are not flexible enough from a dynamic multinational perspective – they need to be more aggressive, more direct, and have a more global perspective. As a result all of our top management here are expatriates. We made an attempt to make management more local, but because of a lack of results we brought everyone in from abroad. Among junior management there are some good calibre staff, but they are unstable, often rotating or leaving in search of better money elsewhere. In a firm as large as ours the growth path is slow, but younger staff tend to seek a quick rise, which leads them elsewhere. Middle management is a crisis: they are not experienced enough, and not fast enough. Many experienced people have emigrated. Moreover, recruiting black middle management staff is a major challenge.

Agro-processing, Johannesburg

We don't have the same level of skills as what you find in Norway, Houston, or Aberdeen. Our universities haven't built up around the oil industry. For example, there is no marine engineering programme anywhere in the country. The FETs train some artisans, but not much is happening at the graduate level. This situation can put the brakes on investment and development. For example, one firm wanted to make a long-term investment in Saldanha. But the needed 4,000 artisans to operate the installation and just weren't convinced that they could source those skills. So in the end they didn't do it. Otherwise the ship repair industry could be much larger.

Oil and gas, Cape Town

When there is something we cannot do with our own people, we hire foreigners. For example, we worked with an American architect on a mall. He did the design, we the working drawings and implementation. A similar thing happened with the Green Point Stadium where German architects came up with the design. These kinds of collaborations allow for a lot of learning and technology transfer to local firms. But of course we also use local designers.

Property management, Cape Town

The human resources available locally are generally sufficient, but not always, particularly at the high end. For example, we recently needed to import a winemaker from Australia through a headhunting company because we couldn't find a local person who could make large quantities of high quality wine consistently and successfully.

Agro-processing, Paarl

We hired a senior black guy from outside Cape Town. He took residence in Camps Bay. Every time he went to the beach, people started clutching their handbags. He didn't last long.

Legal, Cape Town

Box A.2 -- Infrastructure

Lack of access to public transport to the townships is a concern. The current system essentially excludes a large segment of the labour force. This means we incur massive transport bills which impact the bottom line.

Hotel, Cape Town

The biggest drawback for us is that people cannot use public transport to get to Cape Point, the vineyards in Constantia, or the Table Mountain Cableway. It obviously limits the number of visitors. It is also very expensive for our staff to travel to work on the existing system.

Big-Six tourist attraction, Cape Town

The railway system is severely under-utilised. On a daily basis on a handful of trains move in and out of Cape Town. As a result, we are missing the opportunity of the lower much of rail as opposed to road transport. We might try and do what Richard Branson did in the UK, namely for the larger (transport) companies to get together. We could administer a daily freight train to Gauteng ourselves. It would take 20 hours longer than the road service but be half as expensive. This would make a lot of sense for goods not sensitive to longer lead times. Maybe the City could play a role in facilitating such a process of negotiation between firms based in and around Cape Town and Transnet.

Agro-processing, Paarl

We use a huge amount of bandwidth when we send our films electronically. Software and accelerators help us to increase performance somewhat yet the product is sub-standard. Although we are getting a fibre-optic link, this is extremely expensive. We are also installing a satellite dish to transmit data because we cannot afford to continue with the current bandwidth circumstances.

Creative, Cape Town

The Cape Town ports authority suffers from two basic problems. Firstly, their day to day maintenance of facilities and operations management are simply very weak in all areas. This has a large impact. In one instance, Chevron had booked a berth at the dry dock ten months in advance. When their vessel arrived on the appointed day, the Port Captain informed them that there was in fact no berth available, and that they should anchor in the bay. Eventually Chevron found a berth, but one without the requisite facilities. As a result they had to spend a million Rand on scaffolding to access their ship, but before they could use the scaffolding they were told to move the ship. Secondly, there are organizational problems. Transnet seems focused on building a container moving network that involves the railway network and the harbour. So they are investing money there, but other parts of the port have failed to see investment. Infrastructure is seriously running down. For example, the cranes around the dry dock – which by the way is falling apart even though it should be the crown jewel of African ship repair – don't work, so one has to rent cranes, a large extra expense, while trying to avoid bashing into the rusty cranes that remain there..

Oil and gas, Cape Town

The port operates on a first-come-first-served basis. Thus a R500,000 for a rusty old Russian trawler often take precedence over a R200 million contract for a much larger vessel, and the larger contract is thus lost. It also doesn't help that cancellations can take place as close as three weeks. If this were done more sensibly, there would be the capacity to increase annual throughput from R200m for some 35 vessels to R600m; there would also be employment for another thousand people because of an increased continuity of work and because there would be the management capability to better manage the booking system to bring in contracts, for

example by scheduling night shifts to finish contracts more quickly. The demand already exists. We currently turn away about one ship per week due to this capacity not being properly managed.

Ship repairs, Cape Town

The port is pretty dysfunctional. In fact, it is a detriment to the whole economy and economic growth in the Western Cape. It operates as a silo and doesn't look at value generation because Transnet uses the port as a cash generating asset rather than as a lever for economic development. This is a lost opportunity for one of the Western Cape's most valuable resources. For example, port fees, bureaucracy, delays, and unpredictability could result in large (e.g. $80m) contracts literally sailing past. We always consider sending our large West African oil and gas processing rigs for maintenance to Singapore rather than Cape Town due to this situation. In the past the port could not make a suitable berth or dry dock available in good time – and each day of delaying the commencement of the job cost us $1 million. This job in question employs 1000 people, from low to high skills, and upskills a substantial number of them to work with natural gas. It would represent a substantial loss to Cape Town if this activity went elsewhere. Also, the economic activities at the port are too focused on lower level skills, and the port therefore misses important opportunities to leverage its assets and climb up the value chain. The focus should move from berthing container ships to higher value creation such as construction, design, etc. This could create a new marine business hub in the city.

Oil and gas, Cape Town

Box A.3 -- Government

It is very difficult for town planners to come up with zoning schemes that meet everyone's needs, but these decisions have to be made. For example, in Cape Town there are no height restriction decisions set in stone. You could have restrictions such as those in Washington DC, where no building may be taller than the Capitol Building; or those in Hong Kong, where you have a narrow zone for skyscrapers. Once a set of restrictions have been decided on they need to be made clear and consistent, to prevent uncertainty for investors. The current regulations are not well-suited to a compact city. For instance, parking bay regulations require four parking bays for every 100 square meters of office space. This means that a 20 story building would require 26 stories of parking which is not feasible, especially below-ground parking. Such regulations cause the city to rely on personal transport rather than public transport and exclude a large portion of the potential workforce from that space by doing so. In Sandton greater steps have been taken to promote the compact city, enhancing public transport, creating car-pool lanes and tolling roads.

Property services, Cape Town

Our whole industry thinks that Cape Town is the worst city in the country to get approvals.

Construction, Johannesburg

The senior staff in the Planning Department are from a bygone era. They don't understand what the new planning paradigm means. They're not open to new ideas and oppose any change. Things are never simple with them. To date it's taken them over 18 months to consider a 10-year lease for a major investor on city-owned land along the N1 even though the firm will bear the costs of getting the site ready. In Johannesburg it takes six months from conception to final approval of development proposals. Here it can take up to four years.

Industry body, Cape Town

The City of Cape Town and the Department of Public Works are both guilty of large delays when awarding tenders. These delays and the uncertainty that goes with them are frustrating for the company and make it difficult to manage staff and resources. If the contract is awarded it is often months late and without warning, with a letter arriving in the post. This makes it difficult to organise resources and be ready to start large contracts when they are suddenly awarded without forewarning.

Construction, Johannesburg

We and others put in a bid for the R300m bus rapid transit system. But then a downscaled project was awarded to the company that was third on the list for R100 million. There was no discussion over the change in contract and no explanation. None of the other companies was given the opportunity to re-price. If a company is first or second on a tender they should also be given some explanation as to why they were not awarded the tender. Despite protestations to the contrary by senior officials, this never happens and neither the City of Cape Town nor the Department of Public Works can be contacted for an explanation.

Construction, Johannesburg

The City has a total disregard for tender policy guidelines. It does not exercise any form of urgency and efficiency when making decisions. The officials ask for extensions for up to a year which is not realistic because we firms have to plan. There have been instances where tender deadlines are extended but then we discover that the tender has been awarded without the city communicating the outcome.

Construction, Cape Town

We planned to build a headquarter for our global operations. It would have been an investment of a few hundred million Rand. The city agreed to swap some of their land with ours so that we each would get a consolidated piece. But it took them 10 years to make this decisions by which time we had decided not to undertake the investment.

Creative, Cape Town

In a global perspective, all the City's functions such as rate clearance of sold buildings and plan approvals etc take too much time and could be much better managed.

Property services, Cape Town

City officials are incapable of budgeting properly for projects. They underestimated the cost of the BRT so massively that we now only get 27 instead of the originally planned 44 terminals. What do you think this does to the resources and overall planning of the involved constructions firms?

Construction, Johannesburg

City and provincial government in Gauteng are much more efficient than in Cape Town.

Construction, Johannesburg

The International Conference Association raised alarm bells when Cape Town Tourism applied to become a member. They didn't understand why we needed another marketing organization, given that Cape Town Routes Unlimited was already involved. This political conflict has fall-out for the entire industry.

Tourism, Cape Town

There are 55 properties in and around the city which lie vacant that should be used for the greater benefit of the public. For example, there is a hectare of ground between Green Point and the CBD that is used by the city to store maintenance implements. The total unutilised property assets are probably worth some R15bn.

Property asset managers could make these assets sweat for the city. We could also do something about the unequal distribution of land. 150,000 low cost affordable housing units could be built on state owned land, selling for R370-R450k. It would allow young people from the Cape Flats who earn more than R10k a month and can afford to pay a monthly mortgage of R+/-2000 to move closer to the city and help make it more open and diverse.

Private sector group, Cape Town

Government doesn't really recognize the creative industries as an important economic sector that creates positive spillovers for the city because it boosts its visibility and hence tourism and related activities. The lack of a strong enabling infrastructure prevents good ideas from taking off. This creates a glass ceiling for creative entrepreneurs. We should have a rent-reduced creative district. Overall, the city should politically coordinate urban renewal like the Johannesburg Development Agency rather than leaving it just to the private sector because that might lead to suboptimal outcomes. For example, it won't bring out the acknowledgement of "Africa's creative capital".

Creative, Cape Town

Cape Town could be Africa's Silicon Valley. We already have a very pleasant working environment. The other thing we need is quality universities producing quality graduates. The clean nature of the IT sector aligns it well with the city's natural environment. And then there might be a virtuous cycle in that it would attract more and more investment.

Creative, Cape Town

The city offers professionalism and strong skills in BPO and back office activities. Cape Town could play a much larger role in this area, both nationally and internationally. This would create a lot of jobs.

Oil and gas, Johannesburg

Other cities have event strategies. For example, Melbourne does. We don't. The Australians publish their event calendar a year in advance and ensure that there are events during the low season as well.

Tourism, Johannesburg

The city needs to work on a winter brand. It can't all be sun, sea, and sand. We need a more comprehensive and complex brand that takes in culture, design, experiences and history.

Tourism, Cape Town

Brazil has a city called Florianopolis that has transformed into an ideas hub which fosters a clean economy. It is almost like a new generation Silicon Valley. They have a design, business, innovation and technology school in the same cluster. People are moving to this area because it offers a great environment to go to school and live. They have found a way to build a natural city that is attractive for people. A significant number of patents come from the area and they attract a high number of PhD students. We could also become a great ideas place and foster a clean economy. The city also needs to be marketed as a great city to work and not merely a holiday destination.

Tourism, Cape Town

Malta has 400,000 inhabitants. In 2007, 58,000 visitors came to take English lessons. To date we only attract some 10-12,000 in the whole country. We could easily grow this area of the tourism market.

Tourism, Cape Town

Box A.4 -- Learning, upgrading, and global competitiveness

We developed smooth yoghurt here that is now being rolled out in many countries. We also worked with the medical faculty at UCT to design a yoghurt with properties that addressed wide-spread nutritional deficiencies among the poor population. Then we pioneered a micro-distribution network in the townships around Johannesburg, giving unemployed people job opportunities on the way. We would love to roll this out in Cape Town but currently the logistics are too difficult.

Agro-processing, Johannesburg

We have a dedicated department for quality assurance and construction support. We continuously look for new processes and other innovations which are disseminated through the rest of the organization. We also analyse our past mistakes so as to develop ways around them in the future. This is a collective endeavour. Individuals are assessed on innovative results in their performance contracts.

Construction, Johannesburg

We visited stores in the US, Germany and the UK to learn about the reception of customers to fresh food products. We then implemented those lessons and launched a premium brand that has been doing well. We also make sure that our suppliers adhere to good farming practices. Many are HACCAP approved, as are all the ready-made meals we sell. The reason our international competitors share their expertise with us is that we're not direct competitors. Our local market position is very strong.

Retailer, Cape Town

Our directors and management learn from a number of sources, including international companies. So they source new technologies, new store formats, and new standards. Much of this happens overseas and is then brought back to South Africa.

Retailer, Cape Town

We have the largest fully air-conditioned, fully sound-proofed studio in Africa. Our film lab is one of only 59 in the world and is Kodak Imagecare accredited. Our score in the accreditation was 99 per cent which makes us No.2 in the world.

Creative, Cape Town

Our group has hundreds of offices around the world. Within the group, we belong to the top ten offices and are outperformed only by our colleagues in major centres such as Berlin or Shanghai. We've won international creative awards. For example, we got the Cannes Award for the best worldwide automobile advert in 2009.

Creative, Cape Town

We keep up with technological developments in the industry, for example by visiting trade fairs. We're on par with anyone else in the world. Recently we were among the first globally to introduce the Bones Dailies system, a cutting-edge post-production software.

Creative, Cape Town

In the beginning we just used homegrown Excel and Access databases. But the organisation of large conferences makes enormous demands on data processing capacity and runs into tens of millions of Rand. So we eventually needed higher-end software packages effectively to grow the business. We went to the UK, brought back top-of-the-range software and paid for the trainer to come to South Africa to train staff. It was

a large risk but paid off and ultimately enabled the company to grow and take on more full time staff. Now we have the very best in software and hardware; huge servers, highly sophisticated firewalls and generators that can operate the whole building so that people around the world can access online systems 24 hours a day, seven days a week. Our core strategy is to attract more big international association conferences to South Africa. Of the 80,000 international approximately 8000 rotate their meetings around the world, and of those 8000 there are probably less than 200 that have ever come to South Africa. Within this group we have identified a core clientele target of 80-90 associations in conjunction with CTICC.

Tourism, Cape Town

Our hotels are world-class and we have great conference facilities. On the whole our infrastructure is high quality.

Tourism, Cape Town