Creating A Competitive South Africa

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Harvard Business School
Johannesburg, South Africa
3 July 2007

This presentation draws on ideas from Professor Porter's articles and books, in particular, The Competitive Advantage of Nations (The Free Press, 1990), "Building the Microeconomic Foundations of Competitiveness," in The Global Competitiveness Report 2006 (World Economic Forum, 2006), "Clusters and the New Competitive Agenda for Companies and Governments" in On Competition (Harvard Business School Press, 1998), and ongoing research on clusters and competitiveness. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means - electronic, mechanical, photocopying, recording, or otherwise - without the permission of Michael E. Porter.

Further information on Professor Porter’s work and the Institute for Strategy and Competitiveness is available at www.isc.hbs.edu
The Changing Nature of International Competition

Drivers
- Fewer barriers to trade and investment
- Rapidly increasing stock and diffusion of knowledge
- Competitiveness upgrading in many countries

Market reaction
- Globalization of markets
- Globalization of capital investment
- Globalization of value chains
- Increasing knowledge and skill intensity of competition
- Value migrating to the service component of the value chain

- Improving competitiveness is increasingly essential to South Africa’s prosperity
Prosperity Performance
Selected Countries

Real PPP-adjusted GDP per Capita, 2006

Growth of Real GDP per Capita (PPP-adjusted), CAGR, 1998-2006

Source: EIU (2007)
Comparative Economic Performance
Real GDP Growth Rates

Countries sorted by 2001-2006 annual real GDP growth rate (CAGR)

Source: EIU (2007)

Source: EIU (2007)
Income Inequality
Selected Countries

Note: Most recent Gini index data available for each country (1999 – 2003). South Africa’s data is from 2000.
South African Economy 2007

• Economic growth rates are **solid** and have reached a higher path since 2003, driven increasingly by domestic demand

• A combination of **domestic policies** and supportive conditions in the **global economy** have driven growth

However

• Growth rates have **not been exceptional** compared to other middle income and natural resource-rich countries

• Domestic demand growth is threatening to create **unsustainable external balances**; export capacity needs to broaden and grow

• Unemployment, inequality, and the **social tensions** they create recede only slowly

• Is South Africa **improving competitiveness fast enough** to avoid the risk of macroeconomic and political instability?
What is Competitiveness?

• Competitiveness is determined by the **productivity** (value per unit of input) with which a nation uses its human, capital, and natural resources.
  – Productivity sets the standard of living (wages, returns on capital, returns on natural resources) that a nation can sustain.
  – Productivity depends on the **prices** that a nation’s products and services command (e.g. uniqueness, quality), not just on **efficiency**.
  – It is not **what** industries a nation competes in that matters for prosperity, but **how** it competes in those industries.
  – Productivity requires a **combination of domestic and foreign firms** operating in the nation.
  – The productivity of “local” or **domestic** industries is fundamental to competitiveness, not just that of traded industries.
  – Devaluation does **not** make a country more competitive.

• Only **business** can create wealth.
• Nations compete in offering the **most productive environment** for business.
• The public and private sectors play **different but interrelated roles** in creating a productive economy.
Decomposing Prosperity

Prosperity

- Standard of living
- Inequality

Per Capita Income

Domestic Purchasing Power

- Consumption taxes
- Local prices
  - Efficiency of local industries
  - Level of local market competition

Labor Productivity

- Skills
- Capital stock
- Total factor productivity

Labor Utilization

- Working hours
- Unemployment
- Workforce participation rate
  - Population age profile
Comparative Labor Productivity Performance
Selected Developing Countries

Source: EIU (2007)
Unemployment Performance
Selected Countries

Unemployment Rate, 2006

Improving

Worsening

South Africa

Change of Unemployment Rate in Percentage Points, 1998 - 2006

Source: EIU (2007)
Labor Force Mobilization
Selected Countries

Employees as % of Population, 2006

Source: EIU, 2007
Domestic Purchasing Power

Normalized Purchasing Power Across Countries

Purchasing Power Factor, 2006, (USD = 1)

Source: IMF (2007), authors’ calculations

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Enablers and Indicators of Competitiveness

Productivity

Exports
Inbound Foreign Direct Investment
Domestic Investment
Outbound Foreign Direct Investment
Domestic Innovation

Competitiveness Environment
South African Export Performance
1994 - 2005

Source: WTO (2007)
Inbound Foreign Investment Performance
Stocks and Flows, Selected Countries

FDI Stocks as % of GDP, Average 2002 - 2005

FDI Inflows as % of Gross Fixed Capital Formation, Average 2002 - 2005

Source: UNCTAD (2007)
Fixed Investment Rates
Selected Countries

Gross Fixed Investment as % of GDP

International Patenting Output
Selected Countries

Annual U.S. patents per 1 million population, 2005

Source: USPTO, 2006

South Africa’s Economic Performance

Core components of prosperity

• **Productivity** is comparable versus peers but growing less dynamically
• The **mobilization of the working age population** remains dramatically lower
• **Labor mobilization** is becoming more crucial for future prosperity growth, but job creation still lags the growth of the available labor force

Indicators and enablers of competitiveness

• South Africa’s **export share** has been flat, despite the country’s focus on growing natural resource-driven clusters
• **Inward foreign direct investment** has increased in recent years, but South Africa still remains well below its potential
• **Domestic investment** is increasing, but continues to fall short of peer countries and the benchmark set by the government
• **Innovation output** is falling behind peer countries
• South Africa continues to suffer from a ‘**two-economy phenomena**’
  – A formal economy with relatively solid productivity close to global standards
  – An informal economy with low productivity that provides jobs for a large share of the population, especially the poor
Determinants of Competitiveness

Macroeconomic, Political, Legal, and Social Context

Microeconomic Competitiveness

- Sophistication of Company Operations and Strategy
- Quality of the Business Environment

State of Cluster Development

- A sound context creates the potential for competitiveness, but is not sufficient
- Competitiveness ultimately depends on improving the microeconomic capability of the economy and the sophistication of local competition
Governance Indicators
Selected Countries

Index of Governance Quality, 2006

Better
Worse

Note: Sorted left to right by decreasing average value across all indicators. The ‘zero’ horizontal line corresponds to the median country’s average value across all indicators.
## Prosperity and Human Development
### Selected Countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Rank</th>
<th>HDI components</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>GDP per Capita (PPP)</td>
<td>Human Development Index (HDI)</td>
</tr>
<tr>
<td></td>
<td>55</td>
<td>121</td>
</tr>
<tr>
<td>South Africa</td>
<td>58</td>
<td>131</td>
</tr>
<tr>
<td>Botswana</td>
<td>59</td>
<td>65</td>
</tr>
<tr>
<td>Russian Federation</td>
<td>64</td>
<td>69</td>
</tr>
<tr>
<td>Brazil</td>
<td>65</td>
<td>74</td>
</tr>
<tr>
<td>Thailand</td>
<td>69</td>
<td>87</td>
</tr>
<tr>
<td>Tunisia</td>
<td>70</td>
<td>92</td>
</tr>
<tr>
<td>Turkey</td>
<td>71</td>
<td>64</td>
</tr>
<tr>
<td>Libyan Arab Jamahiriya</td>
<td>72</td>
<td>96</td>
</tr>
<tr>
<td>Iran, Islamic Rep. of</td>
<td>74</td>
<td>79</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>75</td>
<td>125</td>
</tr>
<tr>
<td>Namibia</td>
<td>81</td>
<td>124</td>
</tr>
<tr>
<td>Gabon</td>
<td>83</td>
<td>102</td>
</tr>
<tr>
<td>Algeria</td>
<td>89</td>
<td>72</td>
</tr>
<tr>
<td>Venezuela</td>
<td>90</td>
<td>81</td>
</tr>
<tr>
<td>China</td>
<td>116</td>
<td>108</td>
</tr>
<tr>
<td>Indonesia</td>
<td>117</td>
<td>126</td>
</tr>
<tr>
<td>India</td>
<td>127</td>
<td>136</td>
</tr>
<tr>
<td>Ghana</td>
<td>131</td>
<td>144</td>
</tr>
<tr>
<td>Cameroon</td>
<td>152</td>
<td>145</td>
</tr>
<tr>
<td>Uganda</td>
<td>165</td>
<td>140</td>
</tr>
</tbody>
</table>

Note: Percentages are relative to best country in the world
Source: UNDP (2006)
Improving the Business Environment: The Diamond

- **Context for Firm, Strategy and Rivalry**
  - A local context and rules that encourage investment and productivity
    - e.g., Intellectual property protection
  - Meritocratic incentive systems in businesses and other institutions
  - Open and vigorous local competition
    - e.g., Anti-monopoly laws, openness to imports

- **Factor (Input) Conditions**
  - Presence of high quality, specialized inputs available to firms
    - Human resources
    - Capital resources
    - Physical infrastructure
    - Administrative infrastructure
    - Information infrastructure
    - Scientific and technological infrastructure
    - Natural resource availability

- **Demand Conditions**
  - Local demand with improving sophistication
  - Local customer needs that anticipate those elsewhere
  - Unusual local demand in specialized segments that can be served nationally and globally

- **Related and Supporting Industries**
  - Access to capable, locally based suppliers and firms in related fields

- Successful economic development is a process of successive upgrading, in which the business environment improves to enable increasingly sophisticated ways of competing.
## Factor (Input) Conditions

### South Africa’s Relative Position 2006

<table>
<thead>
<tr>
<th>Competitive Advantages Relative to GDP per Capita</th>
<th>Competitive Disadvantages Relative to GDP per Capita</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country Ranking, Arrows indicate a change of 5 or more ranks since 2001</td>
<td>Country Ranking, Arrows indicate a change of 5 or more ranks since 2001</td>
</tr>
<tr>
<td>Local equity market access 12</td>
<td>Quality of math and science education 119</td>
</tr>
<tr>
<td>Efficiency of legal framework 16</td>
<td>Availability of scientists and engineers 96</td>
</tr>
<tr>
<td>Financial market sophistication 18</td>
<td>Quality of public schools 89 ↓</td>
</tr>
<tr>
<td>University/industry research collaboration 22</td>
<td>Reliability of police services 86 ↑</td>
</tr>
<tr>
<td>Quality of management schools 22</td>
<td>Telephone/fax infrastructure quality 83 ↓</td>
</tr>
<tr>
<td>Judicial independence 22</td>
<td>Quality of electricity supply 68 ↓</td>
</tr>
<tr>
<td>Air transport infrastructure quality 24</td>
<td>Port infrastructure quality 43 ↓</td>
</tr>
<tr>
<td>Quality of scientific research institutions 25</td>
<td>Overall infrastructure quality 41 ↓</td>
</tr>
<tr>
<td>Railroad infrastructure development 40</td>
<td>Ease of access to loans 37</td>
</tr>
<tr>
<td></td>
<td>Venture capital availability 35</td>
</tr>
</tbody>
</table>

Note: Rank versus 121 countries; overall, South Africa ranks 33rd in 2005 PPP adjusted GDP per capita and 46th in Business Competitiveness.

Weaknesses in South Africa’s Labor Market

- South Africa continues to struggle with high unemployment and a significant informal economy.

- **Skill shortages** are a clear reason for the persistent unemployment; a large share of the unemployed are low-skilled long-term unemployed.

- Labor market rules and regulations are major causes of low job creation in the economy.
  - Hiring and firing rules and work procedures are comparable to peer countries; especially after the 2002 modifications to the legislation of the initial post-apartheid period.
  - Wage policies, which set unrealistically high minimum wages and uneconomic wage structures within industries, are a serious barrier.

- Rising unit labor costs, despite persistently high unemployment, is a sign of clear structural problems in South Africa’s labor market.
## Context for Strategy and Rivalry
### South Africa’s Relative Position 2006

### Competitive Advantages Relative to GDP per Capita

<table>
<thead>
<tr>
<th>Category</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Efficacy of corporate boards</td>
<td>8</td>
</tr>
<tr>
<td>Effectiveness of antitrust policy</td>
<td>19</td>
</tr>
<tr>
<td>Intellectual property protection</td>
<td>23</td>
</tr>
<tr>
<td>Business costs of corruption</td>
<td>33</td>
</tr>
<tr>
<td>Decentralization of corporate activity</td>
<td>34</td>
</tr>
<tr>
<td>Intensity of local competition</td>
<td>35</td>
</tr>
</tbody>
</table>

Country Ranking, Arrows indicate a change of 5 or more ranks since 2001.

### Competitive Disadvantages Relative to GDP per Capita

<table>
<thead>
<tr>
<th>Category</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooperation in labor-employer relations</td>
<td>107</td>
</tr>
<tr>
<td>Centralization of economic policymaking</td>
<td>79</td>
</tr>
<tr>
<td>Favoritism in decisions of government officials</td>
<td>48</td>
</tr>
<tr>
<td>Prevalence of trade barriers</td>
<td>38</td>
</tr>
</tbody>
</table>

Country Ranking, Arrows indicate a change of 5 or more ranks since 2001.

Note: Rank versus 121 countries; overall, South Africa ranks 33rd in 2005 PPP adjusted GDP per capita and 46th in Business Competitiveness.

Ease of Doing Business
South Africa

Ranking, 2006 (of 175 countries)

Favorable

Unfavorable

Median Ranking,
Sub-Saharan Africa

South Africa’s GNI per capita rank: 54

Demand Conditions
South Africa’s Relative Position 2006

Competitive Advantages
Relative to GDP per Capita

Country Ranking, Arrows indicate a change of 5 or more ranks since 2001

Laws relating to ICT 26
Stringency of environmental regulations 32
Government procurement advanced technology products 32
Presence of demanding regulatory standards 34
Buyer sophistication 34

Competitive Disadvantages
Relative to GDP per Capita

Note: Rank versus 121 countries; overall, South Africa ranks 33rd in 2005 PPP adjusted GDP per capita and 46th in Business Competitiveness.
# Related and Supporting Industries

## South Africa’s Relative Position 2006

### Competitive Advantages Relative to GDP per Capita

<table>
<thead>
<tr>
<th>Factor</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local supplier quantity</td>
<td>23</td>
</tr>
<tr>
<td>Local supplier quality</td>
<td>28</td>
</tr>
<tr>
<td>Local availability of specialized research</td>
<td>31</td>
</tr>
</tbody>
</table>

*Country Ranking, Arrows indicate a change of 5 or more ranks since 2001*

### Competitive Disadvantages Relative to GDP per Capita

<table>
<thead>
<tr>
<th>Factor</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local availability of process machinery</td>
<td>40</td>
</tr>
</tbody>
</table>

*Country Ranking, Arrows indicate a change of 5 or more ranks since 2001*

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**Note:** Rank versus 121 countries; overall, South Africa ranks 33rd in 2005 PPP adjusted GDP per capita and 46th in Business Competitiveness.

**Source:** Global Competitiveness Report 2006-2007.
## Company Operations and Strategy
### South Africa’s Relative Position 2006

<table>
<thead>
<tr>
<th>Competitive Advantages Relative to GDP per Capita</th>
<th>Competitive Disadvantages Relative to GDP per Capita</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extent of incentive compensation</td>
<td>Presence across the value chain</td>
</tr>
<tr>
<td>Prevalence of foreign technology licensing</td>
<td>Nature of competitive advantage</td>
</tr>
<tr>
<td>Reliance on professional management</td>
<td>Degree of customer orientation</td>
</tr>
<tr>
<td>Extent of regional sales</td>
<td>Production process sophistication</td>
</tr>
<tr>
<td>Extent of marketing</td>
<td>Control of international distribution</td>
</tr>
<tr>
<td>Company spending on research and development</td>
<td>Capacity for innovation</td>
</tr>
<tr>
<td>Extent of staff training</td>
<td></td>
</tr>
<tr>
<td>Willingness to delegate authority</td>
<td></td>
</tr>
<tr>
<td>Breadth of international markets</td>
<td></td>
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</tbody>
</table>

Country Ranking, Arrows indicate a change of 5 or more ranks since 2001.

Note: Rank versus 121 countries; overall, South Africa ranks 33rd in 2005 PPP adjusted GDP per capita and 46th in Business Competitiveness.

Determinants of Competitiveness

Macroeconomic, Political, Legal, and Social Context

Microeconomic Competitiveness

Sophistication of Company Operations and Strategy

Quality of the Business Environment

State of Cluster Development
Enhancing Cluster Development
Tourism Cluster in Cairns, Australia

Public Relations & Market Research Services

Food Suppliers

Property Services

Maintenance Services

Travel agents

Tour operators

Restaurants

Attractions and Activities
e.g., theme parks, casinos, sports

Hotels

Airlines, Cruise Ships

Local retail, health care, and other services

Local Transportation

Souvenirs, Duty Free

Banks, Foreign Exchange

Government agencies
e.g. Australian Tourism Commission, Great Barrier Reef Authority

Educational Institutions
e.g. James Cook University, Cairns College of TAFE

Industry Groups
e.g. Queensland Tourism Industry Council

Sources: HBS student team research (2003) - Peter Tynan, Chai McConnell, Alexandra West, Jean Hayden

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Enhancing Cluster Development
California Wine Cluster

- Growers/Vineyards
- Wineries/Processing Facilities
- Educational, Research, & Trade Organizations (e.g., Wine Institute, UC Davis, Culinary Institutes)
- State Government Agencies (e.g., Select Committee on Wine Production and Economy)

- Grapestock
- Fertilizer, Pesticides, Herbicides
- Grape Harvesting Equipment
- Irrigation Technology
- Winemaking Equipment
- Barrels
- Bottles
- Caps and Corks
- Labels
- Public Relations and Advertising
- Specialized Publications (e.g., Wine Spectator, Trade Journal)
- California Agricultural Cluster
- Tourism Cluster
- Food Cluster

Sources: California Wine Institute, Internet search, California State Legislature. Based on research by MBA 1997 students R. Alexander, R. Arney, N. Black, E. Frost, and A. Shivananda.
The Kenyan Cut Flower Cluster
Trade Performance

Kenyan Cut Flower Exports in thousand US $

Kenyan Cut Flower World Export Market Share

Kenya’s Cut Flower Cluster

Government Agencies, NGOs & Industry Associations
- Horticultural Crops Development Authority (HCDA)
- Government Export Policies targeting Horticulture
- Government Policy for Revitalizing Agriculture; National Export Strategy; Export Promotion Council (EPC)
- Non-Governmental Organizations
  - The Rural Enterprise Agri-Business Promotion Project (USAID, CARE, IFAD)
  - Horticultural Produce Handling Facilities Project (JBIC)
- Trade & Industry Associations
  - Kenya Flower Council (KFC)
  - Fresh Produce Exporters Association of Kenya (FPEAK)
  - Regional Growers Associations e.g., North & South Kikuyu; Lake Naivasha, etc.

Flower Farming

Post-Harvest Handling; Transport to Market

Education, Research & Quality Standards Organizations
- Research Institutions:
  - Kenya Agricultural Research Institute (KARI)
  - International Center for Insect Physiology and Ecology (ICIPE)
- Public universities with post graduate degrees in horticulture:
  - University of Nairobi; Jomo Kenyatta University of Agriculture & Technology
- Quality & Standards:
  - EUREGAP Standard (UK & Dutch Supermarkets)
  - Kenya Plant Health Inspectorate Services (KEPHIS)

Plantstock
Greenhouse; Shading Structures
Irrigation technology
Pre-Cooling Technology
Fertilizers, pesticides, herbicides
Agricultural Cluster
Horticultural Cluster (Fruits & Vegetables)

Post-Harvest Cooling Technology
Grading / Packaging Sheds
Packaging & Labeling Materials
Refrigerated Trucks
Freight Forwarders
Clearing and Forwarding Agents
Air Carriers (Commercial / Charters)
Tourism Cluster

Sources: HBS student team research (2007) - Kusi Hornberger, Nick Ndiritu, Lalo Ponce-Brito, Melesse Tashu, Tijan Watt
### Institutions for Collaboration

**Selected Massachusetts Organizations, Life Sciences**

<table>
<thead>
<tr>
<th>Life Sciences Industry Associations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Massachusetts Biotechnology Council</td>
</tr>
<tr>
<td>Massachusetts Medical Device Industry Council</td>
</tr>
<tr>
<td>Massachusetts Hospital Association</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>University Initiatives</th>
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</thead>
<tbody>
<tr>
<td>Harvard Biomedical Community</td>
</tr>
<tr>
<td>MIT Enterprise Forum</td>
</tr>
<tr>
<td>Biotech Club at Harvard Medical School</td>
</tr>
<tr>
<td>Technology Transfer offices</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>General Industry Associations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Associated Industries of Massachusetts</td>
</tr>
<tr>
<td>Greater Boston Chamber of Commerce</td>
</tr>
<tr>
<td>High Tech Council of Massachusetts</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Informal networks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company alumni groups</td>
</tr>
<tr>
<td>Venture capital community</td>
</tr>
<tr>
<td>University alumni groups</td>
</tr>
</tbody>
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<thead>
<tr>
<th>Economic Development Initiatives</th>
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</thead>
<tbody>
<tr>
<td>Massachusetts Technology Collaborative</td>
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<tr>
<td>Mass Biomedical Initiatives</td>
</tr>
<tr>
<td>Mass Development</td>
</tr>
<tr>
<td>Massachusetts Alliance for Economic Development</td>
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</table>

<table>
<thead>
<tr>
<th>Joint Research Initiatives</th>
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</thead>
<tbody>
<tr>
<td>New England Healthcare Institute</td>
</tr>
<tr>
<td>Whitehead Institute For Biomedical Research</td>
</tr>
<tr>
<td>Center for Integration of Medicine and Innovative Technology (CIMIT)</td>
</tr>
</tbody>
</table>
South Africa Cluster Portfolio Measured by Exports
Goods and Services Exports, 2000-2005

Change in South Africa’s world export market share, 2000 – 2005

South Africa Cluster Portfolio Measured by Exports
Goods and Services Exports, 2000-2005 (continued)

Change in South Africa’s world export market share, 2000 – 2005

South Africa’s world export market share, 2005

Change In South Africa’s Overall World Export Share: +0.058%

Exports of $2Billion =

The South African Wine Cluster
Trade Performance

South African Wine Exports in thousand US $

South African Wine World Export Market Share

The South African Wine Cluster
Changing Government Roles

• Until 1997, the South African wine industry was highly regulated through KWV (wine grower’s cooperative):
  • Regulated prices
  • Quotas
  • Regulated planting
→ Surpluses and inefficient production

• After 1997, full deregulation occurred. In 2003, the Ministry of Agriculture announced the Wine Industry Strategic Plan (WIP), a new wine policy around:
  • Competitiveness
  • Black Economic Empowerment (BEE)
  • Resource management
  • Enhanced responsibility devolved to institutions for collaboration, especially South African Wine and Brandy Company (SAWB)
Ranking Microeconomic Competitiveness

Business Competitiveness Index, 2006

Variation in BCI score explains more than 80% of variation in GDP per capita

Source: Global Competitiveness Report 2006
Competitive Dynamism
Rate of Competitiveness Improvement

South African Competitiveness in 2007

Overall competitiveness

• South Africa is ranked 33rd in the Business Competitiveness Index, down three ranks since 2001
• Competitiveness improvement has been moderate, only slightly above the global average
• South Africa’s current prosperity is below the level expected given its competitiveness, pointing towards unexploited potential

Competitiveness profile

• Strengths are present in company sophistication, financial markets, and some aspects of context for rivalry
• Weaknesses are most visible in infrastructure and skills, especially basic skills

• South Africa is facing critical bottlenecks that limit its ability to exploit its strengths
Operational Effectiveness is Not Strategy

Operational Effectiveness:
- Assimilating, attaining, and extending best practices
  
Run the same race faster

Strategic Positioning:
- Creating a unique and sustainable competitive position
  
Choose to run a different race
Geographic Influences on Competitiveness

Levels of Influence

World Economy

Broad Economic Areas

Groups of Neighboring Nations

“The Neighborhood”

Nations

States, Provinces

(Regional Economies)

Metropolitan Areas

Distressed Urban and Rural Communities
Specialization of Regional Economies
Select U.S. Geographic Areas

Seattle-Bellevue-Everett, WA
Aerospace Vehicles and Defense
Fishing and Fishing Products
Analytical Instruments

San Francisco-Oakland-San Jose Bay Area
Communications Equipment
Agricultural Products
Information Technology

Los Angeles Area
Apparel
Building Fixtures, Equipment and Services
Entertainment

San Diego
Leather and Sporting Goods
Power Generation
Education and Knowledge Creation

Wichita, KS
Aerospace Vehicles and Defense
Heavy Machinery
Oil and Gas

Chicago
Communications Equipment
Processed Food
Heavy Machinery

Pittsburgh, PA
Construction Materials
Metal Manufacturing
Education and Knowledge Creation

Atlanta, GA
Construction Materials
Transportation and Logistics
Business Services

Raleigh-Durham, NC
Communications Equipment
Information Technology
Education and Knowledge Creation

Baltimore, MD
Healthcare Services
Computers and Software

Boston
Analytical Instruments
Education and Knowledge Creation
Communications Equipment

Note: Clusters listed are the three highest ranking clusters in terms of share of national employment
Source: Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School
Comparative Regional Economic Performance
South African Provinces

GDP per Capita, South Africa = 100, 2003

Average Growth of Real GDP: 2.6%

Gauteng
Western Cape
KwaZulu-Natal
North West
Northern Cape
Mpumalanga
Free State
Limpopo
Eastern Cape

Note: Size of bubble is proportional to population

Growth of Real GDP, 2003
South Africa’s Role in the Neighborhood
### Regional Economic Coordination

**Illustrative Policy Areas**

<table>
<thead>
<tr>
<th>Factor (Input) Conditions</th>
<th>Context for Strategy and Rivalry</th>
<th>Demand Conditions</th>
<th>Related and Supporting Industries</th>
<th>Regional Governance</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Improve regional transportation infrastructure</td>
<td>• Coordinate macroeconomic policies</td>
<td>• Harmonize environmental standards</td>
<td>• Coordinate development of cross-border clusters, e.g.</td>
<td>• Share best practices in government operations</td>
</tr>
<tr>
<td>• Create an efficient energy network</td>
<td>• Eliminate trade and investment barriers within the region</td>
<td>• Harmonize product safety standards</td>
<td>- Tourism</td>
<td>• Create regional institutions</td>
</tr>
<tr>
<td>• Interconnect regional communications</td>
<td>• Simplify and harmonize cross-border regulations and paperwork</td>
<td>• Establish reciprocal consumer protection laws</td>
<td>- Agribusiness</td>
<td>- Dispute resolution mechanisms</td>
</tr>
<tr>
<td>• Link financial markets</td>
<td></td>
<td></td>
<td>- Transport &amp; Logistics</td>
<td>- Regional development bank</td>
</tr>
<tr>
<td>• Facilitate the movement of students to enhance higher education</td>
<td></td>
<td></td>
<td>- Business services</td>
<td></td>
</tr>
<tr>
<td>• Harmonize regulatory requirements for business</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Coordinate programs to improve public safety</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Factor (Input) Conditions

- Coordinate macroeconomic policies
- Eliminate trade and investment barriers within the region
- Simplify and harmonize cross-border regulations and paperwork
- Coordinate antimonopoly and fair competition policies
- Harmonize environmental standards
- Harmonize product safety standards
- Establish reciprocal consumer protection laws
- Coordinate development of cross-border clusters, e.g.
  - Tourism
  - Agribusiness
  - Transport & Logistics
  - Business services

### Regional Governance

- Share best practices in government operations
- Create regional institutions
  - Dispute resolution mechanisms
  - Regional development bank
- Develop a regional marketing strategy
The Process of Economic Development
Shifting Roles and Responsibilities

**Old Model**
- **Government** drives economic development through policy decisions and incentives

**New Model**
- Economic development is a collaborative process involving government at multiple levels, the private sector, universities, research institutions, and business associations

- Competitiveness must become a **bottom-up process** in which many individuals, companies, clusters, and institutions take responsibility
Clusters and Economic Policy

- Clusters provide a framework for organizing the implementation of public policy and public investments towards economic development.

Clusters

- Business Attraction
- Education and Workforce Training
- Export Promotion
- Science and Technology Investments (e.g., centers, university departments, technology transfer)
- Standard setting
- Market Information and Disclosure
- Environmental Stewardship
- Specialized Physical Infrastructure
- Natural Resource Protection
Role of the Private Sector in Economic Development

- A company’s competitive advantage depends partly on the **quality of the business environment**
- A company gains advantages from being part of a **cluster**
- Companies have a strong **role to play** in upgrading their business environment
- Take an **active role** in upgrading the local infrastructure
- Nurture **local suppliers** and attract **foreign suppliers**
- Work closely with local **educational and research institutions**, to upgrade their **quality** and **address the cluster’s needs**
- Inform government on **regulatory issues and constraints** bearing on cluster development
- Focus **corporate philanthropy** on enhancing the local business environment
- An important role for **trade associations**
  - Collaboration, cost sharing, and increasing influence
The Australian Wine Cluster

Time Line

1930
First oenology course at Roseworthy Agricultural College

1955
Australian Wine Research Institute founded

1965
Australian Wine Bureau established

1970
Winemaking school at Charles Sturt University founded

1980
Australian Wine and Brandy Corporation established

1990
Winemaker’s Federation of Australia established

1991 to 1998
New organizations created for education, research, market information, and export promotions

1950s
Import of European winery technology

1960s
Recruiting of experienced foreign investors, e.g. Wolf Bass

1970s
Continued inflow of foreign capital and management

1980s
Creation of large number of new wineries

1990s
Surge in exports and international acquisitions

## The Australian Wine Cluster
**Recently founded Institutions for Collaboration**

<table>
<thead>
<tr>
<th>Institution</th>
<th>Established</th>
<th>Focus</th>
<th>Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Winemakers’ Federation of Australia</strong></td>
<td>1990</td>
<td>Public policy representation of companies in the wine cluster</td>
<td>Member companies</td>
</tr>
<tr>
<td><strong>Cooperative Centre for Viticulture</strong></td>
<td>1991</td>
<td>Coordination of research and education policy in viticulture</td>
<td>Other cluster organizations</td>
</tr>
<tr>
<td><strong>Australian Wine Export Council</strong></td>
<td>1992</td>
<td>Wine export promotion through international offices in London and San Francisco</td>
<td>Government; cluster organizations</td>
</tr>
<tr>
<td><strong>Grape and Wine R&amp;D Corporation</strong></td>
<td>1991</td>
<td>Funding of research and development activities</td>
<td>Government; statutory levy</td>
</tr>
<tr>
<td><strong>Wine Industry Information Service</strong></td>
<td>1998</td>
<td>Information collection, organization, and dissemination</td>
<td>Cluster organizations</td>
</tr>
<tr>
<td><strong>Wine Industry National Education and Training Council</strong></td>
<td>1995</td>
<td>Coordination, integration, and standard maintenance for vocational training and education</td>
<td>Government; other cluster organizations</td>
</tr>
</tbody>
</table>

The Evolution of Economies
San Diego

- Climate and Geography
- U.S. Military
- Bioscience Research Centers
- Hospitality and Tourism
- Transportation and Logistics
- Power Generation
- Communications Equipment
- Analytical Instruments
- Information Technology
- Education and Knowledge Creation
- Medical Devices
- Biotech / Pharmaceuticals
Defining an Economic Strategy

Value Proposition

- What is the unique competitive position of the nation given its location, legacy, and existing and potential strengths?
  - What roles with neighbors, the region, and the broader world?
  - What unique value as a business location?
  - For what types of activities and clusters?

Developing Unique Strengths

- What elements of context and the business environment become crucial priorities?
- What existing and emerging clusters should be developed first?

Achieving and Maintaining Parity with Peers

- What weaknesses must be addressed to achieve parity with peer countries?

• ASGISA needs to become a true national economic strategy, defining the value proposition of the country in the global economy
National Economic Strategy
Singapore

National Value Proposition

- What roles in regional and world economy?
  e.g., Business, financial, and knowledge hub of Southeast Asia

- What unique value as a business location?
  e.g., Highly efficient place to do business; access to skilled and hardworking staff

- For what range of clusters, activities within clusters?
  e.g., clusters benefiting from a business hub but not dependent on a large home market or physical proximity to markets

Creating Unique Strengths

- Macro/political/legal/social
  e.g., Absence of corruption

- National Diamond
  e.g., Singapore’s physical infrastructure

- Cluster Development
  e.g., Singapore’s logistical services, financial services, petrochemical processing, tourism

- Company Capabilities
  e.g., large number of world-class multinationals with regional headquarters and significant operations in Singapore

- Geographic Levels
  e.g., Growth Triangle, ASEAN

Mitigating Weaknesses

- Macro/political/legal/social
  e.g., Expand cultural attractions

- National Diamond
  e.g., Upgrade Singapore’s research institutions; improve the efficiency of Singaporean domestic economy

- Cluster Development
  e.g., Develop more Singaporean SMEs to deepen clusters; improve the number and quality of IFCs

- Company Capabilities
  e.g., build the capability of Singaporean companies and encourage regional strategies

- Geographic Levels
  e.g., Create friendly relationships with ASEAN neighbors
Government Economic Policy in South Africa
The Accelerated and Shared Growth Initiative (ASGISA)

• In 2004, the South African government set **ambitious goals** in terms of economic growth and social improvements
• In dialogue with the private sector, civil society, and experts, **binding constraints** to growth were identified

**CONSTRAINTS**
- Volatile currency
- Inefficient and costly transport infrastructure
- Skill shortages
- Barriers to entry and competition
- Burdensome regulations for small companies
- Weaknesses in administrative capacity

**RESPONSES**
- Macroeconomic management
- Infrastructure investments
- Skills and education initiatives
- Sector strategies
- ‘Second economy’ programs
- Public administration reform
## Sectoral Priorities within ASGISA

### TOP PRIORITY SECTORS

- Business Process Outsourcing
- Tourism
- Biofuels (under planning)

### NEXT RANK OF PRIORITIES

- Chemicals
- Metal beneficiation
- Creative industries
- Clothing and textiles
- Durable consumer goods
- Wood, pulp and paper
# The Role of Government in Cluster Initiatives

<table>
<thead>
<tr>
<th>Should...</th>
<th>May...</th>
<th>Should not</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actively participate</td>
<td>Convene</td>
<td>Select priority clusters</td>
</tr>
<tr>
<td>Be ready to implement recommendations</td>
<td>Provide matching funds</td>
<td>Define cluster action priorities</td>
</tr>
</tbody>
</table>

- Debates about the role of government in cluster development are too often focused on which clusters should be supported and how much financing they should get.

- **Cluster selection** is an important but ultimately **operative question**; focus is necessary to achieve impact and not all clusters have equal potential.

- **Financing** is important but cluster policy needs to be more; policy needs to improve the potential for companies to **increase productivity**.
Backup
Cluster Specialization
Leading Footwear Clusters

**Portugal**
- Production
- Focus on short-production runs in the medium price range

**Romania**
- Production subsidiaries of Italian companies
- Focus on lower to medium price range

**China**
- OEM Production
- Focus on low cost segment mainly for the US market

**Italy**
- Design, marketing, and production of premium shoes
- Export widely to the world market

**United States**
- Design and marketing
- Focus on specific market segments like sport and recreational shoes and boots
- Manufacturing only in selected lines such as hand-sewn casual shoes and boots

**Brazil**
- Low to medium quality finished shoes, inputs, leather tanning
- Shift toward higher quality products in response to Chinese price competition

**Vietnam/Indonesia**
- OEM Production
- Focus on the low cost segment mainly for the European market

Source: Research by HBS student teams in 2002 – Van Thi Huynh, Evan Lee, Kevin Newman, Nils Ole Oermann
Note: Clusters with overlapping borders or identical shading have at least 20% overlap (by number of industries) in both directions.
### The Composition of Regional Economies
**United States, 2004**

<table>
<thead>
<tr>
<th>Category</th>
<th>Traded</th>
<th>Local</th>
<th>Natural Resource-Driven</th>
</tr>
</thead>
<tbody>
<tr>
<td>Share of Employment</td>
<td>29.3%</td>
<td>70.0%</td>
<td>0.7%</td>
</tr>
<tr>
<td>Employment Growth Rate, 1990 to 2004</td>
<td>0.7%</td>
<td>2.4%</td>
<td>-1.2%</td>
</tr>
<tr>
<td>Average Wage</td>
<td>$49,367</td>
<td>$30,416</td>
<td>$35,815</td>
</tr>
<tr>
<td>Relative Wage</td>
<td>137.2%</td>
<td>84.5</td>
<td>99.5</td>
</tr>
<tr>
<td>Wage Growth</td>
<td>4.2%</td>
<td>3.4%</td>
<td>2.1%</td>
</tr>
<tr>
<td>Relative Productivity</td>
<td>144.1</td>
<td>79.3</td>
<td>140.1</td>
</tr>
<tr>
<td>Patents per 10,000 Employees</td>
<td>23.0</td>
<td>0.4</td>
<td>3.3</td>
</tr>
<tr>
<td>Number of SIC Industries</td>
<td>590</td>
<td>241</td>
<td>48</td>
</tr>
</tbody>
</table>

**Note:** 2004 data, except relative productivity which uses 1997 data.

Stages Of Competitive Development

Shifting Policy Imperatives

Cost of Inputs
- Macro, political, and legal stability
- Efficient basic infrastructure
- Lowering the regulatory costs of doing business

Efficiency
- Local competition
- Market openness
- Incentives and rules encouraging productivity
- Cluster formation and activation

Unique Value
- Advanced skills
- Advanced infrastructure
- Incentives and rules encouraging innovation
- Cluster upgrading

Government and Economic Development

Roles

• Improve the macroeconomic, political, legal, and social context
  – Establish a **stable, predictable, and effective** macroeconomic, legal, and political context
  – Improve the **social conditions** of citizens

• Upgrade the general business environment
  – Improve the availability, quality, and efficiency of **cross-cutting** or **general purpose inputs, infrastructure, and institutions**
  – Set **overall rules and incentives** governing competition that encourage productivity growth

• Facilitate cluster formation and enhancement
  – Identify **existing and emerging clusters**
  – Encourage and support **cluster upgrading**

• Lead a collaborative process of economic change
  – Develop and overall **economic strategy** together with key constituencies
  – Organize the **parts of government** in a coordinated development agenda
  – Engage **multiple levels of government** in economic development
  – Create **institutions** and **processes** for upgrading competitiveness that inform citizens and mobilize the private sector to take action
Integrating Economic and Social Policy

• In the new thinking on competition, there is not an inherent conflict between economic and social objectives, but a long term synergy

• The competitiveness of companies depends heavily on
  – Rising skill levels
  – Safe working conditions
  – A sense of equal opportunity
  – Low levels of pollution (pollution is a sign of unproductive use of physical resources)

• However, efforts to meet “social” objectives must be aligned with productivity and prepare and motivate individuals to succeed in the market system

• Efforts to meet “economic” objectives must include explicit programs to raise human capability, improve the lives and sense of opportunity for individuals, and enhance the broader business environment
Integrating Economic and Social Policy

Examples

Training
• Organize training investments around clusters

Housing
• Create mechanisms to encourage home ownership; provide incentives for new company formation in the construction cluster; reduce unnecessary costs of housing construction due to regulatory and approval requirement; secure property rights to residents

Health Care
• Create incentives for private health insurance; open health care delivery to competition

Social Security
• Create incentives for saving; encourage a private pension system that agglomerates investment capital

Environmental Quality
• Institute a regulatory regime that encourages movement to more environmental friendly methods; invest in technical assistance in eco-efficient processes and practices
ASGISA and Beyond: An Early Assessment

• The Accelerated and Shared Growth Initiative (ASGISA) is an important step forward for South African competitiveness policy
  – Fact-driven analysis of specific challenges
  – Identification of key priorities
  – Medium-term perspective with regular assessment of progress

• The ASGISA needs to be ‘the’ economic action plan for the country, internally consistent and widely accepted as a national objective

• Execution is crucial; even when the policy right area is identified, success depends on specific steps taken and the government’s capacity to deliver

• The action plan needs to add a clear geographic dimension, mobilizing South African regions and leveraging integration with neighboring countries
What are Cluster Initiatives?

Cluster initiatives are **collaborative activities by a group** of companies, public sector entities, and other related institutions with the objective to improve the competitiveness of a group of **interlinked economic activities in a specific geographic region**

- Upgrading of **company operations and strategies** across a group of companies
- Upgrading of **cluster-specific business environment conditions**
- Strengthening of **networks** to enhance spill-overs and other economic benefits of clusters
Towards Sustainable Black Economic Empowerment
Selected Policies

• Improve **social conditions**
• Improve and extend **public education**
• Invest aggressively in **managerial training** for black citizens
• Create incentives and support the hiring and promotion of black employees into **low- and middle-management** positions in white-owned local companies as well as multinationals
• Focus on upgrading **indigenous local businesses**, including in agriculture, local services, and manufacturing businesses serving local needs
• Place early attention to **clusters** involving small- and medium size enterprises
• Create incentives for **risk capital investments** in business with significant (>10%) black ownership. Avoid programs that apply only to majority black-owned businesses, especially when other owners are passive investors or private equity firms

• There a **no short cuts** for addressing this long-term challenge
Decomposing South Africa’s GDP per Capita Growth

Contribution to change in real GDP per Capita (PPP adjusted)

Note: Data before 2001 not available.
Source: EIU (2007)

Labor Productivity
Labor Force Participation

South Africa CAON 2007 07-02-07.ppt
## U.S. Patenting by South African Institutions

<table>
<thead>
<tr>
<th>Organization</th>
<th>Patents Issued from 2000 to 2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 SASOL TECHNOLOGY (PROPRIETARY) LIMITED</td>
<td>29</td>
</tr>
<tr>
<td>2 WINDSOR TECHNOLOGIES LIMITED</td>
<td>11</td>
</tr>
<tr>
<td>3 CSIR</td>
<td>8</td>
</tr>
<tr>
<td>4 WATER RESEARCH COMMISSION</td>
<td>6</td>
</tr>
<tr>
<td>4 DENEL (PROPRIETARY) LIMITED</td>
<td>6</td>
</tr>
<tr>
<td>4 IPCOR NV</td>
<td>6</td>
</tr>
<tr>
<td>4 SUPERSENSOR (PROPRIETARY) LIMITED</td>
<td>6</td>
</tr>
<tr>
<td>8 TECHNOLOGY FINANCE CORPORATION (PROPRIETARY) LIMITED</td>
<td>5</td>
</tr>
<tr>
<td>8 IMPLICO B.V.</td>
<td>5</td>
</tr>
<tr>
<td>8 CLAAS SELBSTFAHRENDE ERNTEMASCHINEN GMBH</td>
<td>5</td>
</tr>
<tr>
<td>11 SLIC TRADING COMPANY LIMITED</td>
<td>4</td>
</tr>
<tr>
<td>11 ESKOM</td>
<td>4</td>
</tr>
<tr>
<td>11 ADCOCK INGRAM LIMITED</td>
<td>4</td>
</tr>
<tr>
<td>14 MEDTRONIC INC.</td>
<td>3</td>
</tr>
<tr>
<td>14 MINTEK</td>
<td>3</td>
</tr>
<tr>
<td>14 SANDVIK AKTIEBOLAG</td>
<td>3</td>
</tr>
<tr>
<td>14 BILLITON INTELLECTUAL PROPERTY B.V.</td>
<td>3</td>
</tr>
<tr>
<td>14 CATALYTIC DISTILLATION TECHNOLOGIES</td>
<td>3</td>
</tr>
<tr>
<td>14 UNIVERSITY OF PRETORIA</td>
<td>3</td>
</tr>
<tr>
<td>14 SALBU RESEARCH AND DEVELOPMENT (PROPRIETARY LIMITED)</td>
<td>3</td>
</tr>
<tr>
<td>14 GARFIELD INTERNATIONAL INVESTMENTS LIMITED</td>
<td>3</td>
</tr>
<tr>
<td>14 SOUTH AFRICA NUCLEAR ENERGY CORPORATION LTD.</td>
<td>3</td>
</tr>
<tr>
<td>14 AZOTEQ (PTY) LIMITED</td>
<td>3</td>
</tr>
</tbody>
</table>

Note: Shading indicates universities, research institutions or government agencies. Nine more institutions with three patents are not listed. Source: US Patent and Trademark Office (www.uspto.gov). Author’s analysis.
Decomposing South African Real GDP Growth

Source: IMF (2006)
## Macroeconomic, Political, Legal, and Social Context

### Macroeconomic Policies
- **Sound fiscal and monetary policies** create stability and encourage business investment and upgrading.
- **Sound and stable macroeconomic conditions** hold down interest rates and provide accurate price signals for market transactions.

### Political Governance
- **Due process in political decisions** and **orderly transfers of power** create a stable planning horizon for business.
- **Checks and balances** in the political system mitigate instability and the abuse of power.

### Legal System
- An **independent, timely, effective and trusted legal system** solidifies the rule of law and provides a **fair environment for business**, encouraging investment.
- Strict monitoring and prosecution of **corruption** rewards productivity instead of favoritism.

### Social Conditions
- **Improving social conditions** in basic education, housing, health, and absence of discrimination enhances productivity.
- A **functioning social safety net** gives citizens the confidence to accept and deal with change in the economy.
- **Improvements of social conditions** signal the benefits of reforms and **increase the political support** for policies to enhance competitiveness.