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## URBAN POLICY FRAMEWORK

Table A.1: Framework for enhanced urban and city image

Urban scale	Social/ demographic identity	Natural identity	Geographic identity	Cultural identity	Urban identity	Infrastructure identity
<ul style="list-style-type: none"> <li>• Metropolitan</li> <li>• City</li> <li>• District</li> <li>• Precinct</li> <li>• Neighbourhood</li> <li>• Block/Street</li> </ul>	<ul style="list-style-type: none"> <li>• % of urban population below substance income level</li> <li>• GGP per capita</li> <li>• Literacy rate</li> <li>• Life expectancy</li> <li>• Average age</li> <li>• Gender composition</li> </ul>	<ul style="list-style-type: none"> <li>• Nature reserves</li> <li>• Unique geological sites</li> <li>• Major rivers</li> <li>• Major dams</li> <li>• Exposure to pollution</li> <li>• Emission levels</li> </ul>	<ul style="list-style-type: none"> <li>• Ridges and hilltops</li> <li>• Natural scenery</li> </ul>	<ul style="list-style-type: none"> <li>• Proclaimed national monuments and museums</li> <li>• Areas and elements of cultural importance</li> </ul>	<ul style="list-style-type: none"> <li>• Urban landmarks</li> <li>• Urban gateways</li> </ul>	<ul style="list-style-type: none"> <li>• Major existing and proposed through roads</li> <li>• Major streets</li> <li>• Railway lines and stations</li> <li>• Airports</li> </ul>

**Table A.2: Urban policy-planning package**

<b>SECTOR: AGRICULTURE, FORESTRY &amp; FISHING (1 000)</b>			
<b>GOALS</b>	<b>STRATEGIC PRIORITIES</b>	<b>POLICIES AND POLICY OBJECTIVES</b>	<b>POSSIBLE ACTIONS</b>
<ul style="list-style-type: none"> <li>• Revitalise urban periphery</li> </ul>	<ul style="list-style-type: none"> <li>• Periphery development</li> <li>• Integrate urban area and periphery</li> <li>• Integrate urban and periphery activities</li> </ul>	<ul style="list-style-type: none"> <li>• Local Agenda 21</li> <li>• Prevent excessive dependence on urban structures</li> <li>• Enhance local market development</li> </ul>	<ul style="list-style-type: none"> <li>• Service delivery study</li> <li>• Provide services of equal quality in urban area and periphery</li> </ul>

<b>SECTOR: MINING (2 000)</b>			
<b>GOALS</b>	<b>STRATEGIC PRIORITIES</b>	<b>POLICIES AND POLICY OBJECTIVES</b>	<b>POSSIBLE ACTIONS</b>
<ul style="list-style-type: none"> <li>• Revitalise urban periphery</li> </ul>	<ul style="list-style-type: none"> <li>• Support periphery small-scale mining</li> <li>• Support periphery large-scale mining</li> </ul>	<ul style="list-style-type: none"> <li>• Local Agenda 21</li> <li>• Prevent excessive dependence on urban structures</li> <li>• Incentives to limit pollution</li> <li>• Incentives to rehabilitate used land</li> </ul>	<ul style="list-style-type: none"> <li>• Service delivery study</li> <li>• Provide services of equal quality in urban area and periphery</li> </ul>

<b>SECTOR: MANUFACTURING (3 000)</b>			
<b>GOALS</b>	<b>STRATEGIC PRIORITIES</b>	<b>POLICIES AND POLICY OBJECTIVES</b>	<b>POSSIBLE ACTIONS</b>
<ul style="list-style-type: none"> <li>• Increase supply of manufacturing goods</li> <li>• Provide high quality products</li> <li>• Increase exports</li> <li>• Strengthening existing business base</li> <li>• Create a centre of excellence in a certain industrial sector</li> </ul>	<ul style="list-style-type: none"> <li>• Focus on comparative advantage</li> <li>• Create a viable SMME environment</li> <li>• Strengthen existing clusters</li> <li>• Focus on existing firms</li> <li>• Attract economic viable businesses</li> <li>• Industrial districts</li> </ul>	<ul style="list-style-type: none"> <li>• Renewal policy</li> <li>• Mix land-use policy</li> <li>• Less regulation</li> <li>• Investment incentive scheme</li> <li>• Provide incentives to landlords to transform vacant office space into mix-usage</li> <li>• SMME incentive package</li> <li>• Export processing zones</li> <li>• Industrial development zones</li> </ul>	<ul style="list-style-type: none"> <li>• Service delivery study</li> <li>• Business advice centres</li> <li>• Information kiosks</li> <li>• Deliberate infrastructure development</li> <li>• Local authority sub-contracting to SMMEs</li> <li>• Acquire venture capital</li> </ul>

<b>SECTOR: ELECTRICITY, GAS &amp; WATER (4 000)</b>			
<b>GOALS</b>	<b>STRATEGIC PRIORITIES</b>	<b>POLICIES AND POLICY OBJECTIVES</b>	<b>POSSIBLE ACTIONS</b>
<ul style="list-style-type: none"> <li>• Quality service delivery</li> </ul>	<ul style="list-style-type: none"> <li>• Provide efficient infrastructure</li> <li>• Maintenance</li> <li>• Replacement</li> <li>• Development</li> </ul>	<ul style="list-style-type: none"> <li>• Local Agenda 21</li> <li>• Access to all</li> <li>• Outsourcing to SMMEs</li> <li>• Payment policy</li> </ul>	<ul style="list-style-type: none"> <li>• Determine demand</li> <li>• Establish waiting list/backlog</li> <li>• Investigate use of alternative energy sources</li> </ul>

<b>SECTOR: CONSTRUCTION (5 000)</b>			
<b>GOALS</b>	<b>STRATEGIC PRIORITIES</b>	<b>POLICIES AND POLICY OBJECTIVES</b>	<b>POSSIBLE ACTIONS</b>
<ul style="list-style-type: none"> <li>• Provide effective and efficient infrastructure</li> <li>• High quality roads system</li> <li>• Effective sewage system</li> <li>• Efficient electricity provision</li> <li>• Provision of clean and safe water</li> <li>• Promote private residential development</li> <li>• Promote private commercial and industrial development</li> </ul>	<ul style="list-style-type: none"> <li>• Provide efficient infrastructure</li> <li>• Maintenance</li> <li>• Replacement</li> <li>• Development</li> </ul>	<ul style="list-style-type: none"> <li>• Renewal policy</li> <li>• Incentives to upgrade and maintain property</li> <li>• Renewal tax incentives</li> <li>• Relaxation of minimum standard requirements according to a sliding scale</li> </ul>	<ul style="list-style-type: none"> <li>• Create an inventory</li> <li>• Service delivery study</li> <li>• Reduce building restrictions without compromising safety and standards</li> <li>• Outsourcing of collective services</li> </ul>

<b>SECTOR: TRADE (6 000)</b>			
<b>GOALS</b>	<b>STRATEGIC PRIORITIES</b>	<b>POLICIES AND POLICY OBJECTIVES</b>	<b>POSSIBLE ACTIONS</b>
<ul style="list-style-type: none"> <li>• Create successful trade partnerships</li> <li>• Provide viable trade opportunities</li> <li>• Increase trade activities</li> <li>• Increase monetary inflow</li> <li>• Restrict monetary outflow</li> </ul>	<ul style="list-style-type: none"> <li>• Focus on domestic market</li> <li>• Exploit globalisation opportunities</li> <li>• Assistance to enter export market</li> <li>• SMME development</li> <li>• Value-added</li> <li>• Local import substitution</li> <li>• Product diversification</li> </ul>	<ul style="list-style-type: none"> <li>• Tax incentives</li> <li>• Trade incentives</li> <li>• National export promotion offices</li> </ul>	<ul style="list-style-type: none"> <li>• Purchasing of local goods by public sector</li> <li>• Campaign to buy local goods</li> <li>• Create SMME assistance centres</li> <li>• Publication of local consumer needs</li> </ul>



<b>SECTOR: TRANSPORT, STORAGE &amp; COMMUNICATIONS (7 000)</b>			
<b>GOALS</b>	<b>STRATEGIC PRIORITIES</b>	<b>POLICIES AND POLICY OBJECTIVES</b>	<b>POSSIBLE ACTIONS</b>
<ul style="list-style-type: none"> <li>• <b>Efficient and effective public transport system</b></li> <li>• <b>Accessible road system</b></li> <li>• <b>Accessible rail system</b></li> <li>• <b>Access to air transport system</b></li> <li>• <b>Provide quality communication system</b></li> </ul>	<ul style="list-style-type: none"> <li>• Reliable transport system</li> <li>• Safe transport</li> <li>• Affordable transport</li> <li>• Safe parking</li> <li>• Sufficient and affordable parking</li> <li>• Discourage excessive dependence on motor vehicles</li> <li>• Enhance communication system</li> </ul>	<ul style="list-style-type: none"> <li>• Public transport subsidy</li> <li>• Higher toll fees for single occupant vehicles</li> <li>• Create car-free zones in inner city</li> <li>• Access to communication for all</li> <li>• Public transport information kiosk</li> </ul>	<ul style="list-style-type: none"> <li>• Provide mass transit systems at edge of car-free zones</li> <li>• Promote car pooling</li> <li>• Create a sufficient and attractive road network</li> <li>• Concentric/Ring roads</li> <li>• Service quality survey on communication system</li> </ul>

<b>SECTOR: FINANCIAL, REAL ESTATE &amp; BUSINESS SERVICES (8 000)</b>			
<b>GOALS</b>	<b>STRATEGIC PRIORITIES</b>	<b>POLICIES AND POLICY OBJECTIVES</b>	<b>POSSIBLE ACTIONS</b>
<ul style="list-style-type: none"> <li>• <b>Create a strong commercial and financial core</b></li> <li>• <b>Create an international investment destination</b></li> <li>• <b>Improve and enhance real estate development</b></li> <li>• <b>Increase monetary inflow</b></li> <li>• <b>Restrict monetary outflow</b></li> </ul>	<ul style="list-style-type: none"> <li>• Enhance economic activity</li> <li>• Retain existing businesses</li> <li>• Attract new and successful businesses</li> <li>• Promote comparative advantage</li> <li>• Create an investment haven</li> <li>• Promote economic clusters</li> <li>• Promote entertainment cluster</li> </ul>	<ul style="list-style-type: none"> <li>• Privatisation</li> <li>• Domestic investment incentive package</li> <li>• Foreign investment incentive package</li> <li>• Investment (e.g. tax rate reductions or tax holidays)</li> <li>• Labour (e.g. tax credits for jobs created)</li> <li>• Financial (e.g. assistance with local location)</li> <li>• Release of unused public land</li> </ul>	<ul style="list-style-type: none"> <li>• Assistance in real estate planning</li> <li>• Market available retail and office capacity</li> <li>• Revitalise vacant retail &amp; office space</li> <li>• Recruit businesses that meet unfulfilled needs</li> <li>• Upgrade decaying buildings</li> <li>• Affordable rental rates</li> <li>• National/international conferences</li> <li>• Trade fares</li> </ul>

<b>SECTOR: GOVERNMENT, NGO, COMMUNITY &amp; SOCIAL SERVICES (9 000)</b>			
<b>GOALS</b>	<b>STRATEGIC PRIORITIES</b>	<b>POLICIES AND POLICY OBJECTIVES</b>	<b>POSSIBLE ACTIONS</b>
<ul style="list-style-type: none"> <li>• <b>Strict fiscal management</b></li> </ul>	<ul style="list-style-type: none"> <li>• Well-developed fiscal plan</li> <li>• Priority planning</li> <li>• Opportunity cost</li> </ul>	<ul style="list-style-type: none"> <li>• Strict fiscal discipline</li> <li>• Disciplined budget</li> <li>• Reduce budget deficit</li> <li>• Capital expenditure plan</li> <li>• Long term policy</li> </ul>	<ul style="list-style-type: none"> <li>• Review financial planning</li> <li>• Fiscal planning study</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Provide public or community services</b></li> </ul>	<ul style="list-style-type: none"> <li>• Capacity building</li> <li>• Improve quality of basic public services</li> <li>• Enhance community facilities</li> </ul>	<ul style="list-style-type: none"> <li>• Minimum standard requirement</li> <li>• Sub-contracting</li> <li>• Outsourcing</li> </ul>	<ul style="list-style-type: none"> <li>• Audit &amp; planning</li> <li>• Upgrade public halls, libraries, museums</li> <li>• Outsourcing of collective services</li> <li>• Customer service training</li> <li>• Head-hunting campaigns</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Supply affordable serviced housing</b></li> <li>• <b>Provide residential amenities</b></li> <li>• <b>Provide low-cost housing</b></li> </ul>	<ul style="list-style-type: none"> <li>• Neighbourhood planning</li> <li>• Support low-cost housing initiatives</li> <li>• Enhance housing stock</li> <li>• Create residential haven</li> <li>• Access to public transport</li> <li>• Provide high density housing</li> <li>• Create a climate of payment of rates and taxes</li> <li>• Boot-strap strategy</li> </ul>	<ul style="list-style-type: none"> <li>• Filtration</li> <li>• Replacement</li> <li>• Uncomplicated rezoning</li> <li>• Uncomplicated land-use restrictions</li> <li>• Market related rent control</li> <li>• Home business districts</li> <li>• Provide incentives to landlords to transform vacant office space into mix-usage</li> <li>• Low cost housing policy</li> </ul>	<ul style="list-style-type: none"> <li>• Acquire census data on housing stock</li> <li>• Determine waiting list of low-cost housing</li> <li>• Develop an informal settlement profile</li> <li>• Upgrade inferior neighbourhoods with amenities other than housing</li> <li>• Revisit zoning ordinances</li> <li>• Enforce payment of rates and taxes</li> </ul>

<b>SECTOR: GOVERNMENT, NGO, COMMUNITY &amp; SOCIAL SERVICES (9000)</b>			
<b>GOALS</b>	<b>STRATEGIC PRIORITIES</b>	<b>POLICIES AND POLICY OBJECTIVES</b>	<b>POSSIBLE ACTIONS</b>
<ul style="list-style-type: none"> <li>• <b>Provide an effective health system</b></li> </ul>	<ul style="list-style-type: none"> <li>• Provide primary health care</li> <li>• Provide advanced medical facilities</li> <li>• Support medical research</li> <li>• Attract advanced medical know-how</li> <li>• Improve air quality</li> <li>• Improve emergency service facilities</li> </ul>	<ul style="list-style-type: none"> <li>• Health policy document</li> <li>• Minimum health care provision</li> <li>• Emergency services delivery policy</li> </ul>	<ul style="list-style-type: none"> <li>• Acquire information on current health care facilities</li> <li>• Determine standard of current health care</li> <li>• Upgrade clinics</li> <li>• HIV/Aids awareness projects</li> <li>• HIV/AIDS impact analysis</li> <li>• Family planning programmes</li> <li>• Address sexual violence</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Ensure high quality education</b></li> </ul>	<ul style="list-style-type: none"> <li>• Promote local relevant programmes</li> <li>• Promote international accepted programmes</li> <li>• Support location of educational facilities</li> <li>• Attract academic leaders</li> </ul>	<ul style="list-style-type: none"> <li>• Entrepreneurship development programmes</li> <li>• Support research and development</li> </ul>	<ul style="list-style-type: none"> <li>• Provide well equipped educational facilities</li> <li>• Innovation initiatives</li> <li>• Promote educational fares</li> </ul>

<b>SECTOR: GOVERNMENT, NGO, COMMUNITY &amp; SOCIAL SERVICES (9000)</b>			
<b>GOALS</b>	<b>STRATEGIC PRIORITIES</b>	<b>POLICIES AND POLICY OBJECTIVES</b>	<b>POSSIBLE ACTIONS</b>
<ul style="list-style-type: none"> <li>• <b>Improve public safety</b></li> </ul>	<ul style="list-style-type: none"> <li>• Crime prevention</li> <li>• Safe city strategy</li> <li>• Attract tourists/visitors</li> <li>• Marketing</li> </ul>	<ul style="list-style-type: none"> <li>• Visible policing</li> <li>• Create City Improvement Districts</li> <li>• Law enforcement</li> <li>• No-tolerance policy</li> </ul>	<ul style="list-style-type: none"> <li>• Create information destination centres</li> <li>• Clean-up unsafe and deteriorated areas</li> <li>• Provide adequate lighting at night</li> <li>• Create a friendly city police force</li> <li>• Market city safeness</li> <li>• Establish city crime control rooms</li> <li>• Enforce law</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Poverty eradication</b></li> </ul>	<ul style="list-style-type: none"> <li>• Ability to meet basic needs</li> <li>• Improved self respect</li> <li>• Income distribution</li> <li>• Less dependence on local government</li> </ul>	<ul style="list-style-type: none"> <li>• Job creation initiative incentive scheme</li> <li>• Social planning</li> <li>• Welfare programmes</li> </ul>	<ul style="list-style-type: none"> <li>• Database on unemployment</li> <li>• Poverty mapping (household and cluster levels)</li> </ul>



<b>SECTOR: GOVERNMENT, NGO, COMMUNITY &amp; SOCIAL SERVICES (9 000)</b>			
<b>GOALS</b>	<b>STRATEGIC PRIORITIES</b>	<b>POLICIES AND POLICY OBJECTIVES</b>	<b>POSSIBLE ACTIONS</b>
<ul style="list-style-type: none"> <li>• <b>Public support programme</b></li> </ul>	<ul style="list-style-type: none"> <li>• Provide support structures</li> <li>• Demand driven labour force development</li> <li>• Public works programmes</li> </ul>	<ul style="list-style-type: none"> <li>• Job creation</li> <li>• Job retention efforts</li> <li>• Skills training for retrenched workers</li> <li>• Provide incentives to landlords to upgrade and maintain buildings</li> <li>• Transparent tender processes</li> </ul>	<ul style="list-style-type: none"> <li>• Improve amenities</li> <li>• Biased to local contractors</li> <li>• Local preference in public-sector hiring</li> <li>• Local community participation</li> <li>• Outsourcing of collective services</li> <li>• Create empowerment zones</li> <li>• Business enterprise competitions</li> <li>• Promote self-employment options</li> <li>• Establish a local skills register</li> <li>• Economic development ideas bank</li> <li>• Mentor programme by retired business people</li> </ul>

<b>SECTOR: GOVERNMENT, NGO, COMMUNITY &amp; SOCIAL SERVICES (9 000)</b>			
<b>GOALS</b>	<b>STRATEGIC PRIORITIES</b>	<b>POLICIES AND POLICY OBJECTIVES</b>	<b>POSSIBLE ACTIONS</b>
<ul style="list-style-type: none"> <li>• <b>Prevent excessive decentralisation</b></li> </ul>	<ul style="list-style-type: none"> <li>• Support inner-city location</li> <li>• Attract business activity to inner-city</li> <li>• Create a viable inner-city environment</li> </ul>	<ul style="list-style-type: none"> <li>• Strict rezoning policy</li> <li>• Right to transfer building rights in inner-city zone</li> <li>• Retention incentive scheme</li> <li>• Provide incentives to landlords to upgrade and maintain buildings</li> <li>• Provide incentives for inner-city location</li> </ul>	<ul style="list-style-type: none"> <li>• Develop a future decentralisation plan</li> <li>• Review town planning regulations</li> <li>• Ensure safe and clean inner-city</li> <li>• Promote City Improvement Districts</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Improved innovation/R&amp;D</b></li> <li>• <b>Foster entrepreneurialism</b></li> <li>• <b>Endogenous development</b></li> <li>• <b>Generate new ideas</b></li> </ul>	<ul style="list-style-type: none"> <li>• Provide excellent research infrastructure</li> <li>• Attract world class researchers</li> <li>• Support academic research</li> </ul>	<ul style="list-style-type: none"> <li>• Financial support for technology research centres</li> <li>• Provide incentives to basic and applied R&amp;D</li> </ul>	<ul style="list-style-type: none"> <li>• Establish an anchor research facility</li> <li>• Upgrade public research centres</li> <li>• International conferences</li> <li>• Trade fares</li> <li>• Entrepreneurship initiatives</li> <li>• Knowledge based business skills development</li> </ul>

<b>SECTOR: ENVIRONMENT</b>			
<b>GOALS</b>	<b>STRATEGIC PRIORITIES</b>	<b>POLICIES AND POLICY OBJECTIVES</b>	<b>POSSIBLE ACTIONS</b>
<ul style="list-style-type: none"> <li>• <b>Sustainable land use development</b></li> <li>• <b>Conservation of environment namely:</b></li> <li>• <b>Geology</b></li> <li>• <b>Soils</b></li> <li>• <b>Hydrology</b></li> <li>• <b>Climatology</b></li> <li>• <b>Geomorphology</b></li> <li>• <b>Biology (fauna/flora)</b></li> <li>• <b>Urban morphology</b></li> <li>• <b>Quality environment</b></li> <li>• <b>Heritage</b></li> </ul>	<ul style="list-style-type: none"> <li>• Establish green belts</li> <li>• Provide open spaces</li> <li>• Waste management</li> <li>• Enhance conservation areas</li> <li>• Highest and best use of land</li> <li>• Spatial development framework</li> <li>• Controlled urban growth</li> <li>• Integrate land-use and transportation plan</li> <li>• Enhance physical features</li> </ul>	<ul style="list-style-type: none"> <li>• Local Agenda 21</li> <li>• Incentives for recycling and reuse</li> <li>• Enforce local environmental legislation/regulations</li> <li>• Flexible mix land-use</li> <li>• Flexible zoning</li> <li>• Waste management policy</li> <li>• Policy for protection of views of hilltops and skylines</li> <li>• Anti-noise control</li> <li>• Pollution control</li> <li>• Provide support to squatters to improve communities</li> </ul>	<ul style="list-style-type: none"> <li>• Environmental planning study</li> <li>• Map all service servitudes</li> <li>• Create database on open spaces</li> <li>• Environmental awareness campaign</li> <li>• Environmental educational programme</li> <li>• Upgrading of parks/open spaces</li> <li>• Acquire information on all heritage sites</li> <li>• Determine level of CO2 emissions</li> <li>• Pollution prevention programmes</li> <li>• Recycle rather than burn solid waste</li> <li>• Plant trees to reduce air/noise pollution</li> <li>• Plant indigenous vegetation to lessen use of water and pesticides</li> <li>• Ecological land-use planning</li> <li>• Prevent destructive sprawl</li> <li>• Plant trees</li> </ul>

<b>SECTOR: TOURISM</b>			
<b>GOALS</b>	<b>STRATEGIC PRIORITIES</b>	<b>POLICIES AND POLICY OBJECTIVES</b>	<b>POSSIBLE ACTIONS</b>
<ul style="list-style-type: none"> <li>• Attract domestic tourists</li> <li>• Attract foreign tourists</li> <li>• Lengthening stay</li> <li>• Increase amount spent</li> <li>• Increase amount spent on local goods</li> <li>• Prevent passing through traffic</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Create a domestic and international tourism destination</li> <li>• Establish a focussed tourism industry</li> <li>• Marketing of services</li> <li>• Mass participation</li> <li>• Promote civic heritage</li> <li>• Create a tourist haven</li> <li>• Stop and shop</li> </ul>	<ul style="list-style-type: none"> <li>• Tourism development policy</li> <li>• Support events in marketing</li> </ul>	<ul style="list-style-type: none"> <li>• Create one stop tourist centres</li> <li>• Provide guided or unguided city tours</li> <li>• Establish annual national/international cultural events</li> <li>• Present an international acclaimed sports event</li> <li>• Establish tourist entertainment and recreation</li> <li>• Provide cultural and recreational facilities</li> <li>• Convention and tourism bureau</li> <li>• Support tourist related financial services</li> <li>• Heritage/tourism trails</li> <li>• Improve safety</li> <li>• Arts/crafts stalls</li> </ul>



<b>SECTOR: INFORMAL SECTOR</b>			
<b>GOALS</b>	<b>STRATEGIC PRIORITIES</b>	<b>POLICIES AND POLICY OBJECTIVES</b>	<b>POSSIBLE ACTIONS</b>
<ul style="list-style-type: none"><li>• <b>Integrate informal sector into formal urban business activity</b></li></ul>	<ul style="list-style-type: none"><li>• Acknowledge informal sector</li><li>• Develop a well-located market place</li><li>• Prevent sterile areas</li></ul>	<ul style="list-style-type: none"><li>• Assistance centres</li><li>• Enforce adherence to regulations</li><li>• Provide infrastructure incentives</li></ul>	<ul style="list-style-type: none"><li>• Create a local management body</li><li>• Provide informal sector infrastructure</li><li>• Designate areas for trade</li><li>• Create formal taxi rank</li><li>• Provide security</li><li>• Provide waste control</li><li>• Create empowerment zones</li></ul>



## ANNEXURE B

### MEASURE OF POLICY SUCCESS (QUALITY OF LIFE INDEX)

#### B.1 INTRODUCTION

The study in general and this annexure specifically, has a contribution to make in terms of the existing literature on providing an economic measure of policy success by means of a quality of life index. This index will be applicable on a national economy in measuring national welfare or quality of life over time. In this sense, it will be possible to measure and compare the quality of life of different cities and countries and provide insight as to where problem areas may exist and how to correct them. It will thus provide a tool to measure policy success in terms of economic, social and environmental issues, amongst other.

Efforts to enhance, protect and maintain the quality of life reflect a planning strategy associated with a stronger preference for a people-centred vision. Increasingly, it is suggested that if national welfare or quality of life could be improved, economic growth and development would be enhanced.

So far, on more than one occasion, the relative importance of agglomeration economies in explaining the concentration of economic activity in metropolitan areas had been emphasised. While the benefits and externalities that arises due to agglomeration economies are well defined and well known, they have not been adequately measured.

The process of thinking about the future is difficult and frustrating because nobody knows what the future holds. Yet, decision-makers want to know what the future holds. Most decisions concerning the future require at least some assumptions about the future. Some type of future analysis is basically unescapable. The problem with complex economic, social and environmental issues is that it is difficult to understand



them. That is why it needs to be simplified. Therefore some facts will be chosen that is emphasised and some others will be ignored or take as a given.

## B.2 BASE MODEL

The economic structure of an urban area can be seen as the first dimension of the planning process; the spatial structure can be viewed as a second dimension and the temporal sequencing of activities as the third.

The basic idea of this quality of life index is that sustainable urban development requires the urban environment to be improved as a factor contributing to the quality of life. Furthermore, it needs to be a factor contributing to the development of the urban economic base. The model of Button and Pearce (1989: 176) stated this formally in saying that urban welfare (UW) depends on the quality of life (QOL) and on the economic base of which urban real income (Y) can be used as a proxy. In turn, QOL depends directly on the quality of the environment (E) and Y depends on economic inputs (N) and indirectly on E. The model is thus expressed as:

$$UW = f(QOL, Y)$$

$$QOL = f(E)$$

$$Y = f(N, E)$$

and hence

$$UW = f(N, E)$$

The aim of urban policy should therefore be to maximise the net benefits of the urban population by influencing E and N. Any given policy package should thus be the least cost one for a given level of welfare creation. Although the purpose of this appendix is not to criticize or evaluate the usefulness of this specific model, one needs to expand the concept of quality of life and incorporate factors not included in the above model. The above model is purely a neo-classical perspective and may be expanded. The ultimate index to be developed will preferably be one that may be quantified and measured.





The quality of life index to be developed will, however, be based on the concept of increased economic growth and development if an improved quality of life can be maintained. Sustainability is also of real importance in this kind of analysis. An indicator of relevance to sustainability is the degree of local provision of goods and services. Sustainability also requires that cognisance of the population structure should be taken. A city with an aging population structure imposes a heavier burden on younger taxpayers and this may lead to priority given to the attraction of new migrants by improved quality of life. Essentially, sustainability also requires that the urban environment should at least not be degraded. National or urban welfare is thus encompassing by quality of life. The objective of developing this index will be to measure the level of welfare or quality of life on various levels. The basic philosophy underlying this framework is that various economic factors need to be measured to enable a country or urban area to identify, address and correct inferior aspects, with the ultimate goal of improving the quality of life and enhancing business activity.

### **B.3 QUALITY OF LIFE INDEX**

#### **B.3.1 Introduction and methodology**

One of the main problems in determining the quality of life within an area is the difficulty to quantify such a concept. There is no generally accepted measure of quality of life. Existing measures seem to focus on certain socio-economic variables only, allowing it to be narrowly focussed and biased. A well-known barometer for capturing the quality of the socio-economic environment is the Human Development Index (HDI) developed as used by the United Nations. The HDI consists of three components, namely adult literacy and life expectancy to indicate the level of opportunities, and personal disposable income per capita as an indicator of welfare (United Nations 1996:28). However, these few variables represent only a limited view of the real socio-economic milieu within a country and too much dependence thereon could obscure some important other socio-economic characteristics. Another major shortcoming of the HDI, as calculated by the Development





Bank of Southern Africa, is that it is not published as a time series, but rather as *ad hoc*-flashes at certain intervals.

For the purpose of developing this quality of life index, national welfare is based on supply, demand and contextual factors. The quality of life index to be developed here is based on the assumption that national welfare is equivalent to quality of life. Quality of life therefore, depends also on three main variables contributing equal amounts of weight capturing all three aspects of supply, demand and contextual factors. The idea is thus to develop a system in which the quality of life, using several variables, can be structured. This quality of life index had to be meaningful in terms of both static and dynamic analysis. As is the case with the HDI, this indicator should, nevertheless, be easy to understand and comprehensive. The purpose of this exercise would thus be to develop a quality of life indicator as an index that may be used on a national, regional or urban level. The composition of the index would firstly be explained before the actual calculations are shown.

The idea is to develop a time series of a single index that may be used as an instrument to measure quality of life over time. This means that if the values of the quality of life index increases over time, an improvement has taken place in the general quality of life of the inhabitants of that specific area. A decreasing quality of life index would obviously means the opposite. From the individual items of the index it would be possible to indicate which variables were mainly responsible for the changes in the quality of life index. This would provide a tool to policy-makers to identify those variables responsible for a decreasing quality of life and thus a chance to correct or eliminate policies contributing to that decrease. Furthermore, the possible changes in national quality of life may be measured and compared to the quality of life of various urban areas over time.

The index consists of three main variables, each one consisting of several sub-variables. The three main variables are personal disposable income per capita ( $Y_{dc}$ ),



capital (K) and socio-economic (SE) variables. In equation format, what have been discussed above, can be expressed as follows:

$$\text{National welfare (NW)} \equiv \text{Quality of life (QOL)}$$
$$\text{QOL} = \text{Ydc} + \text{K} + \text{SE}$$

Each one of these main variables will be discussed individually in more detail below. The time series of each variable will be expressed as an index with 1995 as the base year being set equal to 100. National time series data from 1975 to 1996 was used to create and develop the index, although it may be adjusted and customised for urban or regional areas. Each one of the three main variables will contribute 33.3% to the total quality of life index. The 33.3% contribution of each one of the three main variables will consist of the sub-variables' contribution. The weight of the sub-variables may differ but this will be elaborated upon in more detail below.

### **B.3.2 Disposable income per capita (Ydc) or demand side**

The first main variable is the personal disposable income per capita (Ydc) at constant prices smoothed by a three year moving average. This main variable does not consist of any other variable due to the importance of personal disposable income in terms of quality of life. The contribution of this variable to the total quality of life index will thus be 33.3%. Although the introduction of the Gini-coefficient may provide a better, more comprehensive variable, it is only available at certain *ad hoc*- intervals and not as a time series. Due to this constraint, it was believed that personal disposable income to be a sufficient variable explaining income and thus acts as representing the demand variable. The personal disposable income per capita represents the value of the potential demand that exists in the economy and is therefore seen as reflecting the demand side. The results of the personal disposable income per capita are shown in Table B.1 and Figure B.1.





### B.3.3 Capital assets (K) or supply side

To develop the capital variable as reservoir of wealth, a discussion concerning the various sub-variables is necessary. All these sub-variables encompass the capacity of an economy to be able to produce and deliver and thus contributes toward the supply side of an economy.

According to conventional wisdom, the clinical growth factors such as saving (financial capital) and investment (man-made capital) have to be supplemented by the upliftment of human capacity - known also as endogenous growth (Romer, 1996; Jones, 1998 and Sen, 1996). Thus, the definition of capital has been broadened to include human or intellectual capital. It has also been argued that two more components should be added to this definition, namely, natural and social and organisational capital (Schoeman, Blignaut & Jordaan, 1999). Due to the fact that it is assumed that financial, man-made and human capital is already described at length in literature, only natural and social and organisational capital will briefly be discussed for purposes of the discussion here.

#### (i) Natural capital

Natural capital expands beyond the concept or production factor *land*, to include all natural systems, such as the atmosphere, biological systems, and even the sun (Gilman, 1992). These natural systems affect the quality of capital. For example, sulphur dioxide released into the atmosphere becomes part of negative environmental capital. The natural activity of precipitation converts the sulphur dioxide into acid rain which adversely affects the quality of lakes and forests, respiratory health, buildings, etc. On the other hand, the natural activity of the sun impacts on the environment both positively and negatively, by creating power in solar systems and causing many man-made materials to perish. From a production point of view very little substitution is possible between environmental capital and other reservoirs of wealth such as financial capital or manufactured capital. Although environmental capital can be self-maintaining and even regenerate itself, much of the wealth in environmental capital such as the



ozone layer or complex ecosystems like tropical rainforests simply can not be replaced by other forms of capital (see Pearce and Turner, 1991; Daly, 1996 and Stern, 1997 for a discussion on the natural environment as capital). Of great importance is the fact that humans pose the greatest threat to the quality of environmental capital resources and in so-doing are threatening its own existence.

## **(ii) Social and organisational capital**

According to Ekins (in Gilman, 1992) human capital comprises health, knowledge and skills, and motivation. A major difference between human capital and material forms of wealth is that the former is enhanced by use rather than depleted or worn down. As outlined in the endogenous growth theories referred to, human capital is not constrained by the normal economics of scarcity. The only limiting factors to human capital is time, and in many parts of the world a lack of opportunities and facilities.

Apart from the importance of human capital in the conservation and exploitation of scarce environmental capital, social and organisational aspects should also be considered as part of the broad package of reservoirs of wealth. Social and organisational capital include all of the interpersonal "software" that enables societies and organisations to function, including habits, norms, roles, traditions, regulations, policies, etc. - in other words, the non-physical part of culture (Gilman, 1992). It differs from human capital in that while the latter is attached to a particular individual, the former is transpersonal, non-exploitable and collective. It includes the way in which the legal system operates, the functioning of government, the feeling of the community, the dynamics within families, as well as all art and knowledge that has become part of culture. Similar to the case of human capital, social and organisational capital cannot be depleted and is in fact enhanced by use but it can deteriorate should external effects adversely influence the social fibre of society.

It is therefore essential to include all five forms of identified capital namely man-made or physical, financial, human, natural or environmental and social and organisational





capital as supply variables into the index. Each one of these five sub-variables will contribute equally to the total capital variable. The composition of the five sub-variables will subsequently be discussed.

### iii) Capital sub-variables

- Man-made capital (MM) consists only of one element namely fixed capital stock per capita. The contribution of fixed capital stock per capita to the total capital variable is 20%.
- Financial capital (FIN) consists of two elements namely real money stock per capita and per capita foreign reserves in dollar terms. Each one of the two contributes 50% to FIN with FIN contributing 20% to the total capital variable.
- Human or intellectual capital (HC) consists of the dependency ratio and is expressed as the total population divided by the formally employed. The contribution of HC to the total capital variable is 20%.
- Natural or environmental capital (E) consists of two elements namely non-renewable resources and environmental resources. The total value of gold and coal stock per capita would serve as a proxy for non-renewable resources and carbon dioxide (CO<sub>2</sub>) emissions per capita as a proxy for environmental resources. However, in the case of CO<sub>2</sub> emissions per capita, an environmental improvement is indicated by a decline in the index value. In order to adjust for this technicality, the reciprocal of the index was calculated and applied. Each one of the two elements contributes 50% to E with E contributing 20% to the total capital variable. An effort was made to include renewable resources (fauna and/or flora) as a third element but after timeless effort, no time series data could be acquired and it was omitted from the model.
- The last sub-variable, social and organisational (S/O) capital consists of two elements namely the number of divorces divided by the labour force and the women



participation rate in the economy. However, in the case of the number of divorces divided by the labour force, a social improvement in the variable is indicated by a decline in the index value. In order to adjust for this technicality, the reciprocal of the index was again calculated and applied. Each one of the two elements contributes 50% to the sub-variable of S/O and S/O contributes 20% to the total capital variable.

This part of the quality of life index can thus be represented by the following equations:

$$\text{Capital (K)} = \text{MM (20\%)} + \text{FIN (20\%)} + \text{HC (20\%)} + \text{E (20\%)} + \text{S/O (20\%)}$$

MM = fixed capital stock per capita

FIN = real money stock per capita + per capita foreign reserves in \$ terms

HC = dependency ratio

E = non-renewable resources + environmental resources

S/O = number of divorces/labour force + women economic participation rate

Capital contributes 33.3% to the total quality of life index and the results of capital are shown in Table B.2 and Figure B.2.

#### **B.3.4 Socio-economic indicators (SE)**

The socio-economic environment was divided into five categories namely education, health, infrastructure, public safety and leisure. Given the poor state of socio-economic and labour statistics in South Africa, high quality and appropriate time series data on each of these domains that subscribe to the set criteria were difficult to find. However, despite these constraints, a series that could be regarded as representative of each domain and which fulfils the set criteria, was compiled and a composite index calculated. Each one of these sub-variables contribute 20% to the socio-economic variable. The five sub-variables are again made up by several elements. This will now be discussed.



- Education (EDU), is determined by the number of successful matric (grade 12) candidates as percentage of total population and the literacy rate. Both of these elements contribute 50% each to the education sub-variable and education contributes 20% to SE.
- Health (H) consists of two elements as well namely the number of medical practitioners per 1000 of the total population and life expectancy. These two elements contribute 50% each to H and H contributes 20% to SE.
- The number of approved building plans and electricity generated was used to develop the infrastructure (INFRA) sub-variable. Both these elements contribute 50% each to INFRA with INFRA contributing 20% to SE.
- To determine public safety (PS) as a sub-variable the number of thefts per 1000 of the total population was calculated. However, in the case of public safety, an improvement in the socio-economic environment is indicated by a decline in the index value. In order to adjust for this technicality, the reciprocal of the index was calculated and applied. The PS contributes 20% to SE.
- The last sub-variable, namely leisure (L), was developed by using two elements namely the number of hotel beds available as well as the bed occupancy rate. Both these elements contribute 50% each to L with L contributing 20% to SE.

This part of the quality of life index can thus be represented by the following equations:

$$\text{Socioeconomic variable (SE)} = \text{EDU (20\%)} + \text{H (20\%)} + \text{INFRA (20\%)} + \text{PS (20\%)} + \text{L (20\%)}$$

EDU = number of successful matric candidates as % of the population + literacy rate

H = number of medical practitioners per 1000 of the population + life expectancy

INFRA = number of approved building plans + electricity generated





PS = number of thefts per 1000 of the population

L = number of hotel beds available + bed occupancy rate

The socioeconomic variable contributes 33.3% to the total quality of life index and also represents the contextual variables. The contextual variables accommodate the in which people, participating in the economy, have to deal on a day to day basis. The results of the socio-economic environment are shown in Table B.3 and Figure B.3.

In sum, the following may represent the total quality of life index:

$$NW \equiv QOL$$

$$QOL = Ydc + K + SE$$

$$Ydc [33.3\%] = Ydc$$

$$K [33.3\%] = MM (20\%) + FIN (20\%) + HC (20\%) + E (20\%) + S/O (20\%)$$

$$SE [33.3\%] = EDU (20\%) + H (20\%) + INFRA (20\%) + PS (20\%) + L (20\%)$$

The quality of life index is therefore a composite index determined by 18 variables in total and represents a quantitatively and comprehensive indicator of general quality of life.

### B.3.5 Figures and data

The various figures and data of each variable will now be presented to show the tendency of each.



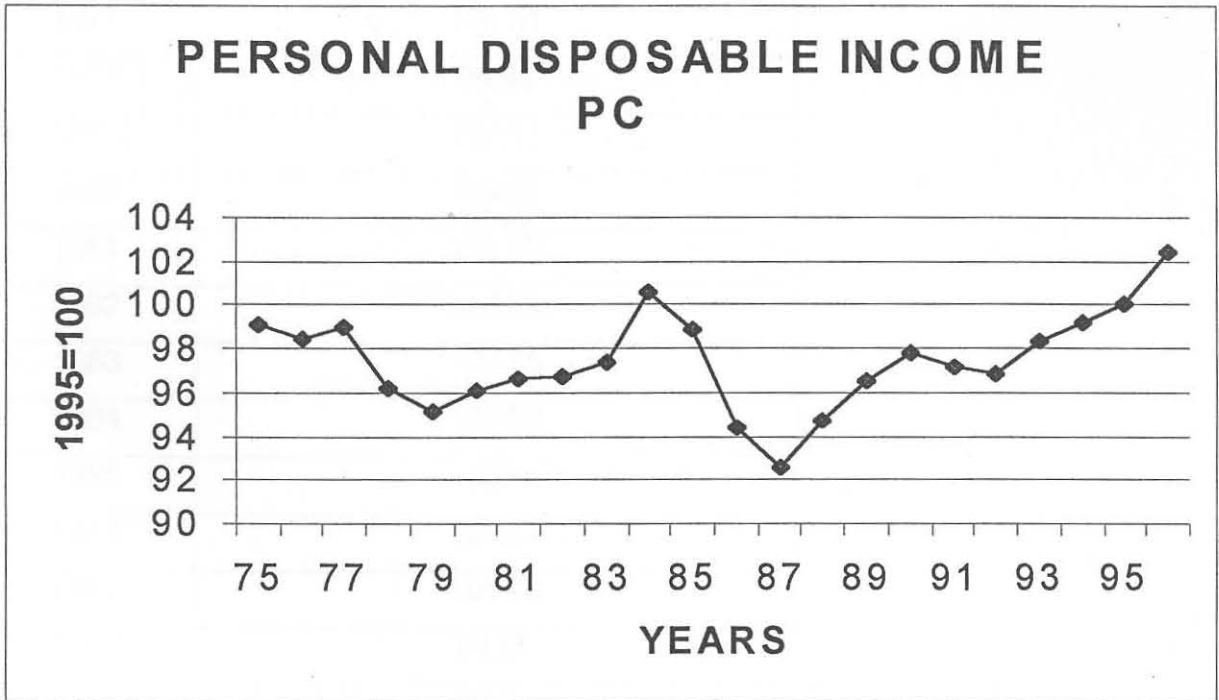


**Table B.1: Personal disposable income**

<b>Years</b>	<b>Personable disposable income (Ydc) (1995=100)</b>
1975	99.08
1976	98.48
1977	98.69
1978	96.16
1979	95.10
1980	96.05
1981	96.65
1982	96.73
1983	97.38
1984	100.56
1985	98.84
1986	94.42
1987	92.54
1988	94.65
1989	96.57
1990	97.83
1991	97.16
1992	96.88
1993	98.39
1994	99.23
1995	100.00
1996	102.37



Figure B.1: Personal disposable income per capita

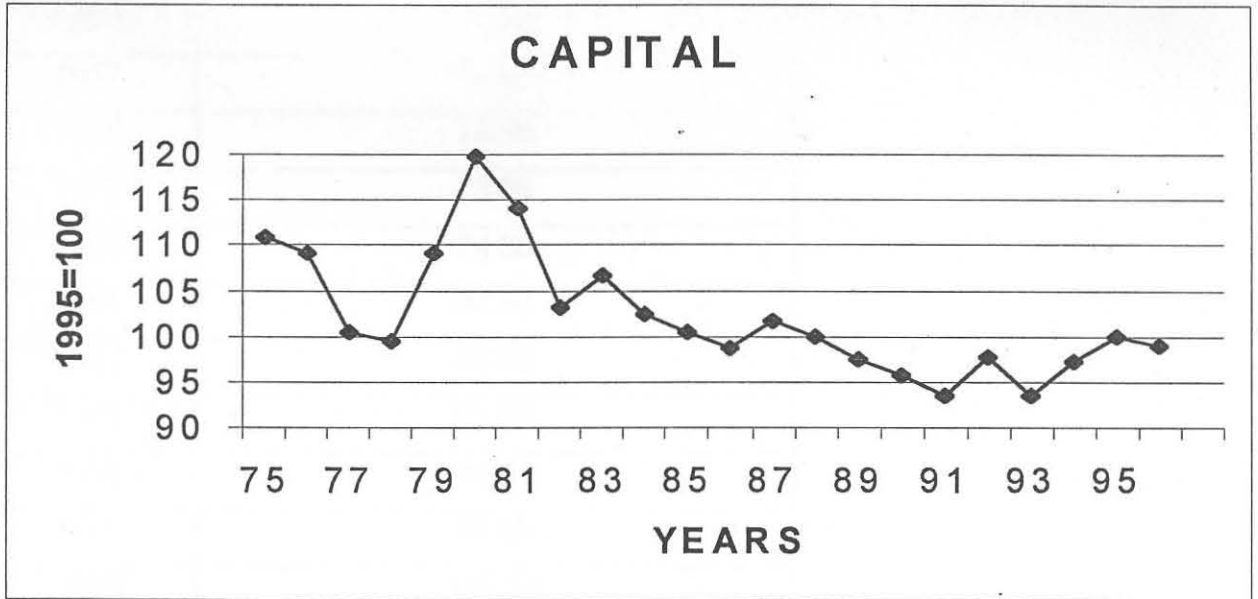




**Table B.2: Capital (total of all sub-variables)**

<b>Years</b>	<b>Capital (K) (1995=100)</b>
1975	110.74
1976	109.12
1977	100.31
1978	99.32
1979	109.11
1980	119.67
1981	114.08
1982	103.25
1983	106.55
1984	102.30
1985	100.46
1986	98.60
1987	101.75
1988	99.85
1989	97.51
1990	95.61
1991	93.54
1992	97.79
1993	93.43
1994	97.12
1995	100.00
1996	98.85

Figure B.2: Capital





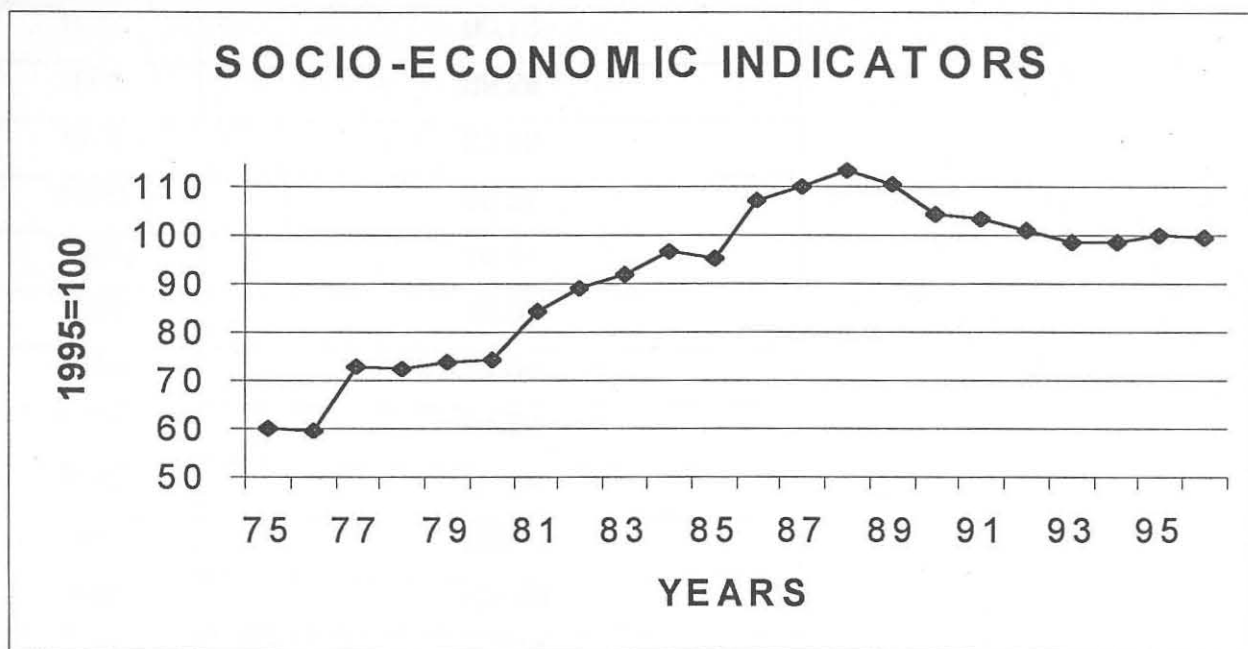


**Table B.3: Socio-economic indicators (total of all sub-variables)**

<b>Years</b>	<b>Socio-economic indicators (SE) (1995=100)</b>
1975	59.90
1976	59.32
1977	72.91
1978	72.39
1979	73.86
1980	74.30
1981	84.50
1982	89.00
1983	91.99
1984	96.65
1985	95.59
1986	107.31
1987	110.16
1988	113.34
1989	110.56
1990	104.55
1991	103.42
1992	101.34
1993	98.69
1994	98.64
1995	100.00
1996	99.63



Figure B.3: Socio-economic indicators

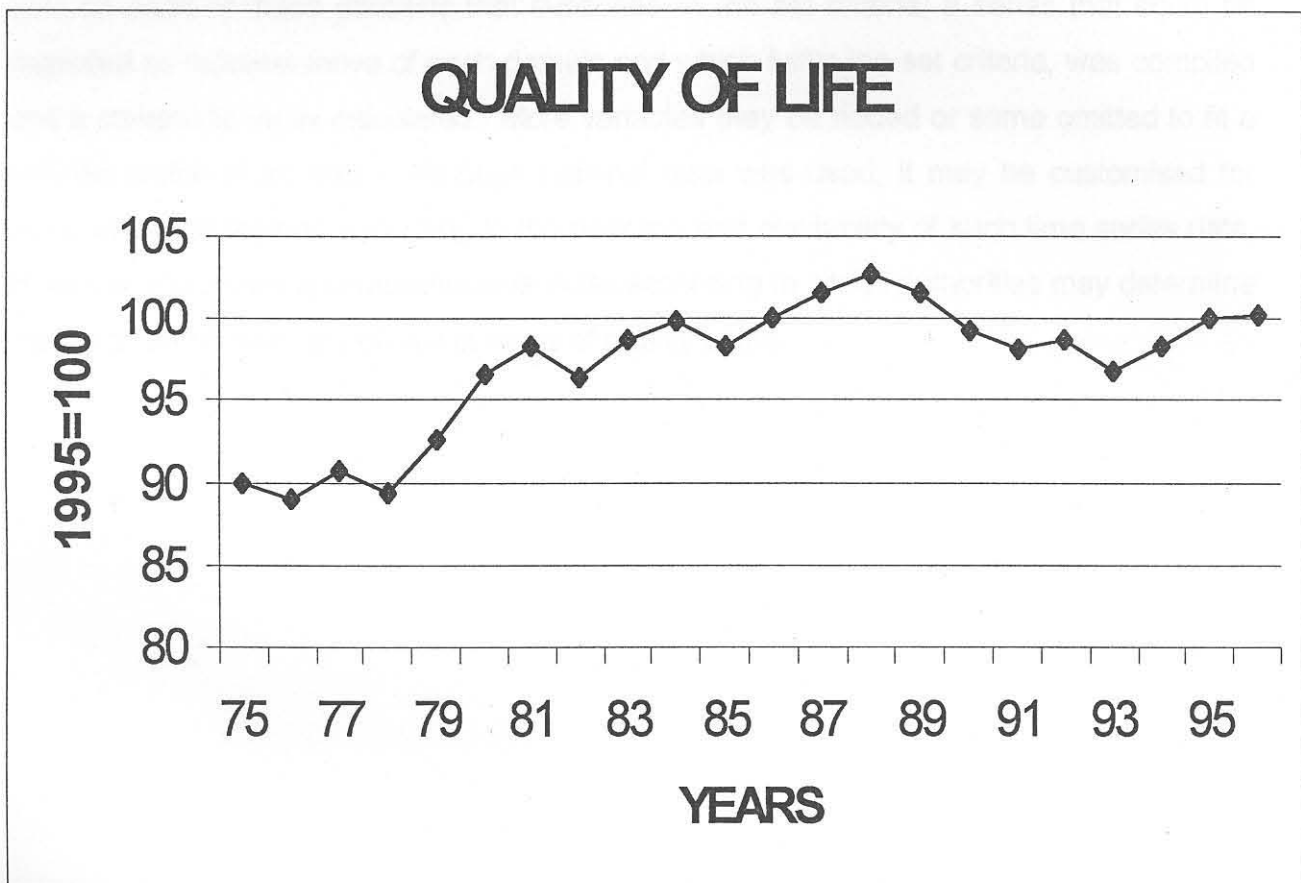




**Table B.4: Quality of life (Ydc + K + SE)**

<b>Years</b>	<b>Quality of life (QOL) (1995=100)</b>
1975	89.91
1976	88.97
1977	90.73
1978	89.29
1979	92.69
1980	96.67
1981	98.41
1982	96.33
1983	98.64
1984	99.84
1985	98.29
1986	100.11
1987	101.48
1988	102.61
1989	101.55
1990	99.33
1991	98.04
1992	98.67
1993	96.83
1994	98.33
1995	100.00
1996	100.28

Figure B.4: Quality of life







Although the quality of life for the total population in South Africa shows an increasing tendency from 1975 until 1996, it is alarming that the 1996 level is more or less equal to the 1986 figure. The peak period in terms of quality of life was reached between 1987 to 1989. Despite the constraints of availability of high quality and appropriate time series data on each of these domains that subscribe to the set criteria, a series that could be regarded as representative of each domain and which fulfils the set criteria, was compiled and a composite index calculated. More variables may be added or some omitted to fit a specific profile of an area. Although national data was used, it may be customised for urban areas or regions according to the demand and availability of such time series data. However, it provides a comprehensive index according to which authorities may determine the outcome of their set policies in terms of quality of life.



## B.4 REFERENCES OF VARIABLES

### B.4.1 Personal disposable income per capita (Ydc)

- Personal disposable income per capita at constant prices smoothed by a three year moving average (SARB, various issues).

### B.4.2 Capital (K)

#### MM

- **Fixed capital stock per capita** (SARB Quarterly Bulletin, various issues) Total SA population (SA Statistics, [www.statssa.gov.za/publications/statistics\\_in\\_brief/](http://www.statssa.gov.za/publications/statistics_in_brief/)).

#### FIN

- **Real M3 per capita** (Unit: R millions) (SARB Quarterly Bulletin, various issues). The consumer price-index, seasonally adjusted (Unit: Index 1995=100) (SARB Quarterly Bulletin, various issues).
- **Per capita foreign reserves in USA dollar**. Gross gold and other foreign reserves (Unit: R millions) (SARB Quarterly Bulletin, various issues) minus Gold reserves (Unit: R millions) (SARB Quarterly Bulletin, various issues). Exchange rates (Unit: SA cents per USA dollar, average for period) (SARB Quarterly Bulletin, various issues).

#### HC

- **Dependency ratio** (Total SA population/ Formally employed). Total SA population. Formally employed. (SA Statistics, [www.statssa.gov.za/publications/statistics\\_in\\_brief/](http://www.statssa.gov.za/publications/statistics_in_brief/)).

#### E

- **Co2 emissions, industrial** (Kg per 1995 US\$ of GDP) (World development indicators)
- **Gold and coal stock in rand value** (Blignaut, J.N. & Hassan, R.M. 2000. A Natural Resource Accounting Analysis of the Contribution of Mineral Resources to Sustainable Development in South Africa. Working Paper. ([www.Ranesa.co.za](http://www.Ranesa.co.za)))



## S/O

- **Number of divorces/labour force**, reciprocal. Labour force, total number (World Development Indicators, 1999). Total number of divorces (StatsSA, vital statistics).
- **Women economic participation rate**. Economically active female population/potential economically active female population (15-64 years) (94 October Household survey, 60, 70, 80, 91, 96 census figures).

## B.4.3 Socio-economic indicators (SE)

### EDU

- **The number of successful matric candidates** was expressed as a percentage of the total population (Quarterly Bulletin, SARB).
- **Total adult illiteracy rate**, reciprocal (% of people aged 15 and above) (World development indicators, 1999).

### H

- **The number of medical practitioners** per 1000 of the total population (CCS1994 and 1996).
- **Life expectancy** at birth in years (World development indicators, 1999).

### INFRA

- The geometric mean of the index value of **buildings completed** at constant prices (SARB, 1998).
- **Electricity generated** (SARB, 1998).

### PS

- **The number of thefts** per 1000 of the total population (CCS 1994 and 1996).

### L

- **Number of hotel beds available** (CCS 1975 - 1997).
- **Bed occupancy rate** (CCS 1975 - 1997).