QUALITY OF LIFE INDEX: MEASURE OF POLICY SUCCESS?*

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ABSTRACT

The process of economic development can be seen as a process of expanding the capabilities of people. This process should include the notion of human development by means of capacity building and empowering the decision-makers. Growth-enhancing policies should therefore be implemented and evaluated in terms of policy success. This paper 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. Agents of government sometimes have limited authority and capacity and need guidelines to strengthen their competence to limit the potential dangers of resource wastage or misallocation. The decisions made by the authorities will inevitably affect the inhabitants of a specific area, the social order, environmental issues and economic activities. Authorities should be empowered to measure quality of life in order to evaluate their own policy outcomes. The purpose is to develop a single index that may be used as an instrument to measure quality of life over time. The main objective would be to develop a quality of life index which is comprehensive, yet simple to use and apply.

INTRODUCTION

The Economic System Approach (ESA) initially emerged in an effort to stress a sense of dissatisfaction and disagreement with the conventional neo-classical account of the economic development success in East Asia. The ESA represents an attempt to re-examine the methodological premises of the policy prescriptions by the neo-classical school (Yanagihara, 1997: 8). The term "economic system" is used to describe the way in which productive capacities exist, personified in co-operative relationships within and between firms and in relation to various factor markets. The economic system can further be seen as an interrelated and mutually reinforcing process comprising the improvement of organisational capabilities of firms and the expansion and deepening of inter-firm relationships.

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* Views expressed are those of the author and do not necessarily reflect those of any institution that he may be associated with.

Article The ESA accentuates the strengthening of organisational capacities of economic agents and views markets as interrelationships among these agents formed and shaped through their interactions. It also focuses its attention on the technological and managerial capabilities of economic subjects such as economic decision-makers or economic agents (Yanagihara, 1997: 11). Markets refer to the relational arrangements among these agents. The process of decision-making and actions taken by subjects to establish and change the interrelations between them leads to the creation and development of markets. It furthermore concerns the development of the institutional framework in which the subjects operate, which include both the physical and social infrastructures and the natural environment surrounding these. The process of production and employment is enhanced in this way and the subjects therefore consider themselves active participants and not merely spectators or recipients.

ECONOMIC SYSTEMS APPROACH[1]

The Economic System Approach as a theoretical framework highlights the importance of investment in human ability to participate in economic growth and development (Schoeman & Blignaut, 1998). This is also in line with the reasoning of Solow (1957) and Romer (1994) and again emphasises the importance of human capital investment. The latter is of great importance as the demand for labour is related to the required level of production and people thus act as catalysts for economic activity. This view as to what stimulates economic growth has only recently been acknowledged by the introduction of endogenous growth models by Romer (Todaro, 1997: 90), and the work of the Institute of Developing Economies (IDE), on what is known as the ESA (Yanagihara & Sambommatsu, 1997). By contrast to the conventional neo-classical approach, the ESA focusses on the strengthening of organisational capabilities. It views the market not only as a pure mechanical process but also adds to the importance of inter-relationships among agents operating in the market. Markets are therefore shaped and reshaped by the interaction amongst these market participants. Furthermore, factor-endowment is not perfectly malleable, but exists in distinctive forms and contexts which are embodied in, mediated and co-ordinated by expertise acquired through learning. This learning process occurs by experience within specific organisational setups and arrangements between firms (Yanagihara, 1997: 11).

The radicalism of this process is accentuated as follows by Sen (1988: 47, 48):

A major failing of traditional development economics has been its tendency to concentrate on the supply of goods rather than on ownership and entitlement. The process of economic development can be seen as a process of expanding the capabilities of people and the expansion of entitlements.

According to Sen (1988: 47, 48), the process of economic development can be seen as a process of expanding the capabilities of people. This view of Sen is proliferated by the ESA, which draws attention to the technological and managerial capabilities of economic agents (decision-makers). The ESA revolves around building the productive capacity of subjects by focussing on their personal capacities (education, training and health), and developing the infrastructure within which they operate. The infrastructure referred to comprises an institutional, physical and social framework, surrounded by the natural environment. These, the building blocks of the process, must be of a particular character and quality. The subjects, who drive the process and cause the changes to occur, must also possess particular capabilities. The productive capacities of the subjects and a smooth-running, production-enhancing process within a supporting institutional, physical, social and natural environment have to be developed. The ESA therefore focusses on the process of human development by means of capacity building, and the strengthening of relational arrangements among subjects. Human and infrastructural development as well as capacity building implies an improvement and upgrading of the socio-economic environment of a country.

The ESA facilitates the integration of a multitude of processes and the diverse nature of human behaviour. It is descriptive and focusses on people and their capabilities in the interests of progress, rather than on techniques and models. The ESA recognises that the structure of society is complex - a fact which development theory, policy and practice must take into account. It captures the diversity of the participants by postulating that markets are an integral part of the diverse economic and development process. Society and the economy are determined by relationships that can vary in all possible ways, allowing each society its unique features (De Wet, Harmse & Blignaut, 1997: 365). By recognising these complexities and diversities, it is possible to create an environment conducive to development. Markets are therefore not neutral. The government must provide the institutional, legal and policy frameworks for subject-driven development. There is little room for clear-cut, formal, and rigorous policies. An application of the ESA constitutes a decisive paradigm shift from past practices. The ESA moved away from the mechanistic and deterministic conception of economic growth and development (Yanagihara, 1997: 16-18).

The question which the ESA poses, is how the capacity of, and relationship among economic agents can be strengthened and developed and their entitlement expanded. The development of an institutional environment as part of an infrastructural development programme can promote, and has indeed promoted, the process of building capacities and relationships, and enhances economic growth and development. Infrastructural development comprises both the physical infrastructure (eg. the sustainable use and development of natural resources and man-made capital) and a social infrastructure (eg. health, housing, financing and other institutions rendering services) (De Wet, Harmse & Blignaut, 1997: 366). Modern endogenous growth models accept that investment in private and human capital encourages external economies and productivity improvements,

both of which offset the natural tendency towards diminishing returns. The implication is that investment in human capital could result in increasing returns to scale and therefore economic growth and employment (Yosida, 1998: 357; Todaro, 1997: 92).

While the new growth theories stress the importance of the link between human development and growth, the United Nations equates human development with the improvement of the socio-economic environment (United Nations, 1996: 11-28). Furthermore, an improvement in the socio-economic environment improves productivity, which in turn promotes growth and employment (United Nations, 1996: 75; 86).

QUALITY OF LIFE INDEX

For the purpose of this paper, developing a quality of life index, national welfare is based on supply, demand and socio-economic factors. Increasingly, it is suggested that if national welfare or quality of life could be improved, economic growth and development would be enhanced. The quality of life index to be developed 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 socio-economic factors. The fact that no one of these three main variables could be superior to the other, equal weights were attributed. The purpose of this paper was to construct a quality of life index and the effect of different weights can be investigated in future studies. The idea is thus to develop a system in which the quality of life, using several variables, can be structured.

Agents of government sometimes have limited authority and capacity and need guidelines to strengthen their competence to limit the potential dangers of resource wastage or misallocation. The decisions made by the authorities will inevitably affect the inhabitants of a specific area, the social order, environmental issues and economic activities. This quality of life index could empower government authorities to evaluate their own economic, social and environmental policies introduced and implemented.

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 particular 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 and 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 impor-

tant other socio-economic characteristics. Another major shortcoming of the HDI for South Africa, 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.

Methodology

The purpose 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 mean 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 other areas over time. As is the case with the HDI, this indicator should, nevertheless, be easy to understand and comprehensive.

The index consists of three main variables, each one consisting of several sub-variables. The three main variables are personal disposable income per capita (Ydc), capital (K) and socio-economic (SE) variables. In equation format, what have been discussed above, can be expressed as follows:

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

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[2]. 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.

• 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 ad hoc- intervals and not as a time series. Due to this constraint, it was believed that personal disposable income was a sufficient variable to explain income and thus 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 A.1 and Figure A.1

• 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 contribute 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.

- 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 *inter alia* the quality of lakes and forests, respiratory health and buildings. 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 cannot 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.

- 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. - i.e. 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 have 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 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.

- Capital sub-variables

- Man-made capital (MM) consists of only 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_2) emissions per capita as a proxy for environmental resources. However, in the case of CO_2 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:

Capital (K) = MM (20%) + FIN (20%) + HC (20%) + E (20%) + 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 A.2 and Figure A.2.

• 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 of 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:

Socio economic variable (SE) = EDU (20%) + H (20%) + INFRA (20%) + PS (20%) + 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 socio economic variable contributes 33.3% to the total quality of life index and also represents the contextual variables. The contextual variables accommodate the way 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 A.3 and Figure A.3.

In sum, the following may represent the total quality of life index:
    NW = 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 (Table A.4 and Figure A.4) is therefore a composite index determined by 18 variables in total and represents a quantitatively and comprehensive indicator of general quality of life. The basic philosophy underlying this framework is that various economic factors need to be measured to enable a country to identify, address and correct inferior aspects, with the ultimate goal of improving the quality of life and enhancing business activity.

FIGURES AND DATA

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

Table A.1: Personal disposable income

Years	Personable disposable income (Ydc) (1995=100)
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 A.1: Personal disposable income per capita

PERSONAL DISPOSABLE INCOME PC

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

Years	Capital (K) (1995=100)
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

Table A.2: Capital (total of all sub-variables) (continued)

Years	Capital (K) (1995=100)
1991	93.54
1992	97.79
1993	93.43
1994	97.12
1995	100.00
1996	98.85

Figure A.2: Capital
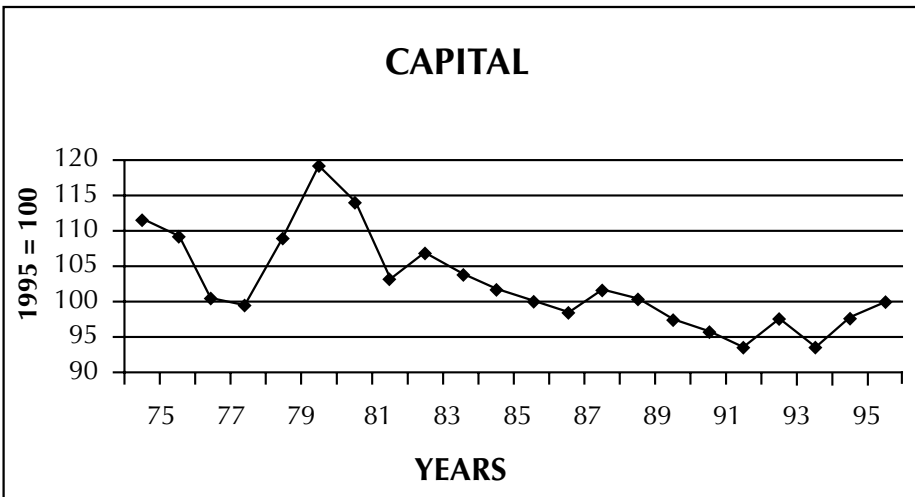

Table A.3: Socio-economic indicators (total of all sub-variables)

Years	Socio-economic indicators (SE) (1995=100)
1975	59.90
1976	59.32
1977	72.91
1978	72.39
1979	73.86

Table A.3: Socio-economic indicators (total of all sub-variables) (continued)

Years	Socio-economic indicators (SE) (1995=100)
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 A.3: Socio-economic indicators

SOCIO-ECONOMIC INDICATORS
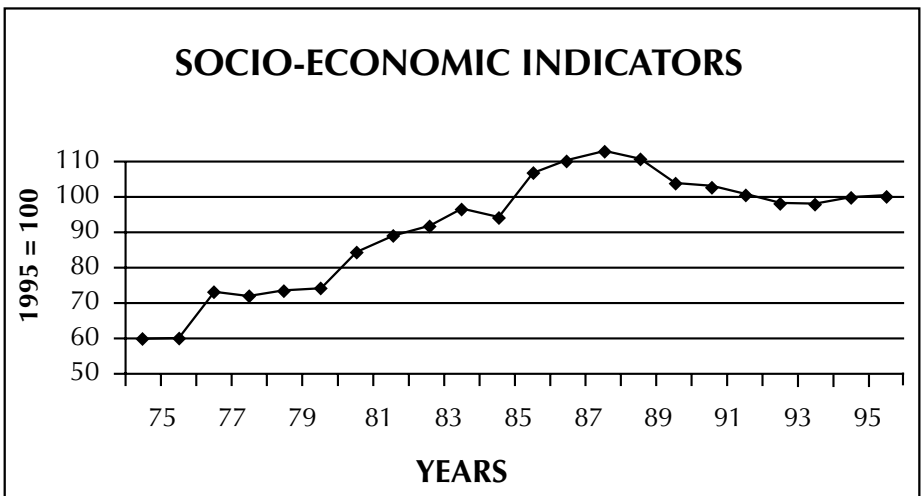
Table A.4: Quality of life (Ydc + K + SE)

Years	Quality of life (QOL) (1995=100)
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 A.4: Quality of life
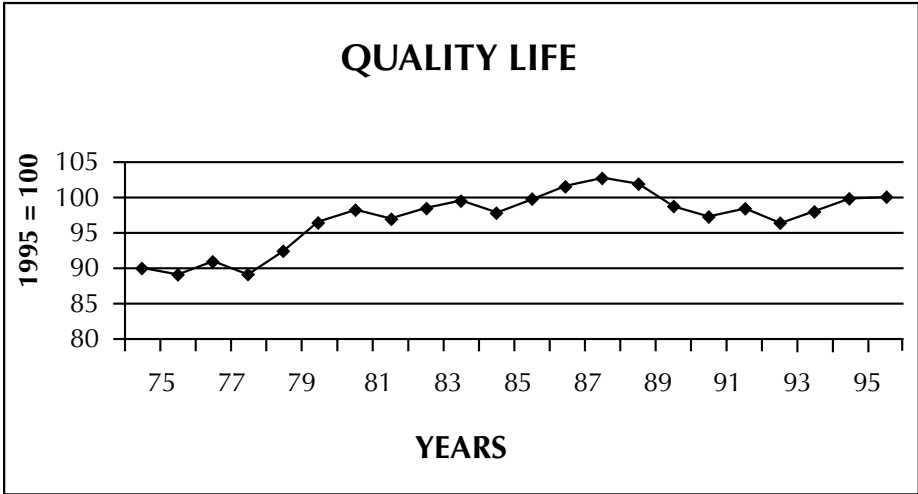
CONCLUSION

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. However, a general decline of the quality of life was experienced since the late 1980s. On average, the capital and socio-economic variables were mainly responsible for the declining trend in the quality of life index. Although particular individual sub-variables might show an improvement, the net effect of both these two main variables contributed towards the decline. The dependency ratio sub-variable weakened mainly because of the high unemployment rate and its burden on the quality of life in general. Increased carbon dioxide emissions also contributed towards a decreasing capital variable. The social fiber affecting the capital variable negatively, indicating a worsening social environment. Although the impact of HIV/AIDS was not part of the overall index mainly because of a lack of sufficient data, the life expectancy sub-variable reflected this impact in general. It seems as if this might have a negative effect on the socio-economic environment and thus putting pressure on the index. Public safety also contributed towards this negative trend in the socio-economic variable.

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 spe-

cific profile of an area. Future research could be undertaken to determine the validity of the trends in each case, because it falls beyond the scope of this paper. 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.

NOTES

[1] Printed by permission of the authors.
[2] Certain series only available up to 1996. National adjustment to 1996 census not completed.

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REFERENCES OF VARIABLES

A.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).

A.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/).

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/).

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)

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).

A.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).