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FOREWORD

Prof NJ Dorfling, Dean: Faculty of Business and Economic Sciences, Nelson Mandela Metropolitan University (NMMU), Port Elizabeth, South Africa.

It is a pleasure for me to introduce this first edition of the Journal for Development and Leadership (JDL) of the Faculty of Business and Economic Sciences at the NMMU in Port Elizabeth, South Africa.

As an academic research journal, its presence will fill a void in the faculty and will serve as a vehicle to promote academic discourse, higher education enthusiasm, as well as valuable research outputs.

It should be borne in mind that due to the nature of our work, all of us are to a greater or lesser extent involved in a degree of research. This could be when we are updating our lecture notes for presentations in class, when we supervise master's and doctoral studies, when we research to present papers at conferences or when research has to be undertaken for personal studies, writing of journal articles or joint or individual *ad hoc* and/or contracted research.

The Faculty of Business and Economic Studies is committed to the vision of the NMMU, which is:

“ . . . to be an African university, recognized for its leadership in generating cutting-edge knowledge for a sustainable future . . . ”

In the quest to achieve the institutional vision, the faculty has identified research as a key driver to acquire cutting-edge knowledge about the identified faculty themes, namely Local Economic Development, SMME's and African Leadership, Ethics and Governance. These entities represent three pillars in terms of which faculty educational goals have to be achieved and, in that context, shape the focus areas of the JDL.

The Journal for Development and Leadership is envisaged to contribute to promoting research cultures among staff and students in the faculty and to serve as an image builder for the faculty in particular and the university in general – a status that will benefit all stakeholders in NMMU higher education.

Research output is often the yardstick of best practice in terms of which universities are ranked and which determines donor attitudes, employment of graduates in industry, as well as determining the institutional image locally, nationally and internationally. All efforts to increase our research output should therefore be supported. For example, the articles that will be published bi-annually in this journal, will have a strong national and international slant, further adding to the publication's acceptability among the broader and global social sciences academic communities.

The existence of the JDL is seen against the background of growing numbers of research outputs being a key pillar of the institutional and faculty promotion strategy and, in light of the high premium placed on it, will need to be particularly nurtured to ensure that NMMU can entrench its rightful place as a world-class university.

The first edition of JDL follows a thematic approach in three particular categories, namely General Economic Theory and Business Cycles, Business Ethics and Corporate Governance and Regional Economic Development and Tourism.

EDITORIAL

Prof HR Lloyd, Director: School for Economics, Development and Tourism, Faculty of Business and Economic Sciences, Nelson Mandela Metropolitan University and Editor-in-Chief of the Journal for Development and Leadership (JDL).

This first issue of JDL covers selected topics in Tourism, Economics, Econometrics, Business Ethics, Economic Development, government service delivery, corporate governance as well as contemporary perceptions of government and politics.

With this edition, the initiative of publishing an academic journal that is aimed at providing practical guidance and empirical evidence to researchers and practitioners specialising in the Business, Economics and Management fields, is taken a step closer to obtaining accreditation by the Department of Education by presenting a number of thought-provoking, stimulating and educationally inspiring articles that provide a communication forum to advance elements of business, Economics, development and leadership aspects, as well as various disciplines in the humanities, concomitant with the application of the disciplines in practice.

The fundamental aim of the journal is to encourage the improvement and further development of the selected fields, stimulate healthy, theoretical and empirical debate and, as such, to appeal to both practitioners and academics.

The journal is presented as a vehicle to promote progressive, creative and high-level thinking, while providing a platform for established and emerging academics as well as practitioners to further the ideal of an educated nation that will serve the interests of South Africa and its people on all levels, thereby contributing to the ideal of a democratic, peaceful and prosperous society.

By presenting a number of thought-provoking stimulating and educationally inspiring articles, JDL takes a step closer to being awarded full accreditation by the Dept of Education.

DATING THE SOUTH AFRICAN BUSINESS CYCLE

Biesmans and Majetti¹

ABSTRACT

In this paper, we focus on setting a chronology for the South African business cycle, founded on the detection of turning points in the aggregate activity. First, we answer to the methodological question of how to determine economic cycles: in this case we focus on classical business cycles and growth cycles. Secondly, we develop a non-parametric dating algorithm applied to the real GDP series for the period, 1960-2011: implementing this algorithm yields a periodisation based on six complete cycles. Thirdly, we discuss the main specificities of the South African case.

Keywords: Bry-Boschan algorithms, classical business cycle, cyclical fluctuations, growth cycles, recessions, turning points

INTRODUCTION

Modern economies, whether they be in developing, emergent or developed countries, exhibit more or less regular fluctuations. Several definitions of the trade cycle exist. The more appropriate and useful is that given by the NBER tradition: business cycles represent a peculiar mode of economic fluctuations, characterised by a succession of contraction and expansion phases. However, how is one to measure global activity? Following the classical approach of Burns and Mitchell (1946: 72), we think that “aggregate activity can be (...) made conceptually measurable by identifying it with gross national product at current prices”. Consequently, the reference series we utilise will be that of the Gross Domestic Product (GDP).

The above approach must be contrasted with the current practice where a series is ‘detrended’ before applying to it one of many existing filters or methods, e.g. phase-average detrending, Chistiano-Fitzgerald or Hodrick-Prescott filters, bandpass filters, etc. The problem with these techniques is that their applications generate different cycles.

The main objective of this paper is to date the business cycle in South Africa. More precisely, we search to identify and/or date turning points or fluctuations in GDP: that’s to say changes from expansion to contraction or *vice versa* in GDP.

As explained by Harding and Pagan (2003a), two main business cycle dating methods are available: parametric and non-parametric. The former is founded on the utilisation of a statistical model fitted to the data, usually the Markov-Switching model pioneered by Hamilton (1989): the estimated parameters are then used to isolate turning point dates. The latter method is based on the computational procedure developed by Bry and Boschan (1971). In essence, its meaning is to directly locate the turning points, conceived as local minima and maxima in the GDP series. In the beginning, the Bry-Boschan (BB) algorithm was applied to monthly series, but following Harding and Pagan (2002) it also works on quarterly data.

Each method has pros and cons, as exemplified in the debate between Hamilton (2003) and Harding-Pagan (2003b). See also the views of Diebold and Rudebusch (1999). However, a non-parametrical procedure has a triple advantage compared with parametric ones: transparency, simplicity and reproducibility.

In this paper we use the second approach and consequently, *prima facie*, a variant of the original

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BB algorithm (see Bismans and Le Roux 2012, for an alternative parametric approach to the South African business cycle).

The plan for this article is as follows: section 2 addresses the non-parametric procedure of dating, while section 3 yields the South African business cycle, resulting from the implementation of BB algorithm. Section 4 compares our dating procedure with those of several other authors or institutions. The subsequent section is devoted to the principal features of these cyclical fluctuations. Finally, section 6 concludes and outlines some perspectives for future research.

METHODOLOGY

First we defined two concepts of cycles: then we developed the procedures used to isolate the relevant cycles.

Preliminaries

Denote by Y_t the series of real GDP and by $y_t = \ln(Y_t)$ its natural logarithm. The use of logs does not change the optima of our reference series, because the logarithmic function is a strictly increasing transformation.

The classical business cycle is the result of research initiated by Burns and Mitchell (1946) and the American National Bureau of Economic Analysis. It is arrived at in searching the turning points of a y_t : a *trough* is the analog of a local minimum and possibly marks the beginning of an expansion; a *peak* is the analog of a local maximum and signals the coming recession. Formally, we have:

$$\begin{cases} \text{peak at } t = \{y_{t-1} < y_t > y_{t+1}\} \\ \text{trough at } t = \{y_{t-1} > y_t < y_{t+1}\}. \end{cases}$$

However, a decline or increase in GDP should continue for some time to reach a recession or expansion.

The conception of the growth cycle has been introduced by Mintz (1969). Turning points are now located in *detrended* time series. The distinction between *levels* and *detrended* series is crucial. Indeed, in a growth cycle, a contraction does not imply that the growth is negative during all the phase, but simply means that the growth is inferior to the long-term or potential growth. The entire problem then is to choose the trend removal procedure.

From a formal viewpoint, note first that time variations of Y_t are equivalent to its growth rate, since

$$\partial \ln Y_t / \partial t = (\partial Y_t / \partial t) / Y_t = \dot{Y}_t / Y_t = g_t.$$

In order to determine the trend in y_t , we use the HP filter related to Hodrick-Prescott (1997). This later tries to decompose y_t between a *growth* or *trend* component, denoted g_t , and a *cyclical* component c_t :

$$y_t = g_t + c_t.$$

The two components are then estimated to minimize

$$\sum_{t=1}^T c_t^2 + \lambda \sum_{t=3}^T (g_t - 2g_{t-1} + g_{t-2})^2,$$

where $\lambda \in [0, +\infty[$ is a smoothness parameter. (In fact, λ is equal to 1 600 for quarterly data and to 14 400 for monthly data.) Finally, trend removal happens by taking

$$y_t^d = y_t - \hat{g}_t.$$

Following Artis, Marcellino and Proietti (2004), detrending is obtained by using a combination of HP filters (hereafter HP2 filter). Interpreting that as a band-pass filter and working in the frequency

domain, it can be shown that the cut-off frequency ω_c and the smoothness parameter λ are related by

$$\omega_c = (1 - 0,5\lambda^{-1/2}).$$

To apply this relation to a specified combination of HP filters yields the only fluctuations which have a periodicity from five quarters to eight years.

DATING METHODOLOGY

As we are primarily interested in the features of economic fluctuations in South Africa, we adopt a non-parametric approach to locate the turning points of business cycles. The business cycle is evidently conceived along classical lines – but we also conduct the same approach to the more modern conception of growth cycle.

The non-parametric models derive from graphical methods for the detection of local extrema in time series. The simplest approach consists in a graphical inspection of the data and it also appears to be particularly useful for avoiding false turning points such as those associated with periods whose amplitude or duration would be too low. Then also, various algorithms have been developed to adapt these ‘ocular’ judgments or mechanical dating rules. The best known is that associated with the NBER and performed by Bry and Boschan (1971, BB algorithm). Basically, it aims to identify the local extrema of monthly time series over an interval of five months (on either side) and then the final turning points are selected by applying censoring rules mainly relative to the minimum duration of phases (five months) and cycles (fifteen months).

This procedure has also been transposed to quarterly series by several authors: see for example, Birchenhall *et al.* (2001); Harding and Pagan (2002, BBQ algorithm) or Morley and Piger (2006, MBBQ algorithm). To the extent that these algorithms are mainly applied to the *level* of time series, they clearly lead to identification of *classical* business cycles. Nevertheless, they have the advantage of being easily transposable to the other two conceptions – the growth cycle or acceleration cycle – if the considered series are previously detrended or converted in growth rate.

Here, we propose to adapt Harding and Pagan’s methodology (2002) since we use the quarterly real GDP series as a measure of aggregate economic activity. If we respectively denote by y_t and y_t^d the logs of real GDP and of its cyclical component (filtered by HP2), the application of the BBQ algorithm on each allows us to identify both the classical and growth cycles. The dating methodology – performed in *Visual Basic under Excel* – can be decomposed in three key components:

1. Identifying a potential set of peaks and troughs using a *turning point rule*:

	Classical cycle	Growth cycle	
Peak	$y_t > y_{t\pm k}$	$y_t^d > y_{t\pm k}^d$	$(k = 2)$
Trough	$y_t < y_{t\pm k}$	$y_t^d < y_{t\pm k}^d$	$(k = 2)$

2. Enforcing the condition that peaks and troughs must alternate by selecting the highest (lowest) consecutive peaks (troughs);
3. Defining censoring rules.

The main rules aim to control the minimal duration of phases and cycles. Whatever the definition of the business cycle, its phases must last a minimum of two quarters while a complete cycle – defined by the period of time between two peaks or two troughs – must be at least five quarters long.

We also choose to control the amplitude of phases in the growth cycle by imposing a minimum value equal to 0.9%. This kind of rule does not appear in the original BB approach when measuring

the business cycle; however in our approach it is motivated by obtaining the major fluctuations in the growth cycle.

Complementary rules are finally designed to avoid false turning points:

- elimination of turns within two quarters of beginning and end of series;
- elimination of peaks (or troughs) at both ends of series which are lower (or higher) than values closer to end;
- elimination of phases for which the trough is higher than the peak.

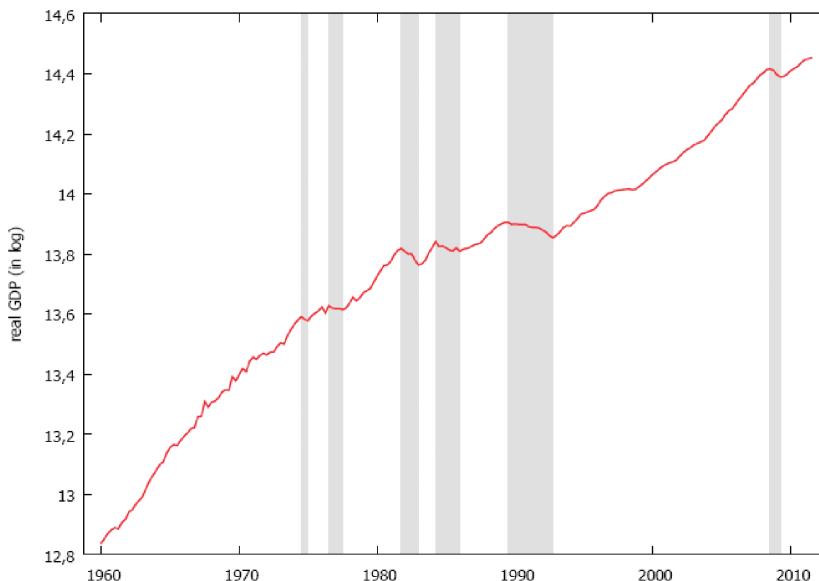
A CHRONOLOGY OF THE SOUTH AFRICAN BUSINESS CYCLE

In this section, we aim to establish a reference chronology of the South African business cycle by applying the non-parametric dating algorithm presented in the previous section. The reference series – that is, the quarterly real GDP – comes from the South African Reserve Bank (SARB) and is obtained from the OECD database for the period 1960Q1-2011Q3. It nevertheless differs from the national source in that the OECD adjusts the series for seasonal and calendar variations by the *XII ARIMA* method. The dating results are displayed in figures 1 and 2 for the classical and growth cycles respectively.

From figure 1, it is apparent that the South African economy experienced six recessions over the period 1960-2011. Four of them occurred in the 70's and 80's and so coincided with periods marked by political difficulties (due to the apartheid regime) and international sanctions against the country (drop in foreign direct investments, boycott of national products, *etc* ...). The next recession, between 1990 and 1992, was directly connected to the end of the apartheid system. The strong political and social tensions in this period were almost certainly the reason why this is the longest recessionary phase that South Africa has experienced. The last recession may be attributed to the 2008 international financial crisis that damaged a large number of emergent and advanced economies.

Overall, it is clear that the South African business cycle exhibits no regular 'behaviour' during the studied period since recessions are relatively concentrated and there are also long periods with no crises, as in the 60's, and between 1993 and 2008.

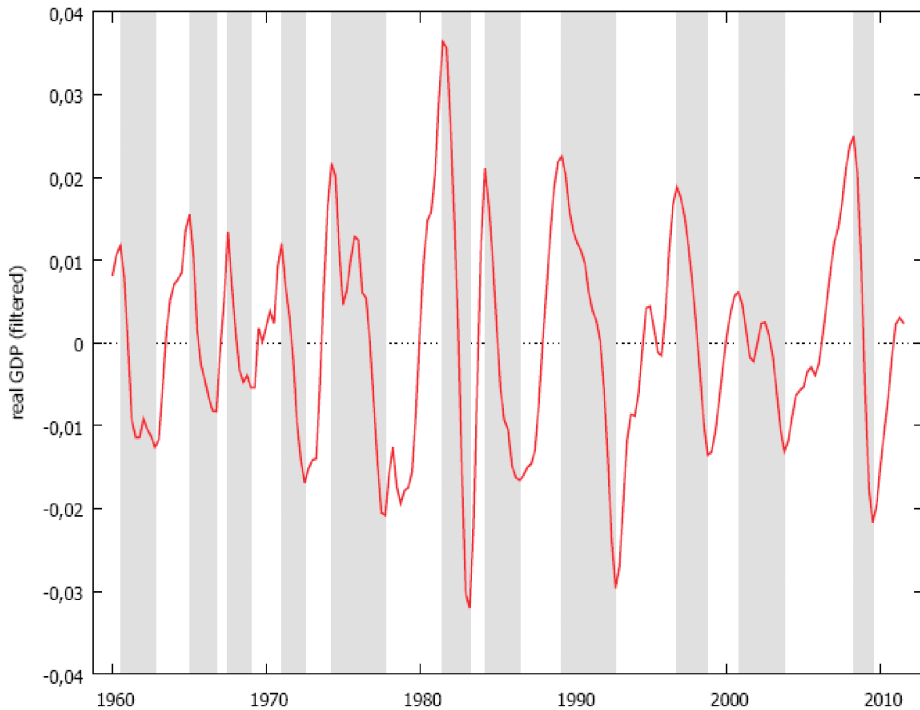
Figure 1: The South African Classical Cycle



Note: The shaded zones represent the recession phases.

The growth cycle chronology delivers some interesting findings (cf. figure 2). Firstly, it is natural to observe that these fluctuations are more volatile than the classical business cycle ones; in other words, the growth cycle has a higher frequency reproduction. Ten complete cycles (from peak to peak or from trough to trough) are indeed identified on the period 1960-2011, leading to the occurrence of eleven downturn phases. As a consequence, it is also much more regular than the business cycle. That's why economic downturns have always appeared regularly since 1960: South Africa experienced low-growth periods that did not turn into recessions. This is particularly the case in the 60's, in 1997-98 (due to South East Asian currency crisis) or in 2001-03 with the bursting of the technological and stock exchange bubble.

Figure 2: The South African Growth Cycle



Note: The real GDP series is filtered by the HP2 method and the shaded zones represent the economic downturns.

Secondly, a more precise observation of the cyclical turning points reveals that all the recessionary phases are both preceded by a cyclical downturn and followed by a cyclical upturn (cf. table 1). The explanation seems natural: on the one hand, as a recession is characterized by negative growth during all the phase, it necessarily implies the occurrence of a prior economic slowdown. Here the growth falls below its long-term level while, on the other hand, the economy necessarily involves an expansion (the growth rate becomes positive) before beginning its next upturn phase (the growth rate is above the long-term trend rate of growth).

One can finally underline a particular point due to the restriction imposed on the minimum amplitude of the growth cycle phases: while the South African economy recorded two distinct recessions between 1974 and 1977, a unique cyclical downturn is identified by the algorithm. In fact, the two episodes of negative growth are both surrounded by a contraction of the growth cycle as can be seen from figure 2. The intermediate upturn is however of insufficient amplitude to be recognized as a major fluctuation so that it has been avoided by the censoring rules.

Table 1: Turning Points Chronology of Business and Growth Cycles

	P	T	P	T	P	T	P	T
GC	1960Q3	1962Q4	1965Q1	1966Q4	1967Q3	1969Q1	1971Q1	1972Q3
BC								
	P	T	P	T	P	T	P	T
GC	1974Q2			1977Q4	1981Q3	1983Q2	1984Q2	1986Q3
BC	1974Q3	1975Q1	1976Q3	1977Q3	1981Q4	1983Q1	1984Q2	1986Q1
	P	T	P	T	P	T	P	T
GC	1989Q2	1992Q4	1996Q4	1998Q4	2000Q4	2003Q4	2008Q2	2009Q3
BC	1989Q3	1992Q4					2008Q3	2009Q2

Note: BC = Business Cycle; GC = Growth Cycle; P = Peak; T = Trough

A BRIEF COMPARISON

It is of interest to compare our own dating results with those obtained by other authors or institutions. There are numerous studies which have used the turning points of the South African business cycle. Though the list is probably incomplete, these include the South African Reserve Bank (SARB 1980-2011), Smit and Van der Walt (1970), Le Roux and Levin (1998), Venter and Pretorius (2001), Laubscher (2005), Du Plessis (2006), Khomo and Aziakpono (2006), Du Toit (2008) and Venter (2009, 2011). Almost all of these studies use SARB chronologies (1980-2011).

To implement its dating process, the first step for the South African central bank – see Venter (2005)¹ for a quick presentation of SARB procedures – is to build a coincident business cycle indicator. This index is compounded of four time series, together with the GDP at constant prices, but excluding agriculture, forestry and fishing. The second step consists of determining the reference cyclical turning points. Note that the cycle is defined as the deviations of the composite index from its long-term trend: it is therefore of the growth cycle, not the classical business cycle.

Consequently, the turning points of economic activity determine either phases where the rhythm of the growth exceeds its long-term growth or periods where this rhythm is lower than the trend.

Table 2 presents a comparison between the chronology of the bank and ours, hereafter denoted respectively SARB and BM (for practical reasons, the comparison begins from the seventies).

Table 2: Two chronologies of the growth cycle in South Africa

Peaks		Troughs	
SARB	BM	SARB	BM
1970 Q4	1971 Q1	1972 Q3	1972 Q3
1974 Q3	1974 Q2	1977 Q4	1977 Q4
1981 Q3	1981 Q3	1983 Q1	1983 Q2
1984 Q2	1984 Q2	1986 Q1	1986 Q3
1989 Q1	1989 Q2	1993 Q2	1992 Q4
1996 Q4	1996 Q4	1999 Q3	1998 Q4
–	2000 Q4	–	2003 Q4

Sources: SARB *Quarterly Bulletin*, 260, June 2011; our own computations. **Note:** SARB chronology was ‘quarterlyised’.

¹Venter (2005:5-6) asserts that the SARB methodology is near the American NBER ones. It’s not false for the building of the composite index. But the NBER is trying to detect the turning points of the classical business cycle, not the growth cycle.

The table reveals that both ‘datations’ are close to each other, except for the most recent period. Indeed our algorithm detects one additional growth cycle that extends from 1998 Q4 to 2003 Q4, i.e. for five years.

The only study devoted to the classical South African business cycle – to the best of our knowledge – is that of Du Plessis (2006). The methodology developed by this author is identical to ours. It consists of the implementation of the BBQ algorithm on the real GDP data. Here is a synthetic table of both dating processes (hereafter denoted respectively by DP and BM).

Table 3: The datation of the business cycle in South Africa

Peaks		Troughs	
DP	BM	DP	BM
1974 Q3	1974 Q2	1975 Q1	1975 Q1
1976 Q3	1974 Q2	1977 Q3	1977 Q3
1981 Q4	1981 Q3	1983 Q1	1983 Q1
1984 Q2	1984 Q2	1986 Q1	1986 Q1
1989 Q3	1989 Q3	1992 Q4	1992 Q4
1998 Q3	–		–
	2008 Q3		2009 Q2

Sources: Du Plessis (2006:12, 24); our calculations.

Clearly, the differences in the chronologies of turning points are extremely small. The only gap is marked at the end of the analysed period. Du Plessis detects a peak at the third quarter of the year 1998. On the other hand, in our own approach, the South African economy experienced a long phase of expansion since 1992. This tremendous and prolonged growth ended with the recession of 2008.

Finally, we must emphasize an important point relating specifically to South African conditions: Laubscher (2004) shows that the domestic business cycle is strongly impacted by the economic situation abroad¹. This general statement can be applied to the 2008 recession. For example, if we consider the cases of the United States and France – see respectively NBER (2010) and Bismans and Majetti (2012) – we note that the first economy entered recession in the last quarter of 2007 and the second in the second quarter of 2008. For its part, South Africa entered recession during the third quarter of 2008 as a direct consequence of world contraction.

FEATURES OF THE SOUTH AFRICAN BUSINESS CYCLE

The identification of cyclical turning points allows us to illustrate some stylized facts of the South African business cycle. As pointed out by Harding and Pagan (2002: 369): “Inspection of comments that are frequently made about the cycle suggests that there are four items of interest: the duration of the cycle and its phases, the amplitude of the cycle and its phases, any asymmetric behavior of its phases and cumulative movements within phases.”

A convenient way to perceive these features is to represent a phase of a classical cycle – or of a growth cycle – as a triangle. For a particular phase i , its duration D_i and its amplitude A_i correspond to the base and the height of the triangle respectively. To sum up these two characteristics, an index of severity S_i is used to measure the area of the triangle:

¹Laubscher (2004:26) has found “an extraordinary correlation” between the G7 countries industrial production and South African business cycle.

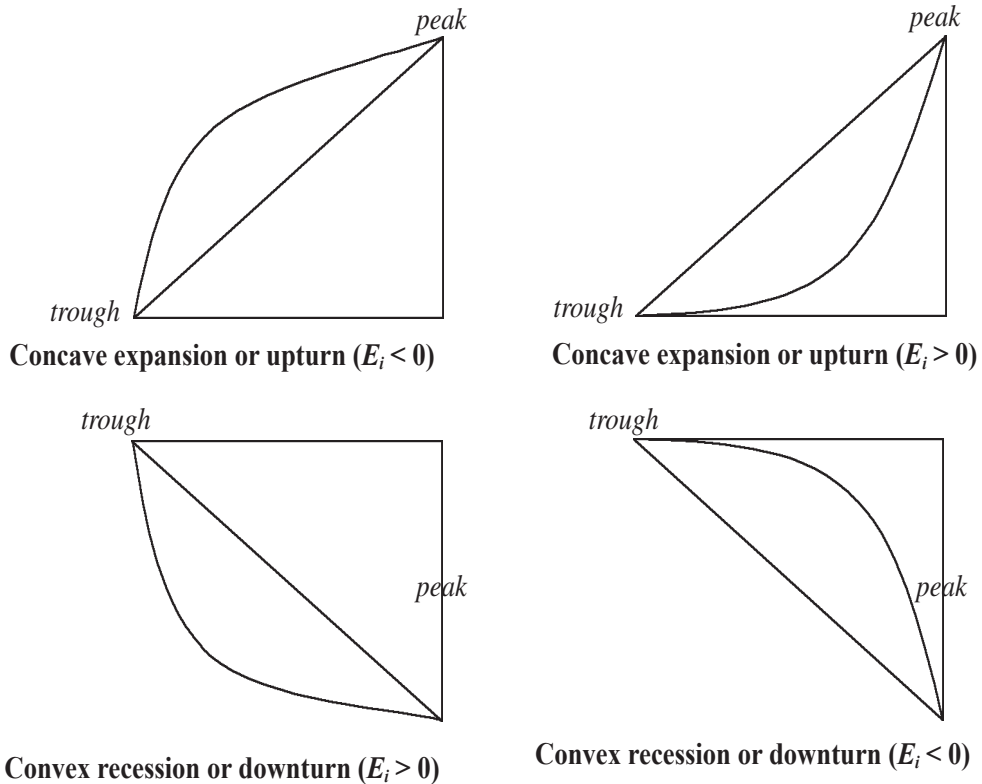
$S_i - 0.5 \times D_i \times A_i$ with, $S_i > 0$ for an expansion or an upturn phase and, $S_i < 0$ for a recession or a downturn phase since the corresponding amplitude is negative.

This measure also approximates the cumulated gains or losses through a phase and so it is referred to as *the triangle approximation to the cumulated movements*. In fact, the actual path through the phase may substantially differ from the linearity associated with the triangle approximation. So the difference between the actual C_i and approximated S_i cumulated movements leads to appreciation of the departure from linearity and also the shape of the phase. To normalize this excess, Harding and Pagan (2002) have proposed the following index:

$$E_i = (S_i - C_i) / D_i$$

Consequently, the sign of E_i indicates that a particular phase may have a concave or a convex form (cf. figure 3). A positive excess index implies convexity, thereby meaning that the economic reversal is increasing through an expansion (or an upturn) phase and decreasing in a recession (or a downturn) phase. Conversely, the cyclical reversals would be high (low) in the beginning of an expansion (a recession) before declining (growing) as the phase extends. Finally, a null excess index would indicate a perfect linear path of cyclical fluctuations.

Figure 3: The Shape of Cyclical Reversals



We first measure these characteristics for the classical business cycle. The results are displayed in table 4. Not surprisingly, this cycle shows a high degree of asymmetry taking various forms. First of all, the positive long-term trend inherent to the GDP series makes the expansions longer and ampler than recessions. The latter have an average duration of 5.67 quarters, leading to an average decrease of 3.2% points of GDP, while the former continue for 21 quarters for a gain of 19.8%. Then, the quarterly

amplitude reveals that cyclical reversals are steeper when the economy is growing: since the 60's, the average gains and losses (in real GDP points) are 1.03% and -0.64% per quarter respectively. The empirical literature qualifies this asymmetric behaviour as *steepness asymmetry* (see for example Sichel, 1993).

As regards the excess cumulative movements, several observations can be drawn. First, the recession phases do not exhibit a unique shape: the two first recessions and that of 1984-85 are convex while the other three are concave. This difference can nonetheless be explained by the features of these recessionary episodes. The three concave recessions are indeed the most severe crises that South Africa has experienced: those of 1982-83 and 2008-09 are the steepest while that of 1989-92 is the longest. This also indicates that economic growth has progressively (or increasingly) deteriorated during these crises. Second, it is clear that expansions have a convex form – despite the first and short episode of 1975-76 – meaning that the South African economy has generally grown at an increasing rate at the end of recessions. This observation seems to contrast with developed countries where the early stages of expansions are characterized by a rapid recovery or a bounce-back effect (see for example Sichel 1994; Ferrara 2003 and Bec, Bouabdallah and Ferrara, 2011).

Table 4: Features of the South African Classical Cycle

RECESSIONS					EXPANSIONS				
Period	Duration		Amplitude		Period	Duration		Amplitude	
Excess (per quarter)					Excess (per quarter)				
Peak	Trough	(quarters)	(%)	(%)	Trough	Peak	(quarters)	(%)	(%)
1974Q3 – 1975Q1	2	-1.35	(-0.67)	0.14	1975Q1 – 1976Q3	6	4.97	(0.83)	-0.40
1976Q3 – 1977Q3	4	-1.24	(-0.31)	0.17	1977Q3 – 1981Q4	17	20.34	(1.20)	0.80
1981Q4 – 1983Q1	5	-5.49	(-1.10)	-0.51	1983Q1 – 1984Q2	5	7.80	(1.56)	0.76
1984Q2 – 1986Q1	7	-3.24	(-0.46)	0.51	1986Q1 – 1989Q3	14	9.60	(0.69)	0.14
1989Q3 – 1992Q4	13	-5.19	(-0.40)	-0.88	1992Q4 – 2008Q3	63	56.30	(0.89)	2.70
2008Q3 – 2009Q2	4	-2.69	(-0.90)	-0.09					
Mean	5.67	-3.20	(-0.64)	-0.11	Mean	21	19.80	(1.03)	0.80

Source: Authors' calculations.

We then carry out the same exercise for the growth cycle (cf. table 5). The results are relatively straightforward, since its phases are quite symmetrical. This is particularly true for both the cumulative magnitude (global amplitude) and the steepness (quarterly amplitude) of upturns and downturns. To a lesser extent, this also holds true for the length of the phases so that it corroborates previous findings on advanced economies (see for example Cotis and Coppel 2005). Moreover, the growth cycle fluctuations seem to have convex and concave forms but, on average, neither of these two forms predominates since the excess indexes are close to zero. One can also remark on figure 2 showing that – considering the major and minor fluctuations in the growth cycle – upturns and downturns tend to have a fairly linear path. Finally, the deeper recessions observed in the classical business cycle are reflected in the growth cycle since the associated downturns – occurring in 1981-83, 1989-1992 and 2008-09 – are also the deeper phases.

Table 5: Features of the South African Growth Cycle

DOWNTURNS					UPTURNS				
Period	Duration		Amplitude		Period	Duration		Amplitude	
Excess (per quarter)					Excess (per quarter)				
Peak	Trough	(quarters)	(%)	(%)	Trough	Peak	(quarters)	(%)	(%)
1960Q3 – 1962Q4	9	-2.43	(-0.27)	0.57	1962Q4 – 1965Q1	9	2.82	(0.31)	-0.16
1965Q1 – 1966Q4	7	-2.38	(-0.34)	0.46	1966Q4 – 1967Q3	3	2.17	(0.72)	0.03
1967Q3 – 1969Q1	6	-1.88	(-0.31)	0.39	1969Q1 – 1971Q1	8	1.74	(0.22)	0.11
1971Q1 – 1972Q3	6	-2.90	(-0.48)	0.05	1972Q3 – 1974Q2	7	3.86	(0.55)	0.56
1974Q2 – 1977Q4	14	-4.25	(-0.30)	-0.29	1977Q4 – 1981Q3	15	5.72	(0.38)	0.94
1981Q3 – 1983Q2	7	-6.84	(-0.98)	-0.27	1983Q2 – 1984Q2	4	5.31	(1.33)	-0.06
1984Q2 – 1986Q3	9	-3.77	(-0.42)	0.51	1986Q3 – 1989Q2	11	3.91	(0.36)	0.33
1989Q2 – 1992Q4	14	-5.22	(-0.37)	-0.71	1992Q4 – 1996Q4	16	4.85	(0.30)	-0.24
1996Q4 – 1998Q4	8	-3.24	(-0.40)	-0.28	1998Q4 – 2000Q4	8	1.97	(0.25)	-0.03
2000Q4 – 2003Q4	12	-1.93	(-0.16)	-0.24	2003Q4 – 2008Q2	18	3.82	(0.21)	0.27
2008Q2 – 2009Q3	5	-4.67	(-0.93)	0					
Mean	8.82	-3.59	(-0.45)	-0.02	Mean	9.9	3.62	(0.46)	0.18

Source: Authors' calculations.

CONCLUSION

In this paper, we have established a chronology for South African classical and growth cycles, using a quarterly algorithm. Application of this non-parametric procedure yields six complete cycles over the period 1960-2011.

Consequently, the recession phases are dated as follows: 1974Q3-1975Q1; 1976Q3-1977Q3; 1981Q4-1983Q1; 1984Q2-1986Q1; 1989Q3-1992Q4 and lastly 2008Q3-2009Q2. Clearly, South Africa experienced a long and regular growth period during the years 1993-2008.

Furthermore, a tailored analysis reveals a deep asymmetry between recessions and expansions: the former have an average duration of 5.67 quarters and are marked by a decrease of 3.2% in GDP; the latter last for 21 quarters and have a recorded growth of 19.8%.

A natural outcome of our work would be comparing these results with those obtained by building a statistical Markov-switching model. Setting a recession forecasting model is yet another promising research approach.

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AN ECONOMETRIC ANALYSIS OF THE AUSTRIAN BUSINESS CYCLE WITH REFERENCE TO SOUTH AFRICA

Farai & Le Roux¹

ABSTRACT

The Austrian Theory of the Business Cycle (ABCT) proposes that the roots of the current global financial crises – and recessions in general – are to be found in the actions of central banks through credit expansion and manipulation of interest rates. ABCT argues that central banks manipulate interest rates causing them to fall below the natural level leading to credit expansion and malinvestments.

The purpose of the article is to provide an explanation of how monetary policy (via setting artificial interest rates) causes longer term investments at the expense of shorter term investments. Granger causality testing and a Vector Error Correction Model (VECM) are used in the econometric analysis. The findings provide empirical evidence of ABCT in explaining fluctuations in South African economic activity. Policy prescriptions relating to the central bank are given.

Keywords: Austrian Business Cycle, Econometrics.

INTRODUCTION

The global financial crisis that began in 2007 and the features of the growth that came before it have brought renewed interest in the Austrian School of Economics. The theory argues that the source of recessions was the expansion of credit by monetary authorities through the manipulation of interest rates (Garrison 2009: 2).

The global financial crisis of 2007 and 2008 led to vast losses of global wealth, approximated by the IMF at US\$50 trillion, almost one year's worth of world GDP (Aisen & Franken 2010: 3). Inspired by Keynesian economics the United States and Europe responded to the financial crisis with economic policies that call for fiscal stimulus packages. Historically the outcome of these policies has been higher inflation rates as money is printed and pumped into the economy as stimulus.

According to the ABCT the newly created money is what created the crisis in the first place (Tucker 2011; Gustavson 2011).

ABCT can justifiably claim to that theirs is the most convincing account of the recent global financial and economic crisis (Tempelman 2010: 1). Accurate predictions of the crisis were made by Austrian-inspired economists. White, in August 2003, predicted that a crisis would be prompted by the crumbling of the real estate bubble as the rising housing prices were related to significant monetary accommodation. Mortgage extension in many countries had risen and the risk of defaults on mortgages would rise if housing prices were to fall. White's warning was not taken seriously by central bankers at the time (Tempelman 2010: 3-4).

ABCT argues that during economic expansions credit created with the help of central bank liquidity stimulates investment demand over and above society's long-term desire to save. A divergence is created between what firms produce and how consumers plan to spend. A recession would follow when the tensions in this mismatch became clear, and economic activity would not pick up until past investment "mistakes" had been put right (Oppers 2002: 3).

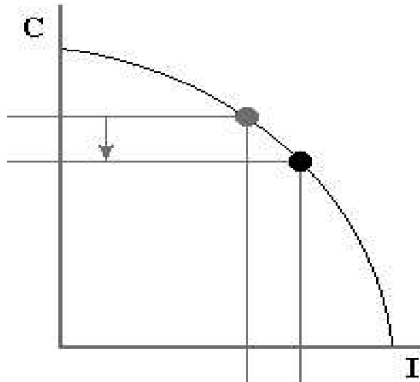
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THE PRODUCTION POSSIBILITIES FRONTIER (PPF)

In ABCT the trade-off between consumption and investment is shown by using the Production Possibilities Frontier (PPF). Investment refers to gross investment, which includes replacement capital. Replacement capital is the investment necessary to replace worn out or obsolete capital. The outward shift of the PPF shows that the economy is growing and this process is enabled by positive net investment (excess of gross investment over replacement capital) (Garrison 2001). A graphic representation of PPF is shown below in figure 1.

Figure 1: Production Possibilities Frontier

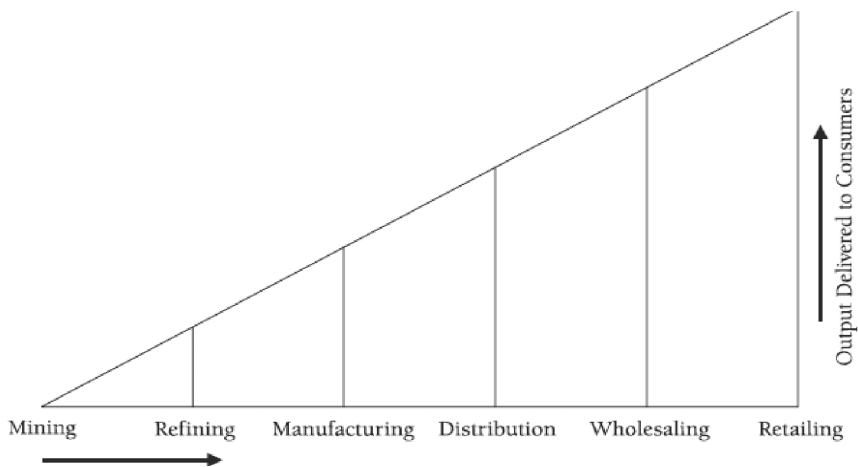


Source: Garrison (2001)

THE INTER-TEMPORAL STRUCTURE OF PRODUCTION

Hayek (1967) illustrates the production process as having several inputs and a point output. Every element in the series is labelled a “stage of production”. The original Hayekian triangle shows five stages displayed from top to bottom. The specific number of stages is not particularly important to the analysis.

Figure 2: The stages of production – Hayekian triangle



Source: Garrison, 2001

Time is an essential variable in order to appreciate how a market economy coordinates production activities with consumer choices; moreover it aids our understanding of some of the things that could go wrong with the coordination process. The use of multiple stages of

production highlights the roots of Austrian macroeconomics in microeconomics. The hypotenuse of the triangle in figure 2 follows the value of consumables that are still being produced and this value increases from zero to the complete market value of the consumables (Garrison 2005).

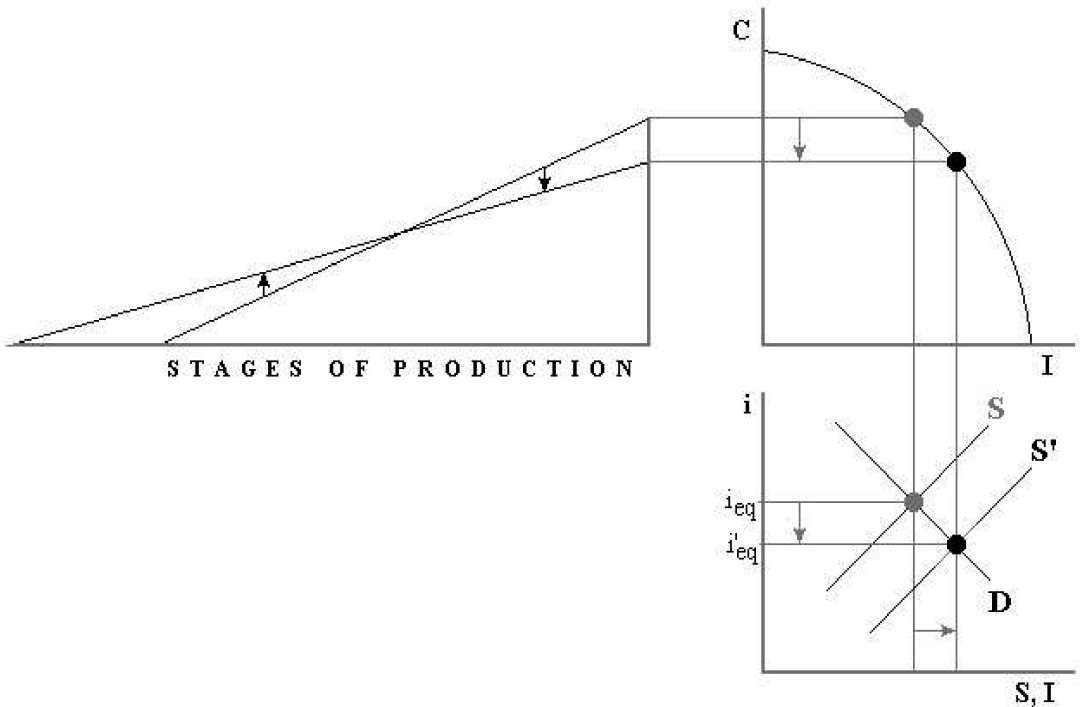
SUSTAINABLE GROWTH

The demand and supply of “loanable” funds shown in the lower right diagram in Figure 3 illustrates the effect of an increase in savings resulting from a change in consumption preferences. Individuals cut back on current consumption in order to consume at a higher level in the future. A greater supply of loanable funds leads to a lower interest rate (as shown by the rightward shift of the supply curve in the last illustration of Figure 3 below), reducing the cost of investing. The market value of capital goods will be inclined to rise if individuals start to rate consumption goods in less relative terms. The economy grows to a higher, sustainable level and the Hayekian triangle expands with the PPF shifting outward. The top left picture shows how the Hayekian triangle is altered because of a change in time preference (Garrison, 2001).

Figure 3: Sustainable growth resulting from an increase in savings

a) Structure of production

b) PPF



c) Loanable funds market

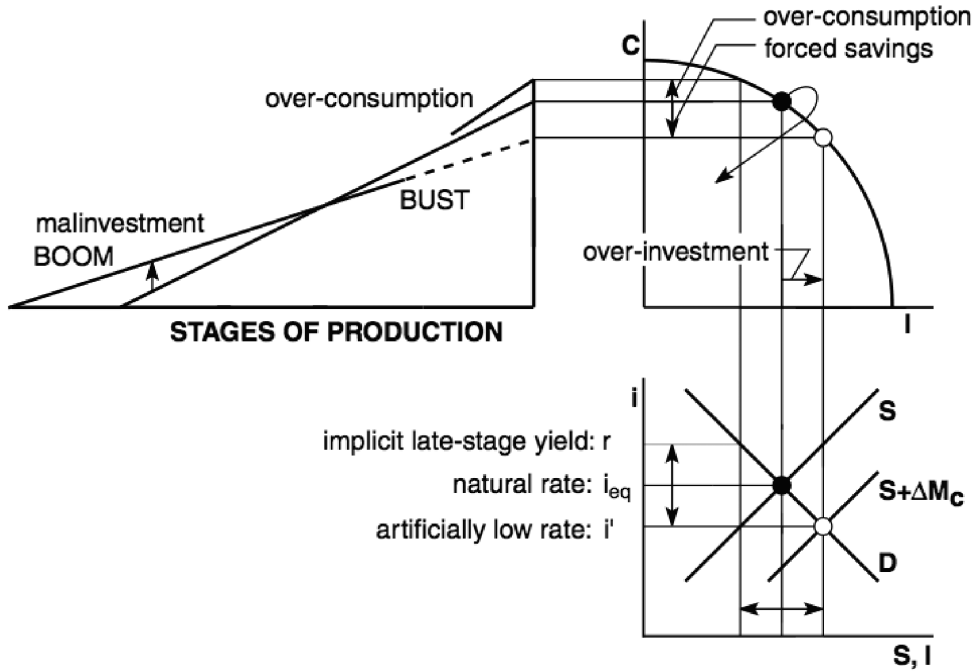
Source: Garrison 2001

UNSUSTAINABLE GROWTH

The low interest rate entices entrepreneurs to invest in projects that appeared unprofitable when interest rates were higher, entailing the production of new capital goods. The problem is that interest rates are not low because of increased savings, but rather due to artificial credit expansion (Desoto 2009: 325-327).

Increased savings lead to sustainable growth while credit expansion leads to unsustainable growth and a ‘bust’. The direct effect of loaning money into existence can be seen in the supply of loanable funds market. The new money in the form of added credit is labelled as ΔM_c . An enlarged supply of loanable funds causes the rate of interest to drop below the natural rate that would have existed if there had been no credit expansion.

Figure 4: A policy induced Boom and Bust



Source: Garrison 2001

Market forces pull in the direction of more consumption (C) in the PPF. Market forces stemming from the effect of artificially cheap credit are also pulling toward more investment (I). The result is an outward movement in a north-easterly direction on the PPF. There are increases in the level of employment of all resources, causing the economy to produce at a point outside the PPF. Opposing market forces are trying to take the economy in opposite directions. Investors can now get investment funds at a lower rate of interest and therefore view longer-term investment projects as relatively more attractive.

Since the production process is not sustainable, a large number of production projects are abandoned or cut back. The resulting unemployment of labour and other resources has a direct and negative effect on income and expenditure. The phase of production outside the PPF ends because it was unsustainable and the economy thus moves back into the PPF as shown by the curved arrow in Figure 6 (Garrison 2001: 67-73).

REVIEW OF PREVIOUS STUDIES

Le Roux (1998) analysed the period from 1980 until 1996 and found evidence supporting propositions consistent with the creation of a credit-induced cycle that showed the non-neutrality of money. Kaza (2002: 9) found that the American Central Bank allowed money supply to grow from 1990 through to 2000 at a faster rate than that of real GDP. The consequence was a recession in the period 2001-2002.

Bismans' panel data estimation of four European countries showed that the explanatory power of term spread and relative expenditures differed among countries (2009: 14). The main finding was that in the four European countries evaluated, monetary policy shocks explained business cycles.

Cochran and Yetter (2004) found that the boom-bust experiences of Japan in the 1980s and the U.S. in the late 1990s were induced by money and credit expansion. The Japanese boom was started when the Bank of Japan expanded money supply. Powell (2002) highlights exactly how expansionary monetary and fiscal policy designed to facilitate recovery, actually exacerbated and lengthened Japan's recession of the 1990s.

Rothbard (1963) argues that during the Great Depression, money supply growth led to an unsustainable boom in the 1920s. Economic agents could not dissolve inefficient capital because of the flawed government policy at the time. As a result, this led to worse recessionary effects than would have been the case if over-investment had been quickly liquidated (Mulligan 2006: 82). The United States of America in the 1990s and Japan in the 1980s experienced economic expansion that was complemented by an increase in money and credit aggregates. In both countries positive economic growth was followed by a downturn in asset markets and in the real sectors of the economy (Cochran & Yetter 2004: 6).

EMPIRICAL ANALYSIS

There have not been many empirical studies on ABCT because Austrian ideas and concepts are not easily translated into operational terms (Keeler 2001: 1). The empirical analysis is divided into two sections. The first section is the causality tests and the second is the Vector Error Correction Model (VECM).

Granger Causality Testing

The methodology used in the current section follows Le Roux (1996). The period tested is from January 1993 until December 2010. Granger causality tests will be applied to evaluate the relationships between credit expansion, savings, interest rates and manufacturing. The propositions tested were derived from Wainhouse (1984: 47-53). The results of the causality tests of the propositions will be presented below.

a) Proposition 1: Changes in the supply of savings are independent of changes in the supply of bank credit.

The proposition suggests that financial institutions do not immediately change interest rates in response to changes in savings. The supply of credit is thus not affected by changes in time preferences of economic agents (Le Roux 1996: 26).

Null hypotheses are:

HO: Changes in savings do not 'Granger-cause' changes in total credit and

HO: Changes in Credit do not 'Granger-cause' savings.

Table 1: Causality test – savings and credit

Granger Causality Test 1993 M01 – 2010 M12 (212 observations). Lags: 3		
Null hypotheses	F-Statistic	p-value
<input type="checkbox"/> Savings do not Granger-cause credit	0.36039	0.8317
<input type="checkbox"/> Credit does not Granger-cause savings	2.60711	0.538
Rejection rule: Do not reject Ho if F-stat is < than 2.5 (critical value).		

Since the F-stat of 2.6 is less than 2.5, the null is not rejected, thus showing that changes in bank credit are primarily motivated by bank policy as no causation exists between savings and credit.

b) Changes in the supply of credit lead to changes in rates of interest

This proposition suggests that as a result of credit expansion, interest rates drop below the natural level, thereby leading to ‘malinvestments’. The new credit is inflationary and leads to increases in the prices of commodities (Le Roux 1996: 26).

Null hypothesis:

Ho: Changes in credit do not Granger-cause interest rate changes.

Table 2: Causality test – credit and bank rate

Granger Causality Test 1993 M01 – 2010 M12 (214 observations). Lags: 3		
Null hypothesis	F-statistic	p-value
<input type="checkbox"/> in Credit does not Granger-cause interest rate changes	4.61462	0.0038
<input type="checkbox"/> in bank rate does not Granger-cause in Credit	1.14041	0.3338
Rejection rule: Do not reject Ho if F-stat is < than 2.5 (critical value).		

The F-stat of 4.61462 is > than 2.5 thus the null is rejected. Evidence supports the proposition that changes in the supply of credit lead to changes in rates of interest.

c) Changes in the rate of credit growth lead changes in the output of producer goods.

The proposition implies that credit expansion leads to lower interest rates, thus increasing investment activities. The lower interest rates give the impression of reduced household time preference that would lead to higher savings. The structure of production changes as resources are moved from consumption to long term investment projects (Le Roux 1996: 29).

Null hypothesis:

Ho: Changes in credit do not Granger-cause changes in output of manufactured goods.

Table 3: Causality test – manufacturing and credit

Granger Causality Test 1993M01 2010M12 (214 observations). Lags: 3		
Null hypotheses	F-statistic	p-value
<input type="checkbox"/> in Manufacturing does not Granger-cause in Credit	0.81176	0.6283
<input type="checkbox"/> in Credit does not Granger-cause in Manufacturing	3.9128	0.0000
Rejection rule: Do not reject Ho if F-stat is < than 2.5 (critical value).		

Since the F-stat of 3.9128 is greater than 2.5, the null is rejected as credit expansion leads to higher levels of manufacturing production.

VECTOR ERROR CORRECTION METHODOLOGY(VECM)

The VECM will be used to estimate the relationship between Manufacturing production, Investment expenditure and Credit expansion. The model is applied to South African data for the period from the third quarter of 1966(Q3) to the last quarter (Q4) of 2011. Manufacturing and Investment are expressed in terms of the third variable, Credit expansion. All data used in this study was retrieved from the Reserve Bank of South Africa's website. The resulting vector of structural equations is:

$$P_t = a_1 + b_1 M_t + e_{1t}$$

$$I_t = a_2 + b_2 M_t + e_{2t}$$

Key: Manufacturing production (P), Investment (I), Credit expansion (M)

- Manufacturing production – Manufacturing production index
- Investment expenditure – Gross fixed capital formation (millions of rand)
- Credit expansion – Credit extended to the domestic sector (millions of rand)

Investment and Credit expansion appear in the model in log form. The intercept a shows average Manufacturing and Investment when there is no Credit expansion. The slope b indicates the extent to which an increase in Credit expansion increases Manufacturing production and Investment. The residuals are represented by ϵ . The VECM is shown below:

$$\Delta P_t = \delta_1 (P_{t-1} - a_1 - b_1 M_{t-1}) + \Psi_1 (C_{t-1} - a_2 - b_2 L_{t-1}) + \Omega_1 (I_{t-1} - a_3 - b_3 M_{t-1}) + \alpha_{11} \Delta P_{t-1} + \beta_{11} \Delta P_{t-2} + \dots + \alpha_{12} \Delta C_{t-1} + \beta_{12} \Delta C_{t-2} + \dots + \alpha_{13} \Delta I_{t-1} + \beta_{13} \Delta I_{t-2} + \dots + \alpha_{14} \Delta M_{t-1} + \beta_{14} \Delta M_{t-2} + \dots + u_{1t} \quad [1]$$

[2]

$$\Delta I_t = \delta_2 (P_{t-1} - a_1 - b_1 M_{t-1}) + \Psi_2 (C_{t-1} - a_2 - b_2 M_{t-1}) + \Omega_2 (I_{t-1} - a_3 - b_3 M_{t-1}) + \alpha_{21} \Delta P_{t-1} + \beta_{21} \Delta P_{t-2} + \dots + \alpha_{22} \Delta C_{t-1} + \beta_{22} \Delta C_{t-2} + \dots + \alpha_{23} \Delta I_{t-1} + \beta_{23} \Delta I_{t-2} + \dots + \alpha_{24} \Delta M_{t-1} + \beta_{24} \Delta M_{t-2} + \dots + u_{2t} \quad [2]$$

$$\Delta M_t = \delta_3 (P_{t-1} - a_1 - b_1 M_{t-1}) + \Psi_3 (C_{t-1} - a_2 - b_2 M_{t-1}) + \Omega_3 (I_{t-1} - a_3 - b_3 M_{t-1}) + \alpha_{31} \Delta P_{t-1} + \beta_{31} \Delta P_{t-2} + \dots + \alpha_{32} \Delta C_{t-1} + \beta_{32} \Delta C_{t-2} + \dots + \alpha_{33} \Delta I_{t-1} + \beta_{33} \Delta I_{t-2} + \dots + \alpha_{34} \Delta M_{t-1} + \beta_{34} \Delta M_{t-2} + \dots + u_{3t} \quad [3]$$

Source: Mulligan (2005)

THE VECTOR ERROR CORRECTION MODEL

A VECM uses combinations of first differenced and lagged levels of co-integrated variables and the dependent variable changes as a result of changes in its previous values and also changes in the lags of the explanatory variables (Cameron 2005: 377). The bracketed terms are lagged residuals or errors from the structural equations and represent the error correction term: this is lagged and defines the disequilibrium adjustment process (Brooks 2008: 338).

Testing for Unit Roots

A series is stationary if it exhibits mean reversion over time. A series can also be stationary if it fluctuates around its variance and covariance over time. Differencing a series to induce 'stationarity' leads to the series being integrated of order one, $I(1)$. A stationary series is $I(0)$ and does not need to be differenced. A non-stationary series has a unit root and implies 'non-stationarity' (Cameron 2005: 366). The results are shown below.

Table 4: Unit root and ‘Stationarity’ tests

Unit Root Tests		
4 lags		
ADF		
Variable	Levels	First differences
logInv	-1.032935	-3.629
logCred	-0.601102	-4.215
Manu	-1.623506	-20.233
GLS		
logInv	0.674	-.3.28
logCred	0.9324	-4.110
Manu	0.593	-20.277
Critical values: ADF = -2.877, GLS = -1.94.		
PP		
logInv	-0.738	-15.854
logCred	-0.457	-8.541
Manu	-1.74	-26.639
KPSS		
logInv	1.145	0.1368
logCred	1.7197	0.0989
Manu	1.580	0.1253
ERS		
logInv	48.923	3.218
logCred	4448.122	0.808
Manu	97.233	0.329
Critical values: PP = -2.877, KPSS = 0.463, ERS = 3.156		

Key: ADF = Augmented Dickey-Fuller (1979), GLS = Dickey-Fuller (GLS), PP = Phillips-Perron (1988), KPSS = Kwiatkowski, Phillips, Schmidt and Shin (1992), ERS = Elliot, Rothenberg and Stock (1996).

In levels, the results of the unit roots tests (ADF, PP and ERS), and ‘stationarity’ test (KPSS) suggest that all three variables are I (1). Failure to reject the null hypothesis of a unit for all three variables is attributable to the fact that the test statistics of the unit root tests are greater than their critical values. Since the test statistic of the KPSS test is greater than the critical value, it can be concluded that the three variables are non-stationary. When the tests are repeated in first-difference form the variables are found to be I (1).

CO-INTEGRATION TESTING

Co-integration implies that a long term equilibrium relationship exists among the variables. The Johansen-Juselius method used in this article is able to identify all possible co-integrating relationships that may be present using a VAR framework (Cameron 2005: 390). The VECM is estimated with the assumption of two co-integration equations. Results of the Johansen-Juselius co-integration test are shown below.

Table 5: Johansen-Julius Co-integration Test

Johansen-Julius Co-integration Test 1967Q3-2010Q4 174 observations after adjustments		
Hypothesized # of CE(s)	Trace Statistic	5% Critical Value
None*	105.628	29.797
At most 1*	41.856	15.494
At most 2*	16.071	3.841
Hypothesized # of CE(s)	Max- Eigen statistic	5% Critical Value
None*	63.761	21.131
At most 1*	27.793	14.264
At most 2*	16.071	3.841
Notes:		
1. Trace test shows the presence of two co-integrating equations		
2. Max-Eigen test indicates the presence of two co-integrating equation		
3. * denotes rejection of the hypothesis at the 0.05 level		

Both the Trace and the Max-Eigen tests confirm the presence of two co-integrating equations as the test statistics exceed the 5% critical values.

Results of the VECM estimation

The VECM is normalized with respect to and solved for output, enabling interpretation (Mulligan 2005). Emphasis in interpretation of the results is placed on the disequilibrium adjustment process and the effect of credit expansion on the rest of the variables in the model.

Table 6: Vector Error Correction Model

Vector Error Correction Model Manufacturing, Investment and explained by Credit expansion December 1969Q1 – December 2010Q4 (168 observations after adjustments)			
Error correction process: Summary Statistics			
Variables	D (Manu)	D (Inv)	D (Cred)
Co-integrating Equation coefficients	-3.446543	0.004670	0.001911
	(0.58385)	(0.00220)	(0.00093)
	[-5.90317]	[2.12664]	[2.04817]
Co-integrating Equation coefficients	14.99094	-0.524629	-0.148433
	(31.5409)	(0.11863)	(0.05040)
	[0.47529]	[-4.42236]	[-2.94496]
R-squared	0.781662	0.777013	0.399275
Adjusted R-squared	0.741401	0.735895	0.288504
F-stat	19.41494	18.89712	3.604483
Notes: Standard errors in (); t-statistics in [].			

The adjusted R-square values for the error correction process are high (74% for both the Manufacturing and Investment adjustment processes). The F-stats for the disequilibrium adjustment process are highly significant. The VECM shows that any disequilibrium in the structural equations affects correction primarily through changes in Manufacturing. The Investment adjustment process is also statistically significant. The results suggest that producer behaviour does not show much inertia as the nature of capital is fixed. The finding is contrary to Mulligan (2005) who found Investment to exhibit much more inertia. However investment may not be as inert in the South African economy. The error correction process includes eight lagged first-differences of all the variables. The period captured by the lags is two years as each lag represents a quarter.

DIAGNOSTIC TESTING

The lag selection criterion (SC, HC, AIC, LR and FPE), was used to determine the number of lags (4), which were sufficient to capture the dynamics of the South African business cycle. The LM test shows statistically significant autocorrelation at the second and third lags. It must be noted that when additional lags are included in the LM, the results show that autocorrelation dissipates after the third lag. The LM test can be found in the Appendix. The results of the Jarque-Bera normality tests suggest that the residuals are non-normal. Normality is a sufficient but not necessary condition for valid VECM results (Mulligan 2005). The residual normality test is found in the Appendix. The stability of the model can be verified by analysing the inverse roots of AR Characteristic Polynomial. All the dots are captured in the circle and none are outside, thus proving that the model is stable. The AR roots table can also be found in the Appendix.

IMPULSE RESPONSE FUNCTIONS

Impulse response functions analyse the impact of shocks on the adjustment path of the variables. The reaction of the variables to shocks to the system is captured by the response functions (Carter *et al* 2008: 352). The response of each variable to a change in credit expansion is illustrated below.

Figure 4: Impulse response functions

Response to Cholesky One S.D. Innovations

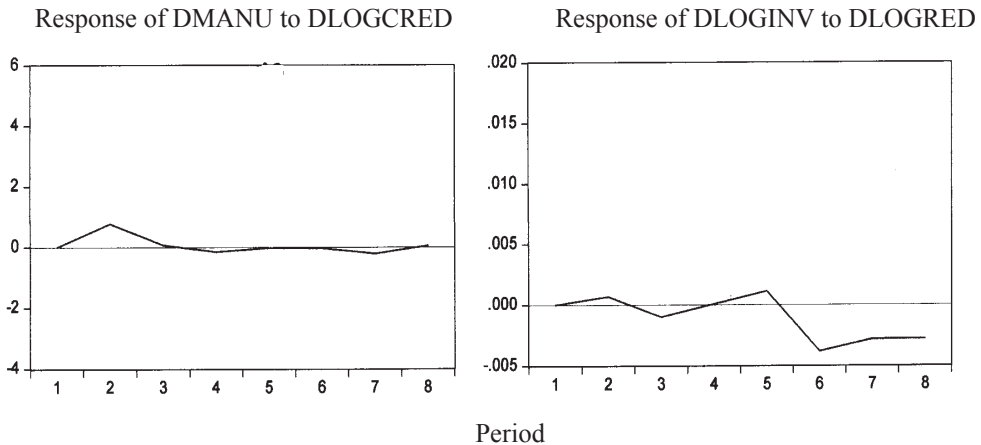


Table 7: Variance Decomposition

Variance Decomposition of DMANU:			
Period	DMANU	DLOGINV	DLOGCRED
1	100.0000	0.000000	0.000000
2	97.90994	0.124491	1.965568
3	96.53160	1.512538	1.955864
4	95.82867	2.161170	2.010158
5	95.77414	2.216082	2.009778
6	95.77014	2.215970	2.013893
7	95.31976	2.535506	2.144733
8	94.79939	3.064542	2.136073
Variance Decomposition of DLOGINV:			
Period	DMANU	DLOGINV	DLOGCRED
1	0.406220	99.59378	0.000000
2	1.525247	98.33288	0.141873
3	2.707901	96.84199	0.450113
4	3.964832	95.59361	0.441556
5	8.314619	90.96537	0.720014
6	8.048520	87.50688	4.444603
7	8.518326	85.17528	6.306399
8	9.358020	82.62397	8.018011
Variance Decomposition of DLOGCRED:			
Period	DMANU	DLOGINV	DLOGCRED
1	3.084427	2.291203	94.62437
2	3.562605	2.000363	94.43703
3	5.658314	2.470778	91.87091
4	7.403959	3.096152	89.49989
5	8.495123	3.735746	87.76913
6	9.675096	4.943497	85.38141
7	10.08274	5.264897	84.65237
8	11.27852	5.951870	82.76961

Investment expenditure shows an initial positive response to a one standard deviation shock credit expansion. At period 3, Investment adjusts downward over the period by adjusting in a downward direction and is at a lower level at the end. A credit expansion shock causes Manufacturing to respond positively. Manufacturing shows a lagged response to the shock. After four periods Manufacturing begins to adjust downward. By the eighth quarter, Investment has responded to the credit expansion shock by adjusting downward. The downward adjustment of the variables provides evidence for ABCT.

VARIANCE DECOMPOSITION FUNCTIONS

The variance decompositions analysis is presented in table 4 below. The decomposition functions show the percentage of variation in each variable caused by its own shocks and by shocks from other variables. The table shows – as expected – that most of the variation in each variable is attributed to its own shocks. The variation attributed to Credit expansion is two percent for Manufacturing and for Investment, eight percent. The levels attributed to Credit expansion are lower than expected.

CONCLUSION

The results of the Granger Causality tests validate ABCT propositions as suggested by Wainhouse (1982). Credit expansion causes interest rates to drop below their natural level and leads to an increase in malinvestments. The structure of production is altered in favour of long term projects at the expense of short term investments.

The results of the VECM empirical analysis provide evidence for ABCT as the response functions show a downward disequilibrium adjustment in response to shocks. The variance analysis produces weaker than expected results. Credit expansion causes inter-temporal resource reallocation and also adjustments in the structure of production. Monetary authorities have not generally accepted ABCT as the norm appears to be to follow Keynesian and Monetarist policy prescriptions.

The focus of monetary authorities should be on ensuring that the boom does not become a 'bust'. During periods of upswing, restraint must be exercised in the granting of new credit. The Reserve Bank must place great emphasis on controlling the extension of credit. Currently credit regulations have been modified and it is now relatively harder to access credit, with the National Credit Act of National Credit Regulator (NCR) being the main enforcer of the act. More can still be done as South Africa is a country with very little in the way of domestic savings.

On average South Africans spend 90% of their income. The levels of household debt are high and while loans may provide banks with business, the danger is that of triggering malinvestments. Any attempts to stimulate the economy with further monetary injections merely postpone and eventually prolong the crisis. ABCT proposes that no money be pumped into the economy (Keynesianism) in order to recover from recession. Malinvestments have to be liquidated and revaluation of overvalued projects and properties is necessary.

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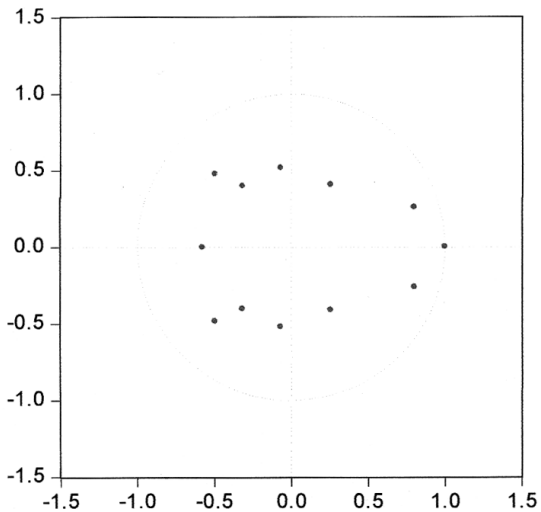
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APPENDIX

a) Residual Heteroskedasticity Tests

VEC Residual Heteroskedasticity Tests: Includes Cross Terms					
Joint test:					
Chi-sq	df	Prob.			
675.5370	462	0.0000			
Individual components:					
Dependent	R-squared	F(77,93)	Prob.	Chi-sq(77)	Prob.
res1*res1	0.869699	8.061483	0.0000	148.7186	0.0000
res2*res2	0.750788	3.638655	0.0000	128.3848	0.0002
res3*res3	0.779536	4.270608	0.0000	133.3006	0.0001
res2*res1	0.504595	1.230198	0.1693	86.28576	0.2196
res3*res1	0.594059	1.767501	0.0044	101.5842	0.0318
res3*res2	0.599706	1.809468	0.0032	102.5497	0.0275

c) AR Roots



d) Serial Correlation LM Tests

VEC Residual Serial Correlation LM Tests		
Lags	LM-Stat	Prob
1	20.24757	0.2093
2	28.10464	0.0307
3	33.79782	0.0058
4	48.58445	0.0000
Probs from chi-square with 16 df.		

e) Residual Normality

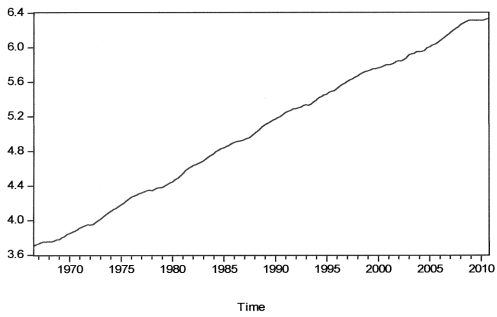
VEC Residual Normality Tests				
Component	Skewness	Chi-sq	df	Prob.
1	5.241366	787.5284	1	0.0000
2	-0.900682	23.25519	1	0.0000
3	-0.032254	0.029823	1	0.8629
4	-2.138920	131.1494	1	0.0000
Component	Kurtosis	Chi-sq	df	Prob.
1	56.45035	20474.73	1	0.0000
2	6.179287	72.43972	1	0.0000
3	4.089545	8.507606	1	0.0035
4	35.54949	7592.862	1	0.0000
Joint		28148.54	4	0.0000
2	95.69491	2	0.0000	
3	8.537429	2	0.0140	
4	7724.011	2	0.0000	
Joint	29090.51	8	0.0000	

f) Lag Length Selection Criterion

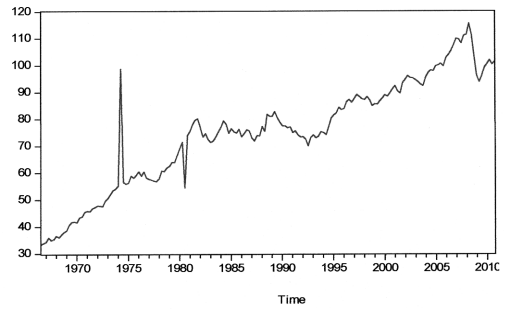
VAR Lag Order Selection Criteria						
Endogenous variables: DMANU DLOGCRED DLOGINV						
Exogenous variables: C						
Date: 11/24/11 Time: 11:38						
Sample: 1966Q3 2010Q4						
Included observations: 169						
Lag	LogL	LR	FPE	AIC	SC	HQ
0	466.2971	NA	8.34e-07	-5.482806	-5.427245	-5.460258
1	503.2419	72.14069	6.00e-07	-5.813513	-5.591272*	-5.723323*
2	517.6253	27.57533	5.63e-07	-5.877222	-5.488300	-5.719390
3	522.3042	8.804034	5.92e-07	-5.826085	-5.270481	-5.600610
4	542.8591	37.94762	5.17e-07	-5.962830	-5.240545	-5.669713
5	554.2530	20.63033	5.03e-07	-5.991160	-5.102194	-5.630401
6	562.3939	14.45123	5.09e-07	-5.980992	-4.925346	-5.552591
7	572.2112	17.07873	5.04e-07	-5.990665	-4.768338	-5.494622
8	586.9181	25.06259*	4.72e-07*	-6.058202*	-4.669194	-5.494516
* indicates lag order selected by the criterion						
LR: sequential modified LR test statistic (each test at 5% level)						
FPE: Final prediction error						
AIC: Akaike information criterion						
SC: Schwarz information criterion						
HQ: Hannan-Quinn information criterion						

g) Variables in levels

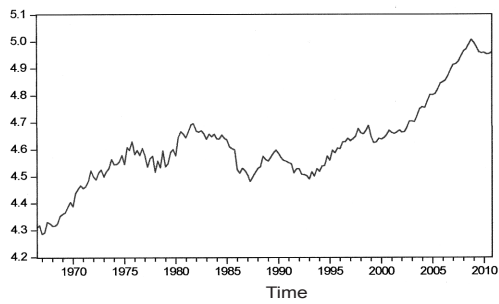
LOGCREG



MANU

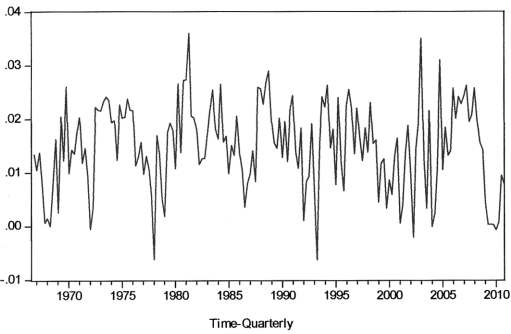


LOGINV

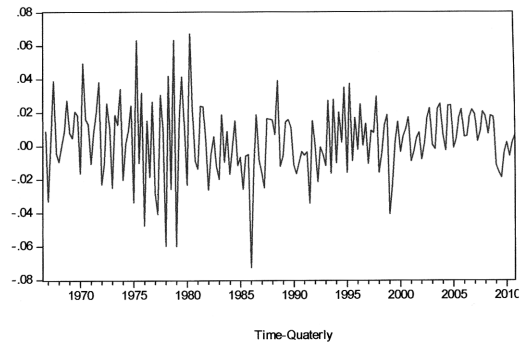


h) Variables in first difference

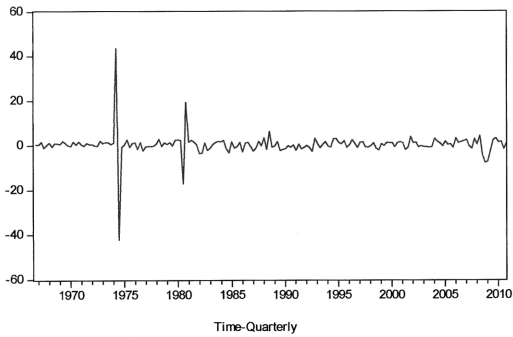
DLOGCREG



DLOGINV



DMANU



A COMPARISON OF ATTITUDES TOWARDS BUSINESS ETHICS HELD BY SOUTH AFRICAN STUDENTS

Botha and Shaw¹

ABSTRACT

This study uses the Attitudes Towards Business Ethics Questionnaire (ATBEQ) as published in R.S. Moore and S.E. Radloff (1996) to measure the attitudes towards business ethics held by final year South African (SA) Bachelor of Commerce students at Fort Hare University. The results were compared with samples (1988) of American (USA) and Israeli students, a sample (1991) of Western Australian students and a sample (1996) of final year SA Bachelor of Commerce students at Rhodes University. A significant difference in attitudes was found to exist between the 1996 and 2010 SA samples. Contrary to the comparisons made in the 1996 study between SA and US, SA and Israeli, SA and W. Australian student samples, a significant difference between the 2010 SA and US and 2010 SA and W. Australian samples was also found in this study; moreover there was insufficient evidence to reject similarities between the 2010 SA and Israeli samples. The outcomes of the study validated theories on ethical attitudes and empirically confirmed that the pace of change that an individual's ethical attitudes undergoes is slower than that of broader society. Various recommendations flowing from the findings are postulated for business and policymakers.

Keywords: Ethical attitudes and behaviour, business ethics, values.

INTRODUCTION

Over the past two decades there has been renewed interest in ethics. More recently serious research attention has been devoted to the ethical behaviour encountered in business and amongst different cultures in order to improve understanding and cooperation within the complex environments of modern business (Botha 2010a).

Conducting business involves multiple relationships among multiple stake-holders and often uniquely challenging ethical problems are experienced (Hannafey 2003). As indicated by Fritzsche (1997) and Hofstede (1997), these stressful business environments proliferate when stakeholders have conflicting claims that arise due to different backgrounds and values.

Furthermore, the numerous reports and investigations into fraud, corruption, bribery and deception provide evidence of the unethical of business and government leaders worldwide. As stated in Preble and Reichel (1988), these reports keep the questions alive of whether there is an increase in incidences of unethical and illegal business acts, and whether current and future generations of management are (and are likely to be) less ethical than previous ones.

This study uses the *Attitudes Towards Business Ethics Questionnaire* (ATBEQ), as first published by Preble and Reichel (1988). Subsequent research findings using this instrument have also been published by Small (1992), Moore and Radloff (1996), Sims (2006) and Phau and Kea (2007) in a variety of studies testing and comparing the attitudes of students in South Africa, Israel, Australia, Singapore, Hong Kong, Jamaica, Turkey and the United States of America.

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PURPOSE OF THE STUDY

The following key objectives have been identified for this study:

- To conduct a literature and empirical study of ethical attitudes and behaviour, business ethics and values
- To establish the ethical attitudes of students in 2010 who will constitute role-players in future public and private sectors, and of civil society managers and leaders
- To compare data from 1996, inclusive of the data for the United States of America, Western Australia and Israel, with data from 2010
- To provide practical recommendations for business leaders, policymakers and other stakeholders.

FOUR HYPOTHESES

H₁: A significant difference should be discernible in the questionnaire performance of the 1996 and 2010 South African (SA) student samples.

This hypothesis is tested by a comparison of means (in either direction) on the average means for all 30 items listed in the questionnaire. If the results support this hypothesis it would indicate that a significant degree of change has taken place in the ethical attitudes of South African students over the last decade. It could then be argued that the existence of such a change would reflect a real impact from the dynamics of a continuously changing socioeconomic environment on the South African students' attitudes. Furthermore, it would indicate that ethical attitudes of business students are relatively easily influenced and open to change (Moore and Radloff, 1996).

H_{2A}: There should be a significant difference in the performance as reported on the questionnaire between the American sample and the South African sample of students.

H_{2B}: There should be a significant difference in the performance as reported on the questionnaire between the Israeli sample and the South African sample of students.

H_{2C}: There should be a significant difference in the performance as reported on the questionnaire between the Western Australian sample and the South African sample of students.

Hypotheses 2A, 2B and 2C are measured by a comparison of means (in either direction) on the average means for all 30 items listed in the questionnaire. If results support these hypotheses, they would indicate the complex nature of ethical attitudes that are intimately linked to factors such as cultural and socioeconomic differences within each society, and also the influence of change and development over a period of time.

LITERATURE REVIEW

This research is based on the Moore and Radloff (1996) study which presented results on South African business students and was originally based on the work by Preble and Reichel (1988) comparing the ethical attitudes of American and Israeli business students. Later research by Small (1992) presenting results on a survey of Western Australian business students was also incorporated in the Moore and Radloff study.

From a research perspective, business ethics has been the focus of attention since the turn of the century, with a heavy emphasis on the philosophical foundations of business in a free society. Recently, studies have been conducted using two major complementary approaches, one conceptual and the other empirical. Conceptual studies have attempted to clarify the meaning of business ethics, moral conduct and social responsibility and to consolidate some rules and guidelines to assist business leaders in making decisions involving ethical dimensions. The empirical approach, on the other hand, has focused on examining the prevailing ethics, perceptions and attitudes

of the general public, business people and college students – often viewed as future business managers. Researchers have examined the ethical beliefs and behaviour of managers, utilising various methodologies ranging from interviews to mail surveys with both closed and open-ended questionnaires (Preble and Reichel 1988).

Ethics is about morality – right and honourable conduct. The Association of Business Executives in the United Kingdom, for example, argues that ethics is significantly broader than the common concept of choosing right from wrong, and that what is considered ethical will vary from country to country. In a general sense, it accepts the medical profession's dictum, "*primum non nocere*", meaning "Above all do no harm". This definition might be considered limited in business contexts where there exists, for example, the element of competition between organisations, and where rules of ethical competition need to be in place. In the competitive labour market, for example, it is generally acceptable to draw staff from other employers, but it would not be acceptable to lure them with promises that will not be fulfilled (Urban 2010).

Ethics is concerned with personal actions and personal interaction. More specifically, it is concerned with a specific quality of interaction, i.e. the kind of interaction that ensures that the interests of those involved are not prejudiced. Or, to put it more positively, ethics is concerned with respecting and/or promoting the interests of all those involved in the personal interaction. It thus aims to ensure that, in the interaction between two or more parties, the interests of all parties involved are not prejudiced, but rather enhanced. Simply put: ethics aims to ensure that the interaction between two parties is good for both of them. Thus, the three main concepts around which ethics revolves are the 'self', the 'other', and the 'good'. It is important that each of these three concepts retains its rightful place in the definition of ethics. Neglecting or ignoring any of the terms would distort our understanding of ethics (Rossouw 2006).

Ethical values involve higher standards than those required by law and therefore are not to be equated with each other. Ethical standards are the generally accepted rules of conduct governing society, and provide for both standards and expectations for behaviour that cover all aspects of life (Jennings 2009: 4).

Ethics comprises those values we have developed into unwritten rules directing human interaction. These unwritten rules are used to steer us when we are sharing resources, honouring contracts, or developing relationships. Ethics involves more than just common or normative standards of behaviour. Business management and leadership and ethical behaviour are about honesty, fairness, justice, responsibility, respect for others and for their values and reputation. The principles of ethics, when honoured, ensure that the playing field is level, that we win by using our own work and ideas, and that we are honest and fair in our interactions with each other, whether personally or in our entrepreneurial endeavours (Jennings 2009: 5).

Business people receive many conflicting signals as society challenges every convention, prohibition, taboo, and regulation that may limit human appetites and ambitions. What is ethical and what is not is often not obvious: situations involving ethical issues are often ambiguous (Timmons 1999: 308). There is no single description of what constitutes good ethical behaviour. To put this into context, Robbins and Judge (2007: 26-27) state that the line differentiating right from wrong has become even more blurred in today's multicultural societies. It is therefore important that we research the ethical attitudes held by business students to support our understanding of their behaviours in order to advance cooperation within today's fast-paced, multifaceted, multicultural and borderless operating environments.

Contemporary examples include the Western Cape Premier's recent attempt at regulating participation by public officials in provincial government procurement in a more transparent and ethical manner, and the protest demonstration against corruption in government by

the South African Communist Party and the trade union COSATU in Durban on Labour Day, 1 May 2010. The coveting of things people cannot afford and of what does not belong to them has always challenged strivings for an ethical society. These desires are motivated by greed, hence the concomitant corrupt and unlawful actions. Continuous education on ethical behaviour and emphasis by leaders on the value of a society characterised by values, law abidance and law enforcement would help realise the ideal of a peaceful society. Thousands of years before the South African government expressed its desire for the formulation of a set of values and laws, the Hammurabi Codex were published for the first time in present day Iran and Iraq to regulate the relations of the Babylonian empire in the fields of commerce and in the civil, social and moral lives of people (Botha 2010b).

RESEARCH METHODOLOGY

Any research method should use objective methods and procedures to collect and analyse data. The approach used should be systematic and purposeful and should ensure that data on the particular research problem are yielded in this manner (Wellman and Kruger 2000: 2). The research methodology used in this study aimed to test the attitudes towards ethical behaviour in business held by South African undergraduate students in commerce. *The Attitudes Towards Business Ethics Questionnaire* (ATBEQ), as first published by Preble and Reichel (1988) was deemed a suitable instrument for this purpose.

The original study by Preble and Reichel (1988) compared the means of samples of the United States of America ($n = 129$) and Israeli ($n = 150$) undergraduate business students on Preble and Reichel's thirty-item *Attitude Towards Business Ethics Questionnaire* (ATBEQ). A subsequent study by Small (1992) compared the results published by Preble and Reichel with a sample ($n = 112$) of Western Australian business students. Hereafter, Moore and Radloff's (1996) study compared the published results of the abovementioned studies with those surveyed from the final year (third year, Bachelor of Commerce) South African undergraduate business students sampled at Rhodes University ($n = 379$). This current study compares the published results of Moore and Radloff, incorporating the previously mentioned studies, with those surveyed from final year (third year, Bachelor of Commerce) South African students sampled at Fort Hare University in 2010. The total number of students surveyed here was 105.

SAMPLING PROCEDURE

To ensure the internal validity of the study, the six-step procedure described by Churchill (2001: 449) was employed. Thus, (i) the target population was defined; (ii) a sampling frame and (iii) sample procedure chosen; (iv) the sample size determined; (v) data collected and (vi) sampling elements were selected.

TARGET POPULATION

A purposive sampling method (Hair, Bush and Ortinau 2000: 329) was used to obtain an accurate reflection of the current attitudes of South African undergraduate business students (Brewerton and Millward 2001). The target audience was selected on the following basis:

- (i) East London and Alice campuses of the University of Fort Hare
- (ii) Third year level, Bachelor of Commerce degree students.

Interviews were held with relevant senior managers of the university's campuses. The purpose of the interviews was to gain approval for the research and to ensure that sample returns would be representative of the university's undergraduate third year level commerce students. During the interviews, the aim of the study and the contents of the questionnaire were discussed.

SAMPLING FRAME

Usually researchers find it difficult to gain access to truly accurate, or representative, current sampling frames (Hair *et al* 2000: 230). However, as the ATBEQ had been used in prior studies and the main objective of this study was to test the current attitudes against previously reported results, the sampling frame was limited to the university's third year undergraduate commerce students. Demographic and background data were therefore obtained and verified beforehand (Brewerton and Millward 2001). After initial discussions with senior management, 150 students from two campuses were identified to participate in the survey.

RESEARCH INSTRUMENTS

Hair *et al* (2000: 440) provided guidelines for the collection of sample information via the ATBEQ questionnaire. The questionnaire is designed to indicate attitudes towards underlying ethical behaviour couched in the form of statements. It tests acceptance of these statements by measuring how far respondents agree (or disagree) with them. The Likert scaling technique proved most suitable for this purpose (Alreck and Settle 1985; Brewerton and Millward 2001). Respondents are asked to indicate the extent to which they either agree or disagree with a series of mental beliefs or behavioural belief statements about a given object. In this study, the main elements for testing attitudes towards ethical behaviour are translated into positive statements to which respondents can indicate their level of agreement or disagreement. The five-point Likert scaling technique was used to test the responses as follows:

- Strongly Disagree
- Disagree
- Not Sure
- Agree
- Strongly Agree

The questionnaire that was used tested the 30 items as contained in the ATBEQ. It contained 30 statements that encompassed the salient aspects of ethical behaviour in business as identified and supported by authoritative literature.

DATA COLLECTION AND MEASURES

The questionnaire was administered in manual format to the identified sample. Respondents were given a brief background on the purpose of the study and then requested to complete the questionnaire. The sampling selection process resulted in 150 pre-selected respondents being approached for the final sample. Responses were received from 105 respondents, giving a response rate of 70%. This level of response was regarded as sufficient to avoid significant sampling bias.

LIMITATIONS

Single method variance could have affected the findings of the study since data was collected only through a questionnaire. However, this was mitigated through pre-qualification interviews held with senior management at the university's campuses to ensure an accurate and high-quality response. This study does not reflect the attitude towards business ethics held amongst South African business practitioners, since several research papers have argued that students are the future business practitioners. Studying their beliefs was considered more advantageous in order to predict and plan for future behaviour and change in society.

DATA ANALYSIS AND INTERPRETATION

Data validation

To ensure that the survey was conducted correctly and free of deception, all respondents' names were recorded, and responses were controlled against these particulars. As indicated, respondents were all screened and informed by means of a covering letter that information would be kept confidential and would be used for research purposes only. This may have contributed to the level of openness exercised by respondents in rating the statements, thereby contributing to improved accuracy.

Data editing

Data was edited by verifying the questionnaire for completeness and by ensuring that all the questions/statements were rated. During this process it was established that 10 respondents had failed to complete a number of items in the questionnaire. The respondents indicated that limited time prevented them from providing all the responses required. They were then provided with additional time. Subsequently the percentage of missing/incomplete statements represented 0% of total sections completed.

Data entry

An independent research statistician used the SPSS computer programme to capture various responses from the research questionnaire. Results were cross-checked and verified for accuracy. Data were entered in a format that allowed for error detection by the researchers.

Data tabulation

Tabulation is a simple process of counting the number of observations classified into certain categories. Two common forms of data tabulation are used in research: one-way tabulation and cross-tabulations. One-way tabulation is the categorisation of single variables in the study. In most cases, one-way tabulation shows the number of respondents who gave each possible answer to each statement on the questionnaire. The actual number of one-way tabulations is directly related to the number of variables being measured in the study. Cross-tabulation simultaneously treats two or more variables in the study (Hair *et al* 2000: 503).

Dependent and independent variables

In this study no independent variables were introduced (Hair *et al* 2000: 289). The respondents' levels of knowledge, exposure and experience were the only dependent variables in the data. Variables in this study were therefore not of any significance and the one-way tabulation technique was judged most appropriate (Hair *et al* 2000: 504).

Description of results

The results of the questionnaire were analysed per statement, and the percentages for each statement reported per Likert scaling indicator. The means and standard deviations for each item were calculated and for comparison purposes inserted into Table 1: *Descriptive statistics for US, Israeli, Western Australian and South African 1996 and 2010 students*.

Table 1 illustrates the descriptive statistics for each item of the questionnaire and for each national sample of students as reported in the Preble and Reichel (1988) study including American and Israeli students, Small's (1992) study with Western Australian students and Moore and Radloff's (1996) study, along with the current study of South African students.

Table 1: Descriptive statistics for US, Israeli, Western Australian and South African students

Item	USA (n=129)		Israel (n=150)		Western Australia (n=112)		South Africa 1996 (n=112)		South Africa 2010 (n=105)	
	Mean	Std. Dev	Mean	Std. Dev	Mean	Std. Dev	Mean	Std. Dev	Mean	Std. Dev
1	1.9	0.86	2.8	1.29	2.39	1.32	2.31	1.29	3.30	1.29
2	1.6	0.69	1.8	1.15	1.39	0.58	1.68	0.66	2.22	1.04
3	2.9	1.14	2.5	1.16	2.86	1.21	2.97	1.20	3.34	1.08
4	1.9	0.64	2.7	1.16	2.22	0.88	2.09	0.74	3.06	1.09
5	3.0	0.74	3.2	1.11	3.15	0.77	3.08	0.58	3.60	0.96
6	2.4	0.93	3.6	1.18	2.7	1.11	3.09	1.14	3.38	1.05
7	1.4	0.53	2.4	1.3	1.59	0.73	1.76	0.63	2.42	1.21
8	2.5	0.85	2.9	1.00	2.53	0.83	2.73	0.98	3.20	1.03
9	1.8	0.57	2.8	1.25	1.86	0.78	1.99	0.78	2.43	1.04
10	1.9	0.97	3.3	3.35	2.01	1.09	1.98	1.05	2.09	1.23
11	2.3	1.05	3.4	1.33	2.51	1.15	2.26	1.00	2.84	1.23
12	3.2	1.12	3.6	1.31	3.18	1.11	3.60	1.32	3.16	1.26
13	3.0	1.18	2.9	1.35	3.22	1.22	3.30	1.37	3.30	1.30
14	1.5	0.72	1.6	1.15	1.54	0.79	1.60	0.93	2.07	1.23
15	2.2	0.91	1.5	1.04	2.45	1.08	2.15	0.96	1.80	1.09
16	2.3	0.88	2.5	1.55	2.14	0.98	2.12	1.05	2.66	1.30
17	2.9	1.06	2.9	1.49	2.52	1.30	2.70	1.38	2.92	1.32
18	4.0	0.79	4.0	1.17	4.06	0.97	3.95	0.96	4.17	1.04
19	3.0	0.94	3.0	1.29	3.16	1.11	3.17	1.00	3.04	1.19
20	2.0	0.95	3.4	1.34	2.73	1.32	2.55	1.33	3.34	1.34
21	2.0	0.95	1.8	1.24	2.0	0.96	2.07	1.16	2.33	1.20
22	2.4	0.97	2.5	1.24	2.74	1.12	2.48	1.08	2.98	1.03
23	3.6	0.98	2.7	1.38	4.0	1.00	3.85	1.09	4.20	1.11
24	3.3	0.98	3.6	1.16	3.44	1.17	3.44	1.14	4.09	1.08
25	3.0	1.07	3.5	1.26	2.98	1.14	3.12	1.18	3.55	1.30
26	3.4	0.91	3.3	1.26	3.20	0.98	3.24	1.18	3.55	1.30
27	2.7	1.09	2.5	1.34	2.71	1.00	2.99	1.07	3.29	1.12
28	2.1	0.84	2.5	1.19	2.22	0.92	2.36	0.85	2.67	1.24
29	3.3	1.11	3.6	1.11	3.36	1.14	3.29	1.27	3.52	1.32
30	2.7	0.94	3.2	1.47	2.99	1.16	2.98	1.32	3.67	1.50

To test the hypotheses, paired sample tests were used to compare the means of the 2010 sample of students against the national samples of students as reported by Moore and Radloff (see table 1 above). Tables 2, 3, 4 and 5 below are the results of the paired sample tests between the means of the 2010 sample of students and the national samples of students. The comparison was done on the average means for all 30 items. Only the data reported in the previous studies (means and standard deviations) were used, together with the raw data collected by the current study, to compute the comparison of the means of the South African sample collected in 2010.

Hypotheses H₁

H₁: A significant difference should be discernible in the questionnaire performance of the 1996 and 2010 SA student samples.

Table 2: Paired sample test of SA 1996 versus SA 2010

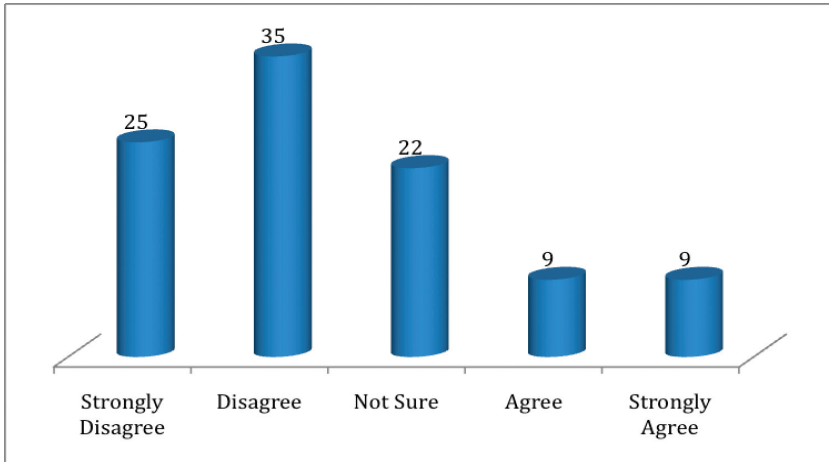
	Mean	Paired Differences				t	df	Sig. (2-tailed)
		Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 NRSA – OR	.3773	.3267	.964E-02	.2553	.4993	6.326	29	.000

Since $p < 0.01$ at 1% level of significance, hypothesis H₁ is proven. There is a significant difference in the performance as reported on the questionnaire between the South African student sample reported in 1996 and the sample of students collected in 2010.

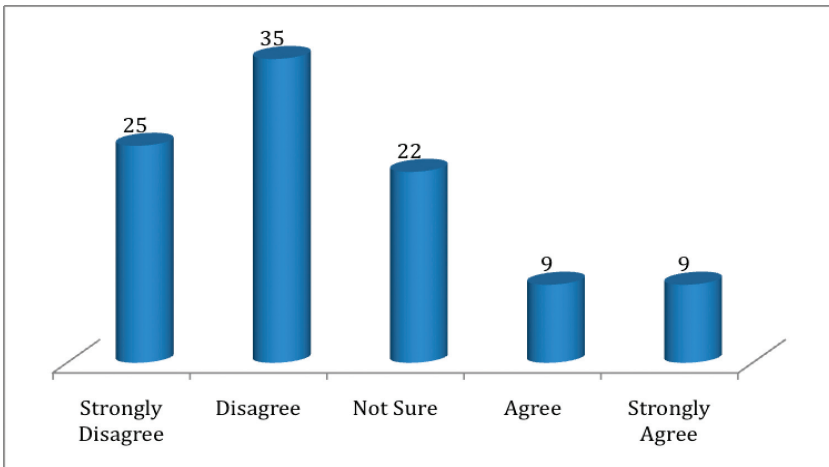
The acceptance of hypothesis H₁, supports and validates both the arguments set out by Moore and Radloff (1996), "... that it would take a number of years for the changes in South African society to be reflected in the student population's ethical attitudes towards business", and Vogel's (1991) conclusion "... that an individual's ethical attitudes changes more slowly than the pace of change in broader society".

This is evident in the results for table 1 under the columns for South Africa 1996 and 2010 where there are six items (numbers 1, 4, 7, 20, 24 and 30) with noticeable variances. For the purpose of this study, only items 1 and 4 will be discussed.

Item 1: *The only moral of business is making money.* This item displays a marked difference in means amongst the two South African student samples. In 1996 the mean was 2.31 and in 2010 it was 3.30. On analysis of this item – and taking cognisance of the high rates of inequalities and joblessness in South Africa – 60% of respondents are in disagreement with the statement, showing clear support for business to play a more meaningful role in the socioeconomic development of society.

Figure 1: The only moral of business is making money

Item 4: *Act according to the law, and you can't go wrong morally.* There is a noticeable difference in means amongst the two South African student samples. In 1996 the mean was 2.09 and in 2010 it is 3.06. On analysis of this item, and taking into consideration the categorisation of South Africa's business and political landscape by the numerous fraud and corruption scandals with low to zero conviction rates, 60% of respondents are in disagreement with the statement, thereby showing that being able to legally justify an action or decision is not considered to constitute ethical behaviour.

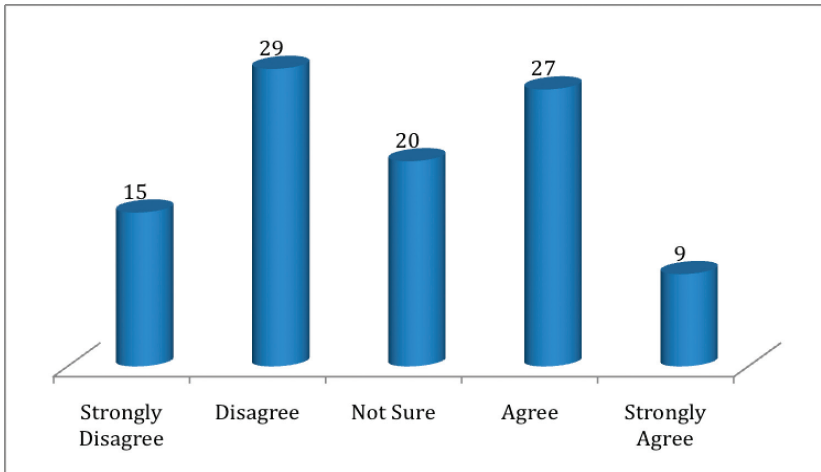
Figure 2: Legal justification constitutes ethical behaviour

However, it seems that current literature might be overestimating the breadth of change in individuals' attitudes towards ethical behaviour in spite of broad change experienced in society. This is supported by the results of this study, as there is no meaningful difference in the means for three items (numbers 10, 13 and 19), even after 14 years.

Item 10: *The business world today is not different from what it used to be in the past. There is nothing new under the sun.* This item shows no meaningful difference in means amongst the two South African student samples. In 1996 the mean was 1.98 and in 2010 it was 2.09. Forty-four percent (44%) of respondents disagree, 36% agree and 20% are not sure with regard to this statement. This shows a high level of awareness amongst respondents about the influences of,

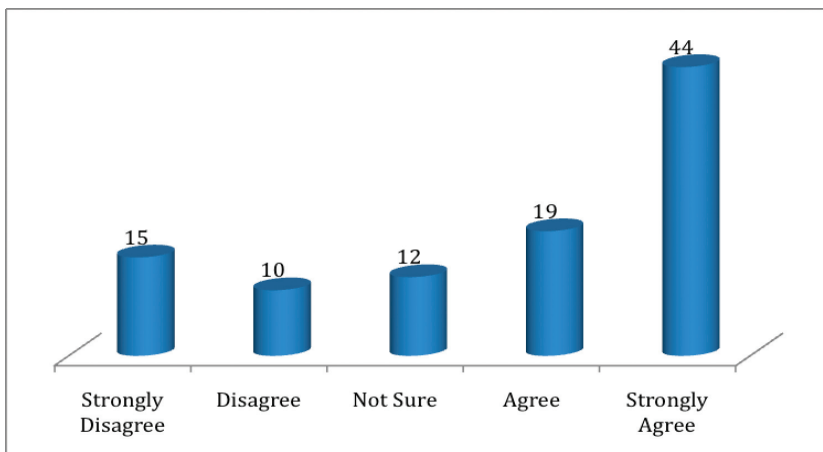
for example, political, environmental technological and regulatory factors on the conduct of business. Also, it could be argued that respondents are expressing an equally high level of uncertainty and dissatisfaction with the slow pace with which social and transformational change is being embraced and implemented by business in South Africa.

Figure 3: Business today is the same as yesterday



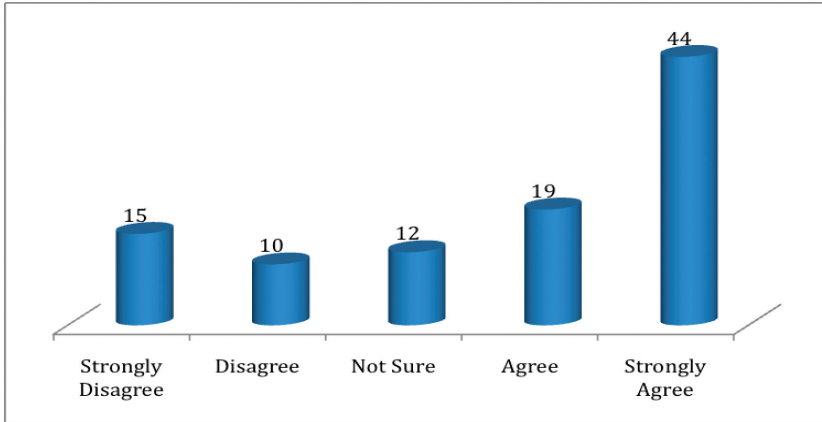
Item 13: *As a consumer, when making a car insurance claim, I try to get as much as possible regardless of the extent of the damage.* This item shows no difference in means amongst the two South African student samples. In 1996 the mean was 3.30 and in 2010 it was 3.30. Sixty-three percent (63%) of respondents agree with this statement, of which, more than two-thirds “strongly agree”. This could possibly be attributed to a general public sentiment about the supposed low level of insurance companies’ equity and fairness when dealing with their customers.

Figure 4: My claims against car insurance should be inflated



Item 19: *George says of himself. “I work long, hard hours and do a good job, but it seems to me that other people are progressing faster. But I know my efforts will pay off in the end.”* Yes, *George works hard, but he’s not realistic.* There is no meaningful difference in means amongst the two SA student samples. In 1996 the mean was 3.17 and in 2010 it was 3.04. Sixty-three percent (63%) of respondents agree with this statement, of which, more than two-thirds “strongly agree”. This could be attributed to a high level of maturity and respondents valuing patience and hard work.

Figure 5: Does hard work have a pay off?



Hypotheses H_{2A}, H_{2B} and H_{2C}

H_{2A}: There should be a significant difference in the performance as reported on the questionnaire between the American sample and the South African sample of students.

Table 3: Paired sample test SA versus USA

Paired Samples Test

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 US – RSA	-.5330	.4105	.494E-02	-.6863	-.3797	-7.113	29	.000

Since $p < 0.01$ at 1% level of significance, hypothesis H_{2A} is proven. There is a significant difference in the performance as reported on the questionnaire between the American sample and the South African sample of students.

H_{2B}: There should be a significant difference in the performance as reported on the questionnaire between the Israeli sample and the South African sample of students.

Table 4: Paired sample test SA versus Israel

Paired Samples Test

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 ISRAEL – RSA	-.2063	.4867	.886E-02	-.3881	2.46E-02	-2.322	29	.027

Since $p > 0.01$ at the 1% level of significance it is concluded that there is insufficient evidence to suggest that there is a significant difference in the performance as reported on the questionnaire between the Israeli sample and the South African sample of students. Therefore, hypothesis H_{2B} is not proven.

H_{2C}: There should be a significant difference in the performance as reported on the questionnaire between the Western Australian sample and the South African sample of students.

Table 5: Paired sample test SA versus Western Australia

Paired Samples Test

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 W.AUSTRIA - RSA	-.4113	.3354	.124E-02	-.5366	-.2861	-6.717	29	.000

Since $p < 0.01$ at the 1% level of significance, hypothesis H_{2C} is proven. There is a significant difference in the performance as reported on the questionnaire between the Western Australian sample and the SA sample of students.

The outcomes for hypothesis H_{2A}, H_{2B} and H_{2C} are the opposite to that of Moore and Radloff's (1996) study. In this study, Hypotheses H_{2B} was supported, showing similarities in the attitudes towards business ethics between South African and Israeli students. On the other hand hypotheses H_{2A} and H_{2C} showed significant differences between South African and American and South African and Western Australian attitudes. A possible explanation could be that ethical attitudes amongst South African students are now different from those with backgrounds in western business culture, whereas the alignment with Israeli attitudes is because both can be considered young countries with deep roots in socialist ideology.

A rotated Varimax factor analysis of the South African sample in 1996 identified 11 factors with an Eigen value greater than 1.00, explaining the total variance of only 57.41%. This is very similar for the South African sample in 2010, which also identified 11 factors with an Eigen value greater than 1.00, explaining the total variance of 64.26%. Table 6 presents an overview of these factors, many of them low in the total amount of variance that they are able to explain. In view of the weakness of these factors, only the first seven factors are theoretically labelled to qualitatively describe the cluster of items that they include.

Table 6: Rotated Varimax factor analysis on all questionnaire items

Factor	Theoretical Label	Eigen value Explained	Variance	Cumulative
1	Moral values	3.438	11.459	11.459
2	Self-serving interests	2.469	8.231	19.690
3	Means-end justification	1.978	6.592	26.282
4	Personal attributes	1.816	6.052	32.334
5	Free market principles	1.677	5.589	37.922
6	Rational argument	1.507	5.024	42.946
7	Societal expectations	1.402	4.674	47.620
8	–	1.354	4.514	52.134
9	–	1.308	4.359	56.493
10	–	1.212	4.039	60.533
11	–	1.119	3.731	64.264

Table 7 indicates the items in the questionnaire that are associated with these factors, together with their rotated factor loadings. The following questions did not contribute loadings of above 0.75 in any of the factors:

Questions 1, 2, 4, 5, 6, 7, 9, 10, 11, 12, 14, 16, 17, 18, 19, 22, 23, 27, 28 and 30.

Table 7: Rotated factor loadings

Factor	Question numbers	Loadings
1	29	0.750
2	26	0.755
3	20	0.702
4	24	0.724
5	3	0.764
6	15	0.700
7	8	0.781
8	25	0.841
10	13	0.857
11	21	0.751

RECOMMENDATIONS

The section on the results provides an opportunity for making a number of important recommendations to various stakeholders, including business leaders and policy makers.

The acceptance of hypotheses H_1 offers confirmation that the rate of transformation of an individual's values is slower than the rate of change in broader society. Furthermore, individuals' values transformations in certain contexts are negligible even to the point where limited movement is noticeable over a period of 14 years. Therefore public and private sectors and civil society should be comfortable in adopting longterm perspectives when developing policy, for example in areas such as business competitiveness, entrepreneurship and growth, attracting of investment and formation of capital, taxation, human capital development and skills migration, medical care and social welfare, as well as in urban planning.

Corporate Social Investment and/or Responsibility have become critical elements in modern free market societies. This is evident in a society such as South Africa with the highest Gini coefficient in the world and the slowest economic growth rate among its BRICS (China, India, Brazil, Russia, and South Africa) counterparts – and with a record of no to slow public service delivery. Hence proponents of capitalism and corporations must rise to meet the moral challenges of absolute poverty, despair and hopelessness being experienced by the majority in society; this they must do in order to remain sustainable and even to turn these challenges through innovation into opportunities for growth.

The media is filled with stories of insider trading, fraudulent accounting and blatantly corrupt officials. Unethical behaviour or conduct, i.e. bribery, deception, untrustworthiness, and coercion seems to permeate society. Moreover, the upper echelons seem to consider themselves above the law. Notwithstanding this lack of control, the results of the study indicate a sharpening of moral awareness at the individual level. There is a difference between merely acting within the bounds of the law or taking advantage of a grey area or getting away with a certain operating style and not being morally responsible or meeting the ethical norms of society. This is an opportunity for parents, educators, lawmakers, justice officials, the courts and political and business leaders to support ethical behaviour and to act decisively when confronted by misbehaviour. In this instance moral behaviour requires a 100% commitment. Making room for compromise spells the death of ethical standards.

The role of professional bodies which offer professional qualifications and annual professional certification of individuals in establishing and maintaining ethical standards and conduct in business and public management should be investigated. Scrutiny by disciplinary committees of adherence to the concepts of continuous professional development, public membership roles, adherence to a code of ethics, and oversight of an individual's conduct as a business or public manager does seem to have much merit in modern society.

The results on Item 13 provide evidence of consumer behaviour for the insurance industry to consider undertaking research into and for a variety of public relations and education campaigns to address the perceptions and behaviour of clients.

The support of hypothesis H_{2B} offers a prospect for the public and private sectors and for civil society to seek more meaningful and deeper cooperation with likeminded nations with shared values in order to pursue long-term economic and social benefits by negotiating more advantageous frameworks for trade, tourism and educational development.

CONCLUSION

Ethics plays an important role in business as it provides guidance as to which personal and business practices are socially and morally acceptable and which not. In cases where there are no rules as to the right and wrong ways of conducting business, ethics fills the void and provides much needed direction. It is through awareness and appreciation of ethics that business managers, entrepreneurs and political leaders desist from engaging in personal and business practices that lead to violations of human rights, or degrading of the environment, or seeking gain at the expense of others. Morally acceptable conduct benefits society at large as it strives to direct entrepreneurs and their businesses to be open and honest in their dealings with all stakeholders with regard to products or services.

In this particular study specific attention is focused on the ethical attitudes towards business ethics amongst undergraduate commerce students in South Africa. A great deal has been written on the topic of business ethics and social responsibility and good governance of large businesses in the formal sector. Hence, this study explored ethics, values and morals by means of a tested instrument, the *Attitudes Towards Business Ethics Questionnaire* (ATBEQ), and compared data from 1996 samples with a sample collected in 2010 to enhance our understanding of change amongst future economic participants.

This paper made four specific contributions to research focusing on attitudes toward business ethics. First, it made a unique contribution in establishing a more detailed or longitudinal understanding of the ethical attitudes of future managers and leaders in South Africa by comparing the results from Moore and Radloff's 1996 study of undergraduate students in the Eastern Cape with a sample of undergraduate students in the Eastern Cape in 2010. Secondly, the findings of the empirical part of this study constitute the second attempt at examining the ethical views of students by using the ATBEQ questionnaire in South Africa. In this way the study provides up-to-date information indicating how these future economic participants may potentially affect the

ethical climate in which they will be working. Thirdly, the outcomes of the tested hypotheses validated international theory and literature on ethical attitudes and confirmed that the pace of change that an individual's ethical attitudes undergo is slower than that of the broader society. Finally, it provided data to policy makers and economic stakeholders in support of an enhanced understanding as to how to advance cooperation within complex local and international, multicultural and multi-stakeholder environments.

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MANAGERIAL PERCEPTIONS OF CORPORATE GOVERNANCE: AN ETHICAL PERSPECTIVE

Smith¹

ABSTRACT

This article investigates managerial perceptions of corporate governance from an ethical perspective. To achieve the research objectives, a comprehensive literature study was conducted so as to provide a theoretical framework for the empirical study. Self-administered questionnaires were distributed to a non-probability convenience sample of 175 organisations in the designated region.

The results were analysed by means of descriptive statistics and frequency distribution findings. Five factors related to corporate governance were identified and tested. Specific aspects related to ethics and corporate governance included the following: King III report, ethical values, corporate citizenship and sustainable reporting. The article goes beyond the financial and regulatory aspects of governance in order to address the interests of a wide range of stakeholders. In addition, it espouses the fundamental principles of social, ethical, environmental and good financial practices. Ethics could build the framework for decision-making and governance processes in an organisation. The inter-dependent relationships that exist among organisations and their stakeholders, as well as the economic system and the community within which they operate, are of equal importance. Useful guidelines are also provided for implementing ethical corporate governance principles.

Key words: corporate governance; ethics; sustainability

INTRODUCTION

According to Hough, Thompson, Strickland and Gamble (2012: 325), the word governance is derived from the Latin word “gubernare” which means to steer, thus referring to the process of running a government or an organisation. This process consists of mechanisms and institutions through which an organisation articulates its interests, exercises legal rights, meets obligations and mediates differences (McLennan & Ngoma 2004). It thus indicates the means by which direction and control are applied to the stewardship of an organisation’s assets so as to create sustainable future value. It is further concerned with holding the balance between economic and social goals and between individual and communal goals in order to align the interests of individuals, organisations and society. This notion goes beyond the financial and regulatory aspects of governance so as to address the interests of a wide range of stakeholders and to espouse the fundamental principle of social, ethical, environmental and good financial practices (Hough *et al* 2012: 325). Hendrickse and Hendrickse (2004) concur that it is a “partnership of shareholders, directors and management to provide wealth creation and economic well-being to the wider community of stakeholders and society.” The focus of this article is thus on ethical aspects of corporate governance. Painter-Morland (2008: 239) asserts that ethics builds the framework for the decision-making and governance processes in an organisation and ensure the “examination of morality” in organisations. While making a profit is a major priority for most organisations, it can be argued that the interdependent relationships that exist among organisations and their stakeholders and the economic system and the communities within which they operate, are all of equal importance

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(Werther & Chandler 2006: 8). These relationships should therefore be nurtured and properly governed.

The main purpose of this article is to investigate the perceptions of mainly managers regarding the ethical aspects of good governance. The first aspect addressed is the problem statement and research objectives of this study. The next section covers the theoretical overview of corporate governance and related concepts. This is followed by the research methodology used for this study. Thereafter, the empirical results are addressed, followed by the main conclusions and recommendations flowing from the study.

PROBLEM STATEMENT

Crossland and Hambrick (2007: 767) state that corporate governance reflects the set of mechanisms used to manage the relationship among various role players and to determine and control the strategic direction and performance of an organisation. Rutherford, Buchholtz and Brown (2007: 414) concur that at the core is the need to ensure that strategic decisions are made effectively and to establish harmony between parties whose interests may conflict. Le Breton-Miller and Miller (2006: 731) further highlight the view that a recent emphasis on corporate governance stems mainly from two reasons: first, failure of governance mechanisms to effectively control top management decisions, resulting in fraud and corruption and secondly, evidence that well-functioning governance and control systems can be a source of competitive advantage for an organisation. Sternberg (2000) agrees that the purpose of organisations is to maximise shareholder wealth and to meet the needs of various stakeholder groups. The use of organisational resources by management for anything other than organisational purposes amounts to embezzling of shareholder wealth. There is also growing evidence (see for example Carroll & Shabana 2010: 85; Cornelius *et al* 2007: 355 and Robbins 2008: 330) that many organisations see their purpose more widely than simply the pursuit of profit: there is also a challenge to include the needs of society and the environment in strategic decision-making and corporate governance efforts. The problem relates to the failure of many managers of organisations to fully realise the importance and ethical implications of effective corporate governance in the contemporary workplace. The main research question to be addressed in this article is therefore as follows:

What are the managerial perceptions regarding corporate governance when viewed from an ethical perspective?

AIM AND OBJECTIVES

The aim of this article is to investigate the managerial perceptions of corporate governance when viewed from an ethical perspective. To help achieve this aim, the following objectives have been identified:

- To clarify and conceptualise the concept of corporate governance;
- To provide a comprehensive literature overview of corporate governance from an ethical perspective;
- To empirically assess managerial perceptions regarding corporate governance; and
- To provide managerial guidelines and recommendations so as to ensure effective corporate governance based on ethical principles.

THEORETICAL OVERVIEW OF CORPORATE GOVERNANCE

Concept clarification

Henry (2011: 392) refers to corporate governance as “the way in which organisations are directed and controlled and the process by which corporations are made responsive to the rights and wishes of stakeholders.” The Organisation for Economic Cooperation and Development (OECD 2004) produced a set of revised guidelines for corporate governance, stating that it involves a set of relationships involving an organisation’s management, board of directors, shareholders and other stakeholders through whom objectives are set and performance is monitored. Higgs (2003) concurs that corporate governance provides an architecture of accountability through structures and processes to ensure that an organisation is managed in the interests of its owners. Baukol (2002) further argues that the fundamental basis of corporate governance is the value system of an organisation – a code of conduct or ethics – which guides it to satisfy corporate and societal responsibilities.

General aspects of corporate governance

Brajesh (2010) argues that corporate governance practices include a set of structural arrangements that align the management of organisations with the interests of stakeholders and cover ethical, efficiency and accountability issues. The cornerstones of governance philosophy are trusteeship, transparency, empowerment accountability and control. Corporate governance practices, policies and procedures should thus ensure that they cover these critical areas which in essence capture the real nature of corporate governance. Kim and Nofsinger (2004) further state that corporate governance has its origins in corporate ownership and control, i.e. stakeholders and management. The stakeholders own the organisation and management controls it. As organisations become bigger there is a separation of ownership and control, where control shifts from entrepreneurs to professional managers, while ownership becomes dispersed among many stockholders who are removed from the day-to-day management and running of the organisation. Ireland, Hoskisson and Hitt (2011: 252) concur that this separation and concomitant specialisation of ownership (risk bearing) and managerial control (decision-making) should lead to the highest return for its owners. However, often there is conflict between the objectives of the organisation and of those who act as custodians of its assets and undertakings: the directors and senior executives. This is known as the principal agent or agency problem – shareholders are the principals and the managers are the agents (Seal 2006: 389).

Hough *et al* (2012: 324) agree that this separation of ownership and control often leads to a conflict of interests. On the one hand the organisation and its shareholders require undivided and unselfish loyalty. According to this view there should be no conflict between this duty and self-interest. But if managers follow an exclusive approach to governance they do not always act in the best interest of shareholders (Kanda & Milhaupt 2003: 887). The rule of law forms the foundation of good governance: this requires the application of legal frameworks in a fair and impartial manner. Corruption and fraud distort the rule of law and are thus contrary to good governance (Mashaw 2009: 353). Moreover, it is important that meaningful disclosure related to the organisation’s activities is given to all stakeholders (Hess 2008). A result of good governance is that disclosure of information related to the organisation’s financial, social and environmental performance is provided to all relevant stakeholders (triple bottom line). There should thus be a balance between economic and social goals and between individual and communal goals (Zahra, Gedajlovic, Neubaum & Shulman 2009: 519). Banerjee (2008: 51) concurs that organisations should embrace the fundamental values of social, ethical, environmental and good financial practices. There is thus a definite shift from reporting only on financial matters to also include reporting on the organisation’s social responsibility efforts and initiatives to preserve the environment. Kooiman

and Jentoft (2009: 818) assert that in all governance practices there should be both transparency and principles that underpin a code of conduct based on ethical and equitable values. Appropriate checks and balances should thus be put in place so as not to constrain operations and activities but rather to ensure good and effective governance of an organisation (Pirson & Turnbull 2011: 459).

Integration of corporate governance and ethics

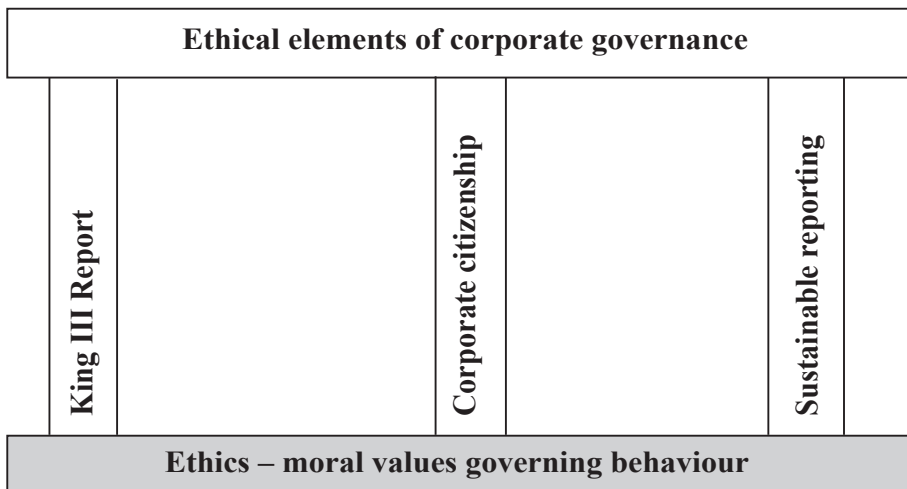
Various authors (see for example Collett & Hrasky 2005: 188; Dally & Dalton 2003: 371; Klapper & Love 2004: 703 and Nelson 2005: 197) have attempted to identify various corporate governance practices. These include: ethics, corporate citizenship, board of directors, audit committee, risk management, governance of information technology, stakeholder relations, integrated sustainable reporting, disclosure and compliance procedures. Chau (2011: 7) asserts that corporate governance as a philosophy is closely related to social responsibility and ethics. Siebens (2002: 109) too argues that governance and ethics are connected as the former deals with statutory and environmental responsibilities and social obligations. Similarly, Aras and Crowther (2008: 433) refer to the close relationship between corporate governance, ethics and sustainability. For the purpose of this article which investigates perceptions regarding ethical aspects of corporate governance, particular attention will be given to the following aspects: King III report, ethics, corporate citizenship and integrated sustainable reporting and disclosure.

These main elements will be discussed in the following sections where it will be clearly shown that ethics forms the foundation upon which effective corporate governance should be built.

Ethics

In light of the foregoing, the elements of an ethical perspective on corporate governance can be illustrated as per Figure 1 below (own construction).

Figure 1: Elements of an ethical perspective on corporate governance



Ethics

Various authors (see for example Brink 2011: xvii; Pae & Choi 2011: 323; West 2009: 10 and Windsor 2009: 306) highlight the important role of ethics in effective corporate governance. Baron (2006: 4) defines ethics as a study of moral judgments about the rightness of actions and values of behaviour. Francesco and Gold (2005: 48) also regard ethical behaviour as involving higher philosophies than established by law, including selfless behaviour rather than mere calculated action aimed at creating a tangible benefit. Fray (2007: 77) further postulates that organisations need

to be ethical in order to be sustainable. Ethics are important as there is a need for transparency of information which allows organisations to be held accountable for actions taken (Ghillyer 2010: 84). Moreover actions of managers at all levels have a direct effect on the ethical climate of an organisation. Ethics provides the vital foundation on which a society is built and lack of ethical principles can cause an organisation to fail (Gowdy 2008). The role of ethics in governance has become more important because organisational behaviour has become more transparent and the public has its own expectations of what is good, bad, dishonest or reckless. Organisations are now expected to behave as moral actors and conform to certain ethical requirements, employing strategies that make both ethical and financial sense (Pietersen 2009: 152).

King III Report

The nature of corporate governance and reporting has evolved tremendously over the past few years, especially with the inception of the King III Report in 2010 (Next Generation 2012). Its aim is to ensure that all forms of business apply the basic principles of good governance. The following chapters are covered in this report: ethical leadership and corporate citizenship; boards and directors; audit committees; governance of risk; governance of information technology; compliance with laws, rules, codes and standards; internal audit; governing stakeholder relations and integrated reporting and disclosure (SAICA 2012). Hough *et al* (2012: 327) further postulate an inclusive approach whereby the emphasis is not only on the financial aspects of governance, but also on addressing social and environmental aspects (integrated reporting). The following seven primary characteristics of good governance are identified: discipline, transparency, independence, accountability, responsibility, fairness and social responsibility. Various authors (see for example Malin, 2011: 390; Maritz, Pretorius & Plant 2010; Marx & Els 2009: 5 and Rossouw 2011: 327) have identified the important role of good governance practices and principles based on the tenets of the King III Report.

Corporate citizenship

Birch 2001; Crane, Matten and Moon 2011: 64; Maxfield 2008: 367 and Morgan, Ryu and Mirvis 2009: 39 investigate the interface between corporate governance and corporate citizenship. These authors conclude that the latter should refer not only to the expected social role of organizations, but also to their giving something back to the community which will ultimately help to improve their own economic performance (Matten & Crane 2003: 1, 4). This therefore boils down to corporate social responsibility obligations on the one hand and sustainability on the other. Corporate citizenship, ethics, social responsibility and sustainability are therefore all interrelated concepts. Moreover corporate citizenship is about a new contract between organisations and society, thus aligning profitable organisations with healthy communities. In terms of corporate citizenship, organisations consider the interests of society by taking responsibility for the impact of their activities on customers, suppliers, employees, shareholders, communities and other stakeholders, as well as on the environment (Hellriegel *et al* 2008: 106). According to Jenkins, Pearson and Seyfang (2002: 8), many organisations in South Africa have adopted corporate citizenship initiatives and aim to create benefits and reduce harm to their stakeholders. Hence, according to corporate citizenship principles, all organisations must be compliant with social responsibility, ethics and sustainability.

Sustainable reporting

As indicated in the section above on the King III Report, sustainable integrated reporting forms an integral part of good governance. This is also substantiated by authors such as Aras and Crowther 2009: 279; Brown, de Jong and Lessidrenska 2009: 182; Jensen and Berg 2011 and Kolk 2008: 1. Sustainable reporting refers to a reliable, comprehensive and holistic overview of the organisation,

from both a financial and a non-financial perspective. Organisations should thus outline the impact of their businesses in three spheres: economic, social and environmental (also known as the triple bottom line). Sustainability refers to economic development that generates wealth and meets the needs of the current generation, while saving the environment so that the needs of future generations are met as well (Daft 2008: 154). The goal of sustainability is for an organisation to take responsibility for its social, environmental and economic impacts (Paramasivan 2010: 1). Furthermore, it was noted that although organisations must make a profit, they are also required to take into account the interests of their stakeholders, including employees, customers, society and investors.

RESEARCH METHODOLOGY

Research Method

A quantitative research method has been used, with an emphasis on the quantification of variables and statistical controls. The main purpose of this research is exploration and description of perceptions among selected organisations regarding corporate governance viewed from an ethical perspective.

Population

For the purpose of this research project, the target population consists of all organisations mainly within the Nelson Mandela Bay region that are involved in some form or other with corporate governance issues. Only medium (employing 51-200 employees) and large-sized organisations (employing more than 200 employees) were included in the population and final sample, as smaller organisations might not be involved in corporate governance issues to the same extent as larger organisations. The questionnaires had to be completed by owners and/or managers of the selected organisations.

Sampling procedure

A non-probability convenience sample of 200 organisations was included so as to determine the perceptions of respondents regarding corporate governance issues within the designated region.

Data collection

The type of information required (data specification decisions) for the study can be classified as follows: research data that are numeric, non-verbal and non-overt (questionnaires). Both secondary and primary data (survey) were collected. For the literature study various text books, journal articles and the Internet were consulted. The empirical study comprised 200 self-administered questionnaires that were issued to respondents. A total of 175 usable questionnaires were returned. The effective response rate for this study is thus 88%.

Questionnaire design

Based on the size of the sample, a survey by means of self-administered questionnaires was best suited to this project. The questionnaire design was based on the extensive literature study and although it is self-reporting, the respondents were informed that the variables refer to actual corporate governance issues and practices. The questionnaire consists of two sections:

- Section A deals with variables about perceptions regarding corporate governance issues and practices. This section consists of 30 statements constituting five factors. The type of ordinal scale used is a semantic differential scaled-response five-point Likert scale (ranging from strongly agree to strongly disagree).
- Section B provides classification data (demographic characteristics) of respondents and con-

tains a nominal scale of measurement, using categorical variables. Eight classification data variables were tested.

Pilot study

As the questionnaire had never been used previously, it was issued to a few academics in the field of management, ethics and statistics and a few large businesses from the designated population. Some problem areas were identified and suggestions for improvement were provided. This ensured the face validity of the questionnaire.

Data processing and analysis

Completed questionnaires were inspected, edited, coded and data transferred to an Excel spreadsheet. The data were analysed by means of the SPSS statistical software package. The techniques used during the data analysis stage of the research project included descriptive statistics (e.g. mean, standard deviation and range), frequency distributions, Cronbach's alpha values and correlation coefficients.

EMPIRICAL RESULTS

Descriptive statistics

Table 1 provides a summary of the descriptive statistics for Section A of the questionnaire (corporate governance perceptions).

Table 1: A summary of the descriptive statistics for Section A of the questionnaire: corporate governance perceptions

Item/ Variable	Factor	Mean	Standard Deviation
1-10	General perceptions regarding corporate governance (A1)	3.96	0.59
11-15	Aspects regarding King III report (A2)	3.87	0.64
16-20	Ethics (A3)	4.02	0.71
21-25	Corporate citizenship (A4)	3.98	0.68
26-30	Integrated sustainable reporting (A5)	3.96	0.65

With regard to the descriptive statistics of each variable, no in-depth discussion is provided, as it falls beyond the scope of this article. Regarding the measure of central tendency (mean values) of these factors, it appears that most of these values cluster around point four (agree) on the instrument scale. The highest mean value (4.02) obtained was for the factor regarding ethical issues in the organisation. None of the mean scores lies on the disagreement side of the scale (point one and two), indicating that most of the respondents agreed with the statements about perceptions regarding corporate governance. The measure of dispersion used is the standard deviation. It appears that respondents do not vary too much in their responses toward these statements as all the scores are below one.

Demographic profile of respondents

Table 2 provides a profile of the respondents of this study by indicating the frequency distribution results for the demographic data.

Table 2: Frequency distribution results: a respondent profile

Characteristic	Category	(%)
Gender	Male	69
	Female	31
Highest educational level	Grade 12 or equivalent	17
	Diploma or National Certificate	25
	Bachelor's degree	20
	Postgraduate degree/diploma	37
	Other	1
Ethnic group	Black	26
	Coloured	16
	White	51
	Asian	7
	Other	0
Position on business	CEO	8
	Manager	75
	Other	17
Length of current employment	1 – 5 years	35
	6 – 10 years	29
	11 – 15 years	17
	More than 15 years	19
Employment size	Medium (51-200 employees)	38
	Large (201+ employees)	62
Employment sector	Public	31
	Private	69
Industry	Manufacturing	24
	Retailing/Wholesaling	26
	Financial, insurance, real estate	22
	Architecture	1
	Agriculture, forestry, fishing	2
	Catering and accommodation	5
	Construction and engineering	1
	Mining	5
	Transport/Travelling	5
	Communication	2
	Medical	1
	Leisure and entertainment	5
	Other	1

From table 2, it is evident that the majority of respondents (69%) are males. In terms of highest educational level, 45% of the respondents have a diploma, certificate or bachelor's degree, whilst 37% have a postgraduate degree/diploma. Based on ethnic classification, 51% of the respondents are white and 26% are black, respectively. 83% of the respondents indicated that they are owner/managers or CEO's. The majority of the respondents

(46%) have been employed in their current position for between six and 15 years. It also appears that the majority of the respondents are employed in large organisations (62%) and in the private sector (69%). Most of them are also employed in manufacturing (24%), wholesaling and retailing (26%) and finance, insurance and real estate (22%) industries.

Frequency distribution results of perceptions regarding corporate governance

Further analysis of perceptions regarding corporate governance was done. To determine the frequency of the responses (as indicated in Table 3) the results were combined with points one and two being 'disagree', three 'neutral' and four and five 'agree'.

Table 3: Frequency distribution results of perceptions regarding corporate governance issues and practices

Variable	Disagree	Neutral %	Agree %	Variable %	Disagree	Neutral %	Agree % %
A1	19	18	63	A16	3	11	86
A2	14	21	65	A17	7	13	80
A3	6	11	83	A18	14	27	59
A4	9	18	73	A19	7	15	78
A5	3	15	82	A20	6	16	78
A6	6	15	79	Overall agree %			76
A7	5	16	79	A21	4	13	83
A8	4	15	81	A22	5	17	78
A9	2	18	80	A23	8	19	73
A10	4	15	81	A24	6	16	78
Overall agree %			77	A25	4	20	76
				Overall agree %			78
A11	5	37	58	A26	4	15	81
A12	5	23	72	A27	4	17	79
A13	5	21	74	A28	6	23	71
A14	5	19	76	A29	5	14	79
A15	4	14	82	A30	5	22	73
Overall agree %			89	Overall agree %			77

Table 3 clearly indicates that in all cases most of the respondents tend to agree with the general statements regarding corporate governance (A1-A10). The lowest percentage of agreement was obtained for the statements regarding the separation of corporate ownership/control and the management of the organisation (63%) and that there is an undivided and unselfish loyalty to the organisation with no conflict of interests (65%). In all other cases respondents tend to agree with these general perceptions regarding corporate governance. In terms of the King III report (A11-A15), the lowest percentage of agreement (58%) was obtained for the statement that the principles and best practices recommended in the King III report are applied (A11). In all other cases most of the respondents tend to agree with the statements regarding the King III report. Regarding ethics, statement A18 (i.e. that ethical behaviour is consistently rewarded) obtained

the lowest agreement percentage (59%). Aspects regarding corporate citizenship (A21-A25) all obtained relatively high 'agree' percentage scores as well as those concerning integrated sustainable reporting (A26-A30). In terms of the overall percentage of 'agree' scores for the five factors, the following ranking positions (from high to low) were obtained:

- King III Report (89%)
- Corporate citizenship (78%)
- General perceptions and sustainable reporting (both 77%)
- Ethics (76%)

It thus appears that respondents mostly agree with the statements regarding the King III Report and least with those statements regarding ethics.

Reliability and validity of the measuring instrument

External validity refers to the generalisation of research results to other population groups: this was assured by means of clear guidelines regarding the place, time and conditions in which the research was to be conducted. The internal validity of the instrument's scores is ensured through both face and content validity. Expert judgement by researchers in business management and statistics and a pilot study among 10 businesses in the designated region were undertaken. The statistical software package SPSS was used to determine Cronbach's alpha values for the five predetermined factors. To confirm the internal reliability of the five factors, Cronbach's alpha was calculated (refer to Table 4).

Table 4: Cronbach's alpha for Section A of the questionnaire

Variables	Factor/Function	Cronbach's Alpha
1-10	General perceptions regarding corporate governance (A1)	0.88
11-15	Aspects regarding King III report (A2)	0.86
16-20	Ethics (A3)	0.85
21-25	Corporate citizenship (A4)	0.88
26-30	Integrated sustainable reporting (A5)	0.88

The reliability coefficients of Cronbach's alpha values for the various factors are all above 0.7. It can therefore be concluded that all factors are internally reliable.

Correlation

Regarding the correlation between the variables which constitute each factor, an inter-item correlation exercise was conducted. It appears that all of the variables in each factor show strong positive relationships with each other. A positive correlation coefficient (*r*-value) indicates a strong or positive relationship among the variables. None of the variables shows a negative/reverse relationship. All variables constituting the five factors indicate strong inter-item correlation. The variables with the highest positive *r*-value (strongest positive relationship) were found in the integrated sustainable reporting factor (0.6880), while the variable with the lowest positive *r*-value (weakest positive relationship) was found in the general perceptions of corporate governance factor (0.0.633). The complete correlation matrix falls outside the scope of this article.

LIMITATIONS OF THE STUDY

The following limitations of this study are acknowledged:

- The sample was mainly restricted to the Nelson Mandela Bay region.
- Uneven distribution of gender and ethnic groupings could also have skewed the results.
- This particular article forms part of a bigger study and in this article no advanced inferential statistics were used for the analyses.
- As the measuring instrument required self-reporting this may have influenced the results as it could have reflected the respondents' own perceptions and not those practised in the organisational settings.

The following extract seems to provide an appropriate conclusion to this article:

“The principles, regulations and directives associated with corporate governance constitute a view of the role, responsibilities and obligations of corporations within a given society ... identifying the ethics of a specific corporate governance regime entails making explicit the moral values and obligations of corporations as well as the ethical values associated with these responsibilities ...” (Rossouw 2009: 5)

RECOMMENDATIONS AND CONCLUSION

The cornerstones of governance philosophy are trusteeship, transparency, empowerment, accountability and control. Separation and specialisation of ownership (risk-bearing) and managerial control (decision-making) should lead to the highest return for owners. All governance practices should be transparent and be based on principles that underlie a code of conduct. Governance and ethics are connected as the former deals with statutory and environmental responsibilities and social obligations. Four inter-related ethical aspects related to corporate governance have been identified: the King III Report, ethical values, corporate citizenship and sustainable reporting.

In terms of the empirical study, in all cases most of the respondents tend to agree with the general statements regarding corporate governance. With regard to the King III report the lowest percentage agreement was obtained for the statement that the principles and best practices recommended in the King III report are applied. In all other cases most of the respondents tended to agree with the statements regarding the King III report. It thus appears that not all organisations have as yet introduced the principles and best practices recommended by the King III Report. Regarding ethics, the statement that ethical behaviour is consistently rewarded obtained the lowest mean score. Aspects regarding corporate citizenship all obtained relatively high 'agree' percentage scores as well as integrated sustainable reporting statements. In terms of overall agreement scores, the highest percentage 'agree' score was obtained for the King III Report and the lowest percentage 'agree' score for the statements regarding ethics. Respondents thus tend to disagree that all these ethical principles are being practised in their respective organisations.

Table 5 below provides some general guidelines regarding practising effective corporate governance, based on ethical principles.

Table 5: Guidelines regarding implementing effective ethical corporate governance principles

No.	Description of guideline
1	Organisations should ensure that there is a definite separation of corporate ownership/control and management of the organisation.
2	There should be an undivided and unselfish loyalty to the organisation with no conflict between duty and self-interest.
3	There should be a balance between economic and social goals and between individual and communal goals.
4	The principles and best practices recommended in the King III report should be adhered to.
5	Shareholders should make an informed assessment of the organisation's economic value rather than its book value.
6	The principles of fairness, accountability, responsibility and transparency should be adhered to.
7	Ethical leaders should articulate and embody the purpose and desired values of the organisation.
8	Ethical values should be communicated to all employees.
9	Organisations should ensure that compliance with an ethics code is practiced.
10	Good corporate citizenship should result in comprehensive policies and practices in respect of society and the environment.
11	Interests of all stakeholders should be incorporated into the organisation's strategies.
12	The triple bottom line should enable the organisation to be relevant to the society and natural environment in which it operates.
13	Environmental, social and economic issues should be considered important in the organisation (triple bottom line).
14	Organisations should ensure that ethical matters and societal transformation issues are disclosed.
15	Matters about safety, health and the environment should be disclosed, together with financial results.

Corporate governance indicates the means by which direction and control are applied to the stewardship of an organisation's assets so as to create sustainable future value. It therefore goes beyond the financial and regulatory aspects of governance in order to address the interests of a wide range of stakeholders; moreover, it espouses the fundamental principles of social, ethical, environmental and good financial practices. Ethical principles build the framework for the decision-making and governance processes in an organisation. While making a profit is a major priority for most organisations, the interdependent relationships that exist with their stakeholders, together with the economic system and the communities within which they operate, are of equal importance. Recent emphasis on corporate governance stem mainly from the failure of governance mechanisms to effectively control top management decisions resulting in fraud and

corruption and also, mounting evidence that well-functioning governance and control systems can be a source of competitive advantage for an organisation. Many organisations view their purpose more widely than simply the pursuit of profit; they see that there is a challenge to include the needs of society and the environment in strategic decision-making and corporate governance efforts.

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LOCAL RESIDENTS' PERCEPTIONS OF COMMUNITY-BASED TOURISM (CBT) AT TWYFELFONTEIN UIBASEN CONSERVANCY IN NAMIBIA

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ABSTRACT

Local communities in Namibia have few options for earning alternative income, apart from selling craftwork and from livestock farming. The main objective of this study was to create an in-depth understanding of the perceptions of the local community at Twyfelfontein Uibasen Conservancy regarding community-based tourism (CBT). This would be the basis for developing strategies that could be used to influence these perceptions with the main goal of using CBT as a vehicle towards the improvement of local peoples' livelihoods. Structures and institutions that impact on the direction of CBT development at Twyfelfontein Uibasen Conservancy were also examined.

Both qualitative and quantitative methods were employed for data gathering. A survey was undertaken by means of 67 structured questionnaires distributed among local community members and key stakeholders – with a 100% return rate. Five in-depth interviews with stakeholders from government, NGOs, the private sector and financiers were also conducted.

Whilst the Namibian government recognizes tourism as a potential means of poverty alleviation, ownership of cultural heritage resources is not yet in the hands of locals. It is argued in the study that tourism development has been pursued more for economic purposes than for sustainable tourism goals. Whilst the conservancies were set up as a strategy for poverty alleviation, the study concludes that development outcomes have not yet filtered down to the needy. Therefore perceptions among the local community are negative towards CBT as a vehicle for socio-cultural and economic development.

It is recommended that in order for CBT development to be meaningful, local participation through ownership, capacity building and control should have precedence over purely economic issues. Currently, the biggest beneficiaries seem to be those who operate the private tourism sector and, to some degree, foreign investors.

Keywords: Community-based tourism, poverty alleviation, local participation, sustainable tourism development, local community

INTRODUCTION

The Republic of Namibia's Constitution recognises in Article 95 (1) the importance of the promotion and maintenance of the welfare of the Namibian people through sustainable utilization of natural resources for the benefit of all Namibians (Namibian Constitution, 2009). As a result, tourism has been viewed as a means of achieving sustainable utilization of natural resources for the benefit of local communities in Namibia.

These communities have been involved in the development of community-based tourism (CBT) projects in their regions since the inception of a CBT Policy in 1995. The Ministry of Environment and Tourism recognised the inequalities that exist in the tourism industry, hence the introduction of CBT programmes. In the past, local communities were not involved in the planning and development of tourism projects in their communal land (MET 1995: 3); this tended to shift benefits to investors. Therefore, the MET's policy was re-formulated so as to provide a framework for rural communities in Namibia to participate in the planning and development of tourism in

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order to derive benefits from tourism activities. The CBT policy aimed to pave the way for the development of communal area conservancies in Namibia. Conservancies are defined by MET as communal land on which local communities conserve their natural resources for sustainable use (MET 1995: 4). Hence, there are over 50 registered conservancies in Namibia, each with an average of 220 000 residents who generate an average income of over N\$39 million per year (NACSO 2008: 3).

BACKGROUND TO THE STUDY

One of the most prolific and progressive of these conservancies is the Twyfelfontein Uibasen Conservancy, which is located in the Kunene Region. This conservancy was registered in 1999 and is situated 90km west of Khorixas, which is in the north-western part of Namibia. The conservancy has a total population of 230 inhabitants (NACSO 2008: 111). A continued increase in the number of tourists has been recorded in the area. The main tourist attraction at Twyfelfontein Uibasen Conservancy is the rock engraving site, which gained international prominence in 2007 as Namibia's first World Heritage Site (NHC 2008: 3).

This site has the largest single concentration of rock engravings in Southern Africa (Kinahan 2005: 8); this has led to a significant growth of tourist arrivals in the region over the past 10 years. For example, a total of 50 000 visitors were recorded to have visited Twyfelfontein in 2008 (NHC 2008: 12).

The growing popularity of the site has brought a number of benefits for the local community at Twyfelfontein. Locals are employed at the World Heritage Site as local tour guides, while some are employed by the Twyfelfontein Country Lodge in various occupations. An income-sharing agreement between the National Heritage Council of Namibia (a statutory body of the Namibian government responsible for the management of Twyfelfontein World Heritage Site) and the Tour Guide Association at Twyfelfontein, allows for 35% of revenues received from entrance fees to be shared among the tour guides as remuneration for the services that they provide (NHC 2008: 16). In addition, the joint venture agreement with the Twyfelfontein Country Lodge provides additional income and employment in a variety of areas for local community members.

Although tourism is meant to contribute towards poverty alleviation, improved quality of life and the empowerment of local people, this may not be wholly the case at the Twyfelfontein Uibasen Conservancy. The ten percent profit-sharing agreement between Twyfelfontein Country Lodge and the community is enjoyed exclusively by qualified members of the conservancy: cash payouts amounting to N\$2000 per year are received by members only, thus excluding the rest of the community who do not comply with conservancy membership requirements (Geingub 2009). The distribution and management of financial resources derived from tourism joint ventures are controlled by conservancy committee members; this has resulted in a lack of transparency and involvement by the community at large. The conservancy has failed to regenerate resources received from joint venture agreements for the benefit of the community. Therefore it seems that the CBT development policy at Twyfelfontein Uibasen Conservancy, after more than 10 years of existence, has failed to address the needs of the local community.

A lack of equitable distribution of income received from tourism is evident at Twyfelfontein. Since only registered members of the conservancy are eligible to receive dividends from joint-venture agreements, other members of the community are excluded. This trend has increased levels of poverty, unemployment and unequal distribution of income. Unskilled residents end up indulging in alcohol abuse, thus adversely affecting the Twyfelfontein local community at the Uibasen Conservancy. Furthermore, infrastructural development has not catered for local community needs such as electricity and water supplies, and health services. There are no formal housing structures available and, to date, there is no school or kindergarten available to

address the educational needs of young children in Twyfelfontein. Local community levels of participation in tourism planning and development is limited to conservancy committee members. Even though members lack skills and knowledge in tourism development, no formal appraisal has been conducted to determine residents' perceptions of CBT projects. As a result, those involved in tourism planning and development (government, NGOs, donors and tourism business investors) are being viewed as the only experts who drive tourism development at Twyfelfontein, with little input invited from the general community. The question that arises is the extent to which community needs are being met through CBT projects. Failure to meet community needs can result in negativity towards CBT.

Certainly the capacity of target community members is not always at the level that is required to understand issues related to tourism. This is exacerbated by a high rate of staff turnover, since those who are trained end up moving on to look for better prospects. While it is acknowledged that the locals are involved to an extent in community-based tourism (CBT), current management approaches do not encourage entrepreneurship. Considering CBT's isolation from mainstream tourism and perceptions of inferiority regarding the quality of CBT products, community benefits are marginal. Most CBT products are not demand driven: this has had an effect on the number of tourists that visit Twyfelfontein. This is further exacerbated by a lack of marketing of CBT products.

Increasing community benefits requires aggressive marketing. However, the local communities are incapacitated owing to a lack of resources for both marketing and product development. Even though NGOs and other partnership organisations have helped to finance community projects at Twyfelfontein, community dynamics tend to hamper progress. Apart from developing and implementing CBT projects, the local community faces a plethora of challenges. One noticeable challenge is the remoteness of CBT projects. Whilst the local community can readily display unique cultural handicrafts and other artifacts, all these products may require capitalization. It has become expensive to borrow money from financial institutions in Namibia and interest rates continue to rise. Even though the community can use its land as collateral to borrow money from banks, this may pose a high risk to this public resource. Therefore, it has become a huge challenge to investors to manage both tourism expectations and local community perceptions.

While the existing CBT development literature in Namibia has focused on the perceptions of government, NGOs, business investors, donors and tourists, no information is available regarding local community perceptions towards CBT development projects. A lack of validated information on community-based tourism has hampered the understanding of local community needs with regard to tourism's impact on their local economies. Therefore, determining the perceptions of the local community at Twyfelfontein towards CBT is a prerequisite for establishing a successful and sustainable tourism sector at Twyfelfontein.

COMMUNITY-BASED TOURISM: A CONCEPTUAL DEFINITION

Sharpley and Telfer (2002: 150) define the term Community Based Tourism (CBT) as a sustainable form of tourism development whereby the needs and aspirations of the community are met and their local economy is sustained. They further state that this concept came about after the Second World War (1939-1945), when negative effects of mass tourism left host communities disempowered while tourism was driven by foreign multi-national organizations, who disregarded the needs of local communities. However, in Namibia, CBT came about in 1995 as a result of inequalities in the tourism industry: local communities had not been involved in tourism planning on communal land and had received no benefits from tourism (MET 1995: 3). The new CBT policy thus aimed to pave the way for the local community to operate tourism enterprises and form joint ventures with the private sector.

Tosun (2000: 613) incorporates socio-cultural benefits of CBTs in his definition by describing it as

a form of development that pays heed to procuring socio-cultural benefits for local communities. He further states that the movement towards sustainable development in recent years has shifted tourism planning towards incorporating the needs of local residents who are directly affected by tourism development. Whilst CBT has no universally agreed-upon definition, it has been defined by various authors in terms of involvement by local communities in tourism development with the aim of meeting community needs (Ashley 1995: 8; Sharpley Telfer 2002: 150 and MET 1995: 2). Hence, it has been viewed as a type of tourism activity spearheaded by the local community, while the economic and socio-cultural benefits derived from tourism are sustainable.

SUSTAINABLE TOURISM DEVELOPMENT

Literature dealing with CBT is closely linked to sustainable tourism development whereby community participation in tourism planning is emphasized, rather than tourism as product or industry. Several authors (Saarinen 2006: 1131; Hardy & Beeton 2001: 168 and Liu 2003: 465), in trying to define the term *sustainable tourism*, have created confusion around the real meaning of the term. However, the WTO (2004: 17) does provide a universal definition of sustainable tourism development by stating that it comprises guidelines and principles that are used in all types and forms of tourism, including that of community-based tourism. The concept thus refers to environmental, economic and socio-cultural aspects of tourism development, with the aim of establishing a balance between the afore-mentioned three aspects in order to achieve longterm sustainability. This makes CBT an integral component of sustainable tourism development as it requires that the economic, social and cultural benefits for the community are continuously improved and that tourism impacts are assessed in terms of the welfare of present and future generations. The success of sustainable tourism depends on the different perceptions that various stakeholders hold about their role within tourism development. By understanding these perceptions and by relating them to sustainable development, one can prevent the development of unsustainable tourism. However, the conceptualization of sustainable tourism development has failed to address CBT development concerns (Halstead 2003: 7). This has resulted in the term being re-defined to suit the requirement of certain individuals, thereby obscuring its true meaning. Sometimes it has even been used as a marketing gimmick so as to increase market growth rather than incorporate sustainability principles within tourism development.

In developing countries such as Namibia, community-led tourism is usually the driving force behind sustainable tourism development (Hall & Richard, 2000: 10), and at Twyfelfontein in particular, CBT was introduced with the aim of empowering local people while alleviating poverty and pursuing long-term sustainability.

However CBT planning approaches adopted at Twyfelfontein have failed to incorporate principles of sustainable tourism development, as defined by the WTO, since inequalities and poverty are still recurring problems at Twyfelfontein. Therefore, sustainable tourism development cannot become a reality at Twyfelfontein without tourism being driven and controlled by the community for long-term benefits.

PERCEPTIONS OF THE COMMUNITY TOWARDS CBT DEVELOPMENT

According to McGehee and Andereck (2004: 132), research conducted over a period of 30 years regarding residents' perceptions towards tourism development is the aspect of tourism that has been most thoroughly studied. In the 1960s, tourism research focused on positive aspects of tourism impacts; in the 1970s it focused on negative impacts; in the 1980s the focus was on investigating more systematic approaches. Recently, there has been a shift towards research at community level concerning residents' attitudes towards tourism. Past research has revealed that residents' perceptions and attitudes towards tourism are as important as the actual impact of tourism. However, most research has focused on measuring residents' attitudes towards

destinations where tourism is well developed and only a few studies have been conducted at destinations where tourism development is at the beginning of a destination lifecycle. In communities, which are located in underdeveloped regions such as Twyfelfontein, tourism is largely still at an inception stage (Sirakaya *et al* 2002: 57).

Researchers have also observed that there are certain factors that affect residents' support of tourism development. Murphy (1985: 48), for example, argues that type and extent of interaction between the tourist and the community, importance of tourism within the community, level of community dependence on tourism and level of tourism development in the community are variables that influence residents' perceptions with regard to degree of support for tourism development. Other researchers (Liu & Var 1986: 207 and Belisle & Hoy 1980: 98) argue that factors such as length of residency in the community, native-born status in the community, extent of tourism concentration, economic reliance on tourism, values and social representation and distance of residence from tourist zone all have an influence on residents' attitudes towards tourism development.

In addition, there are a number of theories that have been developed to explain residents' perceptions and attitudes towards tourism. The social exchange theory is the most common framework used to analyze and understand residents' perceptions and attitudes towards tourism development at a community level (Sirakaya *et al* 2002: 58). This theory is defined by McGehee and Andereck (2004: 133) as "a general sociological theory concerned with understanding the exchange of resources between individuals and groups in an interaction situation."

Sirakaya *et al* (2002: 58) suggest that residents see benefits of tourism in terms of an exchange for something equal to the benefits that are offered in return. Thus, residents that benefit from tourism are more likely to perceive tourism as being positive than those residents who experience its negative impacts.

According to Sirakaya *et al* (2002: 64-66) residents' degree of support for tourism is influenced by their perceptions of tourists, tourism impacts, employment status, membership of community organizations and awareness of tourism development projects. This supports the social exchange theory whereby perceived benefits and costs of tourism play an important role in determining tourism support. However there are three main concerns. Firstly, a lack of community awareness of the nature of tourism development projects: this can result from withholding information from the community on inputs into tourism plans and projects, as well as from rushing community meetings and sending invitations only to mostly educated professionals and local entrepreneurs. Moreover meetings are sometimes held in English thereby excluding a majority of the population. Secondly, it was observed that donor organizations and support agencies are given the responsibility of implementing tourism projects, while participation of community members is restricted. Thirdly, communities have high expectations fostered at the beginning of tourism projects and in the end these often fail to materialize.

Several studies have shown that residents who are dependent on the tourism industry or gain economically from tourism are more likely to have positive perceptions of tourism than those who benefit less from tourism. Studies which have been conducted to investigate the relationship between demographic characteristics and attitudes towards tourism reveal no consistent relationships. However, according to the study conducted by McGehee and Andereck (2004: 133) in Arizona, residents have little trust in community leaders' ability to plan for tourism. Regardless of residents' benefits from tourism, they all perceived tourism planning as important for the whole community. Through this study it was observed that public relations campaigns aimed at educating the community on the types of tourism development that exist have shown success. This is because such campaigns enable community members to make informed decisions on the type and extent of tourism development that is appropriate to meet their needs.

Huh and Vogt (2008: 446) argue that the main reason for conducting attitude studies is to encourage improvement of residents' quality of life and to provide economic benefits. Researchers should observe residents' attitudes over time to gain insights into tourism impacts on their quality of life, job opportunities, cost of living and retention of young people. They further state that past research shows that residents' attitudes towards tourism development are associated with key factors such as age, income, length of residence, ethnicity, education, gender, distance from tourism sites and degree of residents' economic dependence on tourism.

The Huh and Vogt (2008: 454) study investigated residents' attitudes towards tourism over time on an Alaskan Island. Their findings show that residents' attitudes towards impacts of economic tourism change over time, but their attitudes towards community development remain the same. In the same vein, the age factor also has the greatest influence on residents' attitudes. Middle-aged residents had less favorable attitudes towards tourism than young adults. The social exchange theory was also applied. This suggested that there are economic benefits derived from tourism and also rewards for the community in exchange for socio-cultural and environmental impacts brought about by tourism development.

Further longitudinal studies of residents' perceptions should provide in-depth information on residents' attitudes, rather than merely concentrating at a descriptive level on residents' attitudes regarding benefits of tourism as part of the social exchange theory. More appropriate and inclusive theories and models may be developed to provide theoretical foundations for ensuring that the needs of communities are met at local levels.

RESEARCH METHODOLOGY

In this study, both quantitative and qualitative research approaches were used. The purpose of using a qualitative approach was to get an in-depth understanding of the social and psychological phenomena leading to certain perceptions towards community-based tourism (CBT) at Twyfelfontein Uibasen Conservancy. This qualitative approach targeted tourism stakeholders.

Through a quantitative approach, the study also sought to use numerical measurements and statistical analyses to examine social phenomena (Struwig & Stead 2001: 4). This approach targeted community members. By using both quantitative and qualitative approaches, the study was able to utilize triangulation, thereby helping to provide findings that are reliable and valid.

The sample size refers to the number of units that should be included in a study (Malhotra 1993: 354). The sample that was obtained for this study was representative of the population from which it was drawn. Therefore simple random sampling could be used. This method gave each member of the population an equal probability of being chosen once they were included in the sampling frame. With the use of probability sampling the sample could be randomly selected from the sampling frame. By using a simple random sampling technique, the researcher was able to avoid bias or predetermination within the sample selection process.

DATA COLLECTION TOOLS

The researcher used questionnaires for tourism stakeholders, whilst a key informant technique focused on in-depth interviews for data collections. The layout of the questionnaire ensured that it was easy to read, and the sequence of questions easy to follow. In order to achieve this, the questionnaire comprised both open-ended questions and closed-ended questions. Open-ended questions were used to seek in-depth opinions, attitudes and perceptions of the local community towards CBT, whilst the closed-ended questions elicited information that could provide answers to the research questions.

A five-point Likert scale was applied for the structured questions which provided pre-defined categories from which respondents were requested to mark relevant selections. Respondents were

afforded opportunities to provide responses ranging from “strongly agree” to “strongly disagree”. Respondents thus had to indicate a degree of agreement or disagreement with each statement. The questionnaire was compiled in English. A research assistant helped to translate the questions into the local Damara language.

In-depth interviews were applied in this study by using a key informant technique. An interview guide provided the questions that were asked. All interviews were recorded electronically and manually and were conducted in English.

RESULTS OF THE EMPIRICAL SURVEY

The empirical survey reveals three main concerns. Firstly, the community is unaware of the nature of tourism development projects. The study indicates that sometimes the residents are not given enough information regarding CBT projects; therefore no community input into tourism plans and projects is made. Furthermore, the study notes that sometimes community meetings are rushed and that most invitations are sent to highly educated professionals and local entrepreneurs. These meetings are usually in English, thus excluding the majority of the population.

Secondly, the study reveals that on the one hand, donor organizations and support agencies are given the responsibility of implementing CBT projects. On the other hand however, community members are restricted from fully participating in these projects.

Thirdly, the study reveals that high expectations are raised amongst the community at the beginning of CBT projects, but sometimes these do not materialize at the end.

PERCEPTIONS OF COMMUNITY PARTICIPATION IN CBT PLANNING

32.8% of the respondents disagreed that local residents spearhead the CBT planning process, while 20.9% strongly disagreed. Whilst the policy of the Ministry of Environment and Tourism stipulates that community participation should be maximized in the CBT planning process (MET 1995: 5), this community is not fully involved in the planning process. 34.3% of the respondents strongly disagreed that residents have an input in CBT policy formulation, and 31.3% indicated that residents are not involved in the decision-making process. 31.3% strongly agreed that local residents are over-dependent on foreign investors, NGOs and government when it comes to CBT planning at Twyfelfontein. With the statement that locals are incapacitated when it comes to tourism expertise 29.9% strongly agreed and 31.3% agreed with the statement that locals are incapacitated when it comes to tourism expertise. CBT theories indicate that local residents have become co-dependent on NGOs for tourism planning and often the NGOs do not understand the needs of local residents. Hence, local residents become objects of CBT development rather than being the ones who spearhead tourism planning in their region (Tosun 2000: 614). According to Maxi Louis from NACSO, communities are involved in policy formulation as follows:

The local community was involved in policy formulation, but the community does change; the community that was there at the beginning of policy formulation is not the same community so you continuously need to have awareness so that they understand what is required of them in terms of the policy, and I think that it is government's responsibility as well as those of the community.

When examining the above results against the backdrop of CBT theories as propounded by Pretty in her community participation typology, and using Butler's tourist area lifecycle (Mason 2003: 119; Tosun 2000: 627), it becomes clear that the level of participation at Twyfelfontein is still at a manipulative participation stage: CBT planning does not rest with the community, but rather with stake-holders and members of the conservancy management committee.

If this is the case, a larger community is likely to be left out of the decision-making process. In such a case, the needy community is likely to be forced to accept any form of development, which is

decided on their behalf by the powerful few. According to Butler's tourist area lifecycle, the level of local participation in tourism planning is a reflection of the destination stage of development (Tosun 2000: 627). The study shows that the number of tourist arrivals at Twyfelfontein exceeds local residents' numbers and, as such, the control of tourism is with outsiders.

This view is supported by Maxi Louis who laments that local community participation may not be able to pass beyond the 'manipulative stage' (according to Pretty's typology for tourism planning) unless the community gains rights over tourism resources. She states that:

When the whole process of setting up the World Heritage Site started I was part of the process and, according to my understanding, the local community residing at Twyfelfontein was identified as one of the stakeholders that will be involved as part of the decision-making process when it comes to certain issues that need to be implemented at the site. However, when I look at the World Heritage Site, we have become the bosses of the local community rather than being equal stakeholders in decision-making; that is my own personal view in terms of what I see happening to the conservancy. Many times when I have meetings with conservancy members they feel removed and they just need to be informed about issues as this is a government institution and so I think that the community does not understand some of their rights in terms of these issues. The local community feels a bit sad because they were promised that they will be part of the decision-making process, but they are just being informed of what is going to happen tomorrow, which is why I think the rights issue is not well defined in terms of the community with regard to the World Heritage Site.

In support of Louis's view, a majority of respondents (31.3%) agreed that local residents lack expertise in tourism and that therefore they could not participate in CBT development. Jenkins (1993: 288) also argues that:

The reasons why local residents do not participate in CBT development, is due to lack of understanding of complex and technical tourism planning issues, and they do not understand how the tourism planning process operates and how decisions are made.

Frans Durant from Twyfelfontein Country Lodge has clear views regarding the conservancy:

It is sometimes difficult to work with conservancy because they cannot make decisions to go into projects with the private sector, which will benefit the area. And some projects get started and in the middle they collapse because there is not enough collaboration from both ends; between the private sector and the conservancy.

Tosun (2000: 619) points out that there are three types of limitations on community participation in CBT planning and development, namely operational, structural and cultural. The findings of this study show that Twyfelfontein is experiencing operation limitations where tourism planning is fragmented: external agents spearhead the process of CBT planning, whilst residents are expected to deal with negative impacts that arise owing to tourism development. The study also reveals structural limitations at Twyfelfontein with regard to the leadership of the conservancy: it seems that the structure of the constitution has limited the progress of the development process.

Cultural limitation is also evident at Twyfelfontein, since there is apathy among the needy people. They feel inferior and therefore cannot effectively participate in tourism planning, hence their needs are not met through implementation of CBT projects at Twyfelfontein. Sofia Snyman, tourism manager at First National Bank, states as follows:

The problem with many entrepreneurs is that they have this idea about tourism that it is bringing in a lot of money and they want to get into tourism, but they do not understand the industry and even the proposals that they put together are not up to scratch and when you ask them about it, you realise that they have no clue about the business that they want to venture into.

Respondents were asked to state whether the community participatory process followed at Twyfelfontein is effective or not. A total of 40.3% agreed that the process was not effective, whilst 29.9% disagreed.

Besides the fact that annual general meetings are held at Twyfelfontein involving the local community, a majority of respondents still feel that the process of participation is not effective, as alluded to by Sharpley and Telfer (2002: 152).

In general, the findings indicate that a majority of respondents are in agreement with the fact that community participation in CBT planning is not being successfully implemented at Twyfelfontein because local residents lack capacity (31.3% agree) and start-up capital (43.3% strongly agree). However, the issue on the ground involves more than mere community participation: it indicates a need for incorporating human resource development into the planning process to increase the capabilities of locals to participate actively in CBT planning and development. Mere participation of the community via meetings and workshops, which are held once a year at Twyfelfontein, may not be effective as long as the perceived benefits are not in line with expected returns. The following table summarises the results discussed above.

Table 1: Perceptions of community participation in CBT planning

Perceptions of community participation in CBT planning	5 Strongly Agree	4 Agree	3 Undecided	2 Disagree	1 Strongly Disagree
<i>Percentage</i>	%	%	%	%	%
Local residents are spearheading the process of CBT planning at Twyfelfontein.	4.5	28.4	13.4	32.8	20.9
Local residents have input into CBT policy formulation.	0.0	29.9	9.0	26.9	34.3
Local residents are fully involved in the decision-making process at Twyfelfontein.	4.5	26.9	14.9	22.4	31.3
Local residents are over-dependent on foreign investors, NGOs and government for CBT planning at Twyfelfontein.	31.3	20.9	14.9	17.9	14.9
Local residents lack expertise in tourism and therefore cannot make meaningful contributions.	29.9	31.3	4.5	28.4	6.0
Community participatory processes followed at Twyfelfontein are not effective.	14.9	40.3	11.9	29.9	3.0

Whilst the local community is involved in sustainable tourism development, residents need to have control over tourism development programmes. This includes broad-based community input. It is evident from the study that the benefits from tourism are not flowing squarely to the needy; therefore, there is a need for mutual cooperation amongst stakeholders. The external agencies and tourism businesses must strive for equity regarding long-term plans and tourism strategies. These strategies must be linked to a broader context that reflects socio-economic development.

Strategies should be developed to ensure that sustainable tourism becomes socio-economically sustainable and of benefit to the Twyfelfontein community. These strategies should provide a framework through which local communities can be effectively involved as participants in sustainable tourism development.

RECOMMENDATIONS AND CONCLUSION

The overall aim of this study was to investigate the local community's perceptions of CBT. The study examined structures and institutions within the context of CBT development at Twyfelfontein. Whilst the Government of Namibia has recognized tourism as a potential means of poverty alleviation and rural development, issues of governance and ownership of commercial activities are still not yet under the control of locals. The study argues that tourism development has been pursued for economic purposes by tourism's private sector rather than for sustainable development. Whilst the conservancies were established as a strategy to alleviate poverty, the study concludes that development benefits have not yet filtered down to the needy. This study recommends that in order for development to be meaningful, the sustainable tourism development process should empower local people to take control of their own lives and heritage by building their own capacity and ownership of their local resources.

Local participation through ownership, capacity building and control should have precedence over pure economic issues. The study notes that development should be led and controlled by a model that does not compromise the cultural heritage and identity of the indigenous people. The study recommends that CBT operational guidelines should allow locals to manage their own economic endeavours by promoting sustainable tourism development through empowerment and local participation as this seems to appeal to the local community. Whilst the community at Twyfelfontein perceives CBT as an avenue for locals to regain control over their cultural and natural resources, needy Namibians are not being empowered, since those who have real power overshadow the powerless in decision-making processes. Rather than provide sufficient development opportunities, tourism has become a development constraint in some cases for locals. The study concludes that CBT, as a dominant development model, could fail if it does not recognize the capacity, values and desires of potential beneficiaries, since the perception is currently that the biggest beneficiaries are members of the private, and to some degree foreign, tourism industry.

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THE IMPACT OF FLOODING DISASTERS ON FOOD SECURITY IN MOZAMBIQUE AND ZAMBIA

Snow and Albertsen¹

ABSTRACT

Flooding has been attributed to climate change and climate variability which, according to predictions, will affect the future food security of populations across Africa. Climate change has already had a great impact on the natural environment, affecting agriculture and fishing – and so influencing the availability of food. However it is not flooding only, but also political, social and economic elements that can influence food security. This paper therefore uses a holistic approach to subjects relating to development and climate change, in order to achieve a vision of sustainable development and thereby the long-term protection of human security.

The paper examines the influence of flooding on food security in Mozambique and Zambia in 2000 and 2007. Using existing statistics, the investigation also includes an exploration of the causes, consequences and management of flooding. The destruction of structures, assets and infrastructure resulting from flood disasters was found to have increased the inhabitants' vulnerability to food insecurity. However with careful management, planning and adaptation, the undesirable consequences of extreme weather events can be mitigated or prevented. Mozambique and Zambia appear to be geared towards overcoming the problems associated with climate change and extreme weather events, thus demonstrating that they are committed to the development process.

Keywords

adaptation, Africa, agriculture, aid agency, climate change, development, disaster management, disease, displacement, emergency relief, extreme weather events, fishing, flooding, food security, government, health, mitigation, Mozambique, risk reduction, Zambia

INTRODUCTION

Climate change has been identified as a major threat to natural systems, with effects like decreasing water tables and an increase in the intensity and frequency of extreme weather events such as cyclones, for example (Godrej 2006). For Africa, the climatic and non-climatic difficulties facing the continent are many. Extreme poverty, armed conflict, drought and HIV/AIDS are some of the most commonly known challenges. However, recent years have seen the additional burden of devastating floods that have swept across the region [Emergency Events Database (EM-DAT) 2008].

The greatest concern with regard to climate change is that it poses a risk to future human security² and development. With specific regards to food security, the Intergovernmental Panel on Climate Change (IPCC) (cited in Riché 2007) has predicted that climate change will endanger agricultural production, fishing and access to food in Africa. Flooding is considered to be one of the threats to the Millennium Development Goal aimed at reducing poverty and hunger by 2015. Moreover, the consequences of climate change can reverse human development in countries that are affected by extreme weather events [United Nations Development Programme (UNDP) 2007: 85].

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²Human security is divided into 7 dimensions, namely personal, health, food, community, political, economic and environment (Alkire 2003).

The main objective of this paper is to establish an understanding of the impact of flooding on food security in Mozambique and Zambia in 2000 and 2007. The causes and consequences of the flooding, as well as the events that occurred before and after the disaster, had to be evaluated in order to determine whether or not the governments of these countries were equipped to manage a consequent food crisis. In addition, the research aimed to make recommendations for combating future food insecurities that may arise from flooding.

CLIMATIC AND DEVELOPMENTAL DYNAMICS WITH RESPECT TO FLOODING

The study was mainly directed at determining the relationship between climate change and flooding and how it affects food security, with specific reference to developmental issues.

Climate change and flooding

In the developing south any hindrance to development (natural or man-made) only magnifies an already difficult situation. Africa especially raises many concerns. Apart from the continent being viewed as one of the world's regions to be greatly affected by climate change (IPCC, quoted in Riché 2007), the countries in sub-Saharan Africa have shown only marginal development, while poverty continues to escalate. Flooding, for example, is considered to be one of the main reasons why Africa's urban population cannot overcome poverty. The following map depicts the flood prone regions in Africa, clearly showing eastern Africa as the area most affected.

Figure 1: Flood prone countries in Africa



Source: World Health Organization (WHO) Emergency and Humanitarian Action (EHA) 1999.

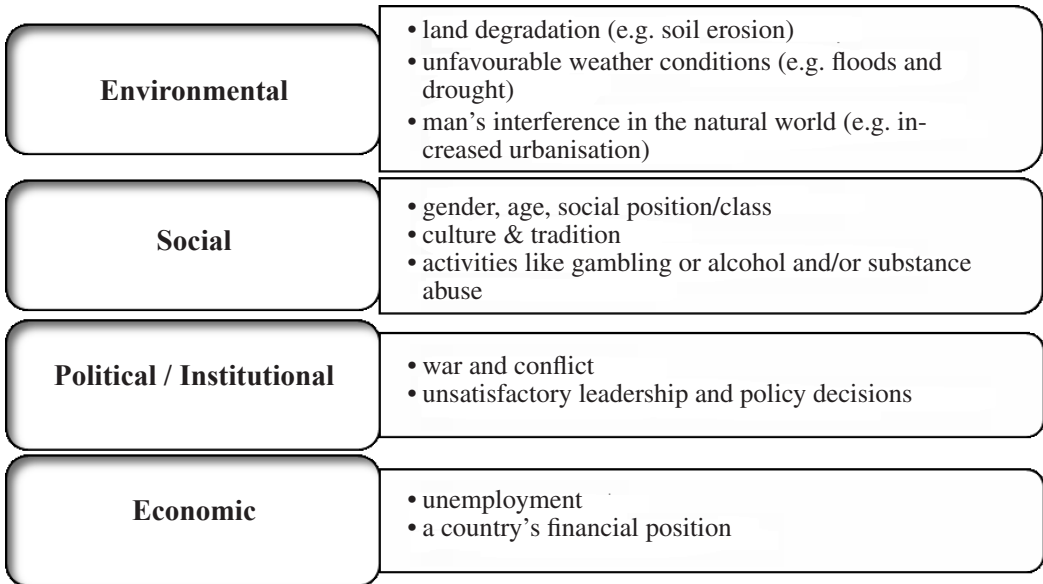
A population faced with flood-drought cycles is vulnerable to flooding. Unexpected climate shocks exert a great impact because people are not given enough time to prepare for crisis avoidance or mitigation (Alkire 2003: 2). Insufficient and poor quality data to feed into climate models further complicate matters in Africa, resulting in limited good quality early warning information (UNDP 2000: 44 & 45).

Very poor households may not be able to recover at all from disasters and are instead hurled into even deeper poverty (UNDP 2007: 88 & 89). This fact ties in with the UNDP's (2007: 1) statement that "climate change is the defining human development issue of our generation."

Food security

Experts from the IPCC³ have predicted that climate change will severely threaten food security in many African regions, while other authors³ hold that climate extremes are not the only contributors to food insecurity; they also highlight political and socio-economic factors. Amongst others, food security is considered to be influenced by the elements outlined in the following diagram.

Figure 2: Factors influencing extent of food security / insecurity



Sources: Godrej 2006 and Young 2007.

The food security status of a population can vary greatly from region to region. Political instability, corruption and inappropriate policies, including lack of planning, have been identified as political constraints hindering sustainable development in sub-Saharan Africa. According to Brown (2004: 197) food security is no longer solely the responsibility of ministries of agriculture. Rather, various ministries (e.g. transport), as well as non-governmental organisations (NGOs), are also important actors with regard to food security matters. Brown (2004: 191-192) suggests a holistic approach, where various specialists work together to secure crop yields and so ensure future food security. Young (1997: 166) too recommends a blend of international, national and community level advocacy if hunger is to be successfully combated.

As food prices escalate the poor are likely to purchase cheaper, nutrient deficient foods, or be forced to reduce their food intake. On the other hand, the positive aspect of rising food prices is that this could stimulate agricultural production, thereby reducing food importation. Apart from agricultural undertakings, the means of livelihood of a population also has a bearing on food security. For example, rural populations are often engaged in diverse livelihood activities such trading (Young, 1997: 78). However, when people's earning potential is hampered during a disaster they lose the wherewithal to purchase food.

See ³Boko, Niang, Nyong, Vogel, Githeko, Medany, Osman-Elasha, Tabo & Panda 2007:435, as well as ³ Young 1997 and Lappé, Collins & Rosset 1998.

SUSTAINABLE DEVELOPMENT AND LINKS WITH PROVISION OF RELIEF

If sustainable development⁴ is to be longterm, ecological, political, economic and cultural sustainability must be promoted. Food and non-food production activities therefore require prevention of environmental degradation and proper management of land and water, and also plant and animal genetic sources. In Africa, sustainability and food security are dependent on the condition of – and interaction between – the environment and population and agricultural growth. These factors need all to be understood at the onset of policy-making if food security is to be achieved (Economic Commission for Africa 2000: 1-6).

In order to reduce the need for emergency relief, links with development processes can provide a means of decreasing:

- i. the frequency and intensity of shocks, and the
- ii. dire effects that these can produce.

However, individuals, households and economies would have to become less susceptible and better equipped to recover from climate shocks (Buchanan-Smith & Maxwell 1994). Furthermore, lessons from disasters should be learnt when planning and implementing reconstruction programmes so that a repetition of past mistakes may be avoided. Adaptation is another proposed solution for coping with the changing climate and its associated effects.

METHODOLOGY

Using a descriptive, comparative case study approach, quantitative and qualitative research methods were used to extend the scope of the research and achieve the most comprehensive understanding of the impact of flooding on food security.

The cases for investigation were selected through use of a purposive sampling technique. This sampling procedure found that flood events affected:

- 4 500 000 people in Mozambique in 2000 and
- 1 553 531 people in Zambia in 2007.

Moreover the 2000 flood also affected Zambia and in 2007 Mozambique did not escape the ravages of the flood, albeit to a lesser degree. Additionally both countries' demographics and histories reveal colonial legacies and weak economies, as well as problems with poverty and HIV/AIDS. On the other hand, both Mozambique and Zambia have warm climates, abundant natural resources, and favourable environments for farming and fishing. Their growth and development profiles possess promising possibilities for future food production, in spite of a number of obstacles, including poor infrastructural development.

Existing statistics (e.g. from reports and scholarly journals) were used to source data. Despite the time and cost benefits of utilising existing statistics, the disadvantages are that:

- i. Information relevant to the study was not always found;
- ii. Errors were observed in some of the data;
- iii. Unnecessary time was spent cross-checking data for errors;
- iv. Data were often omitted.

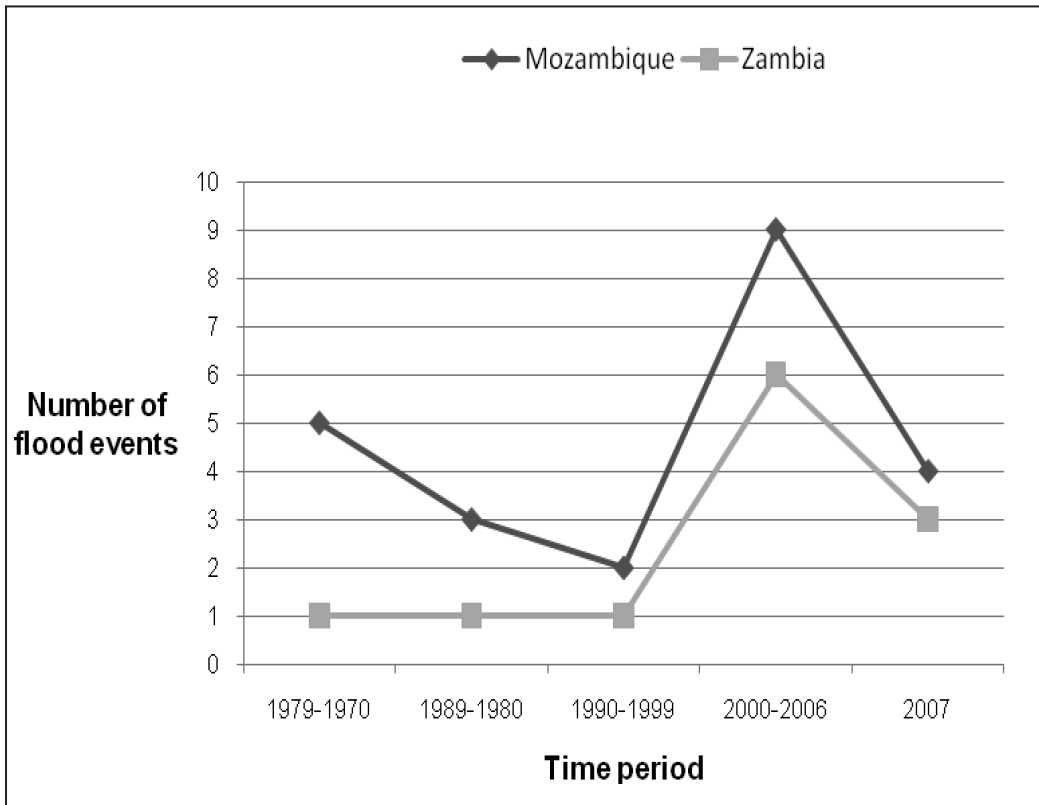
⁴Sustainable development has been described by the Economic Commission for Affairs (2000: 1) as "...development which meets the needs of the present without compromising the ability of future generations to meet their own needs."

RESULTS

The significance of examining the impact of flood disasters in Mozambique and Zambia was highlighted by the finding that over a 37-year period the largest number of flood events have occurred during the last 7 years. The following graph shows the frequency of flood events, from 1970 until 2007, in the countries under investigation.

If this trend continues, it would lead to the socio-economic decline of the two countries. As mentioned in the introduction, such flooding would undermine any attempts to reach the Millennium Development Goal of reducing poverty and hunger by 2015.

Figure 3: Number of flooding events in Mozambique and Zambia: 1970 – 2007.



Source: International Disaster Database (EM-DAT) 2008.

Causes and consequences of the 2000 flooding

a) Mozambique

The Mozambican flooding of 2000 began on 26/01/2000 and ended on 27/03/2000 (EM-DAT 2008). The whole of Mozambique suffered in varying degrees: approximately 4 500 000 persons were affected and 800 were killed in the flooding. The following table provides a summary of the events that resulted in this flooding.

Table 1: Causes of the 2000 flooding in Mozambique

Cause	Effects
Torrential and heavy rains.	Water levels of the Limpopo, Incomati, Umbeluzi, Sabie and Save Rivers rose, leading to flooding.
Cyclone Eline landed about 100km South-west of Beira on 22/02/2000.	Weakened to a tropical depression the next day and raised concerns that it would increase the Limpopo River's levels and cause further flooding.
Heavy rains occurred in South Africa and Zimbabwe.	Further increased the water levels of the Save and Limpopo Rivers.
A 2nd tropical cyclone, Gloria, approached the country but weakened in intensity by about 06/03/2000. Heavy rains were experienced in South Africa, Zimbabwe and Mozambique throughout March.	Worsened the flooding.
Discharges from Massingir Dam and heavy rains in South Africa and Zimbabwe.	Raised the Limpopo River's levels.
Tropical storm, Hudah, hit the North of Mozambique on 05/04/2000.	Resulted in heavy rainfall in Gaza and Inhambane provinces .

Sources: UN Office for the Coordination of Humanitarian Affairs (OCHA) Reports 1, 9, 14, 21, 23 & 25 (2000.)

In addition to large amounts of rice and sorghum, one third of Mozambique's maize crop, 80% of its cattle and about 23 000 tons of fish products were lost [World Food Programme (WFP), quoted in Slaughter 2000; OCHA Reports 5 & 6 2000 and UNDP 2000: 36].

Numerous transport routes were cut off, making air transport the only option for rescue and relief operations in many areas. However, Xai-Xai airport in Gaza province was also flooded (OCHA Reports 3, 5, 6 & 7 2000). Hundreds of houses and schools were affected by the flooding. Public facilities (e.g. churches) were turned into shelters for the displaced. NGOs assisted with the rebuilding of about 40 000 houses, while resettlement kits and plots of land were distributed to families, to assist them with resettlement (OCHA Reports 3, 5, 11, 13, 14, 16, 28 & 29 2000). Various health facilities were impacted and medical equipment was destroyed. Electricity networks were disrupted and 90% of irrigation schemes were destroyed.

Water and sanitation systems were destroyed and/or polluted, causing the spread of waterborne diseases (OCHA Reports 2, 9, 17 & 24 2000). Malaria, diarrhoea, respiratory and skin diseases were commonly reported: by the middle of March 2000 there were 1811 registered cases of cholera. Many children under the age of 5 years suffered from severe malnutrition and dehydration (OCHA Reports 15, 22, 24, 25 & 26 2000). As flood waters receded, human corpses and dead animals were exposed, posing serious health threats. People's safety was further threatened as floodwaters moved landmines to non-mined areas (OCHA Reports 14, 17 and 28 2000).

b) *Zambia*

About 12 000 people were affected and 1 515 hectares of crops were damaged by the flooding brought about by the opening of the Kariba Dam's floodgates in Zambia (British

Broadcasting Corporation [BBC] 2000 and Mpfu 2000: 30). However, Mpfu (2000: 30) estimates that 13 000 households were hit, indicating that possibly many more people were actually affected. Some people tried to save their crops by diving into flood waters and at least one person was attacked by a crocodile. No reports were found about disease outbreaks, displacement or damage to transport routes and infrastructure. The only mention of damage to buildings in the 2000 Zambian flooding was that tourist lodges on the lower Zambezi were flooded (BBC 2000).

CAUSES AND CONSEQUENCES OF THE 2007 FLOODING

a) *Mozambique*

The Mozambican flooding of 2007 began at different times and affected various areas. The flooding was reported to have occurred at the beginning and end of 2007 (Dartmouth Flood Observatory 2008; EM-DAT 2008 and OCHA Report 1 2007). About 485 000 people were affected and 40 lives lost. Localised flooding was experienced from the beginning of the year, and the situation was worsened by the events outlined in Table 2.

Table 2: Causes of the 2007 flooding in Mozambique.

Cause	Effects
The National Water Directorate (DNA) decided to increase the discharge rate from the Cahora Bassa Dam.	Large-scale flooding was anticipated.
Heavy rains occurred across the Zambezi River Basin.	This increased the water levels of the Zambezi River and its major tributaries.
Increased discharge rate	Expected to cause major flooding that would affect Sofala, Manica, Tete and Zambezia provinces.
Cyclone Favio struck on 22/02/2007.	133 670 people were affected in Vilanculos, Inhassoro, Govuro and Massinga; 9 were killed.

Source: OCHA Reports 1, 2 & 7 2007

In March 2007 the flood damage to infrastructure was estimated to be US\$ 71 million. The flooding destroyed about 277 000 hectares of crops and seriously affected transport routes, houses, schools and health care facilities in Mozambique (OCHA Reports 1, 2, 4, 10, 11, 12 & 13 2007). Hundreds of thousands of displaced people were housed in accommodation centres. Again, vulnerable children were a major concern. Activists from Save the Children worked on protection issues and 80 police officers were deployed to assist (OCHA Reports 6, 7 & 13 2007). Food shortages in rural areas and the availability of food at shelters caused people to move to accommodation centres after the flood waters had receded (OCHA Report 13 2007). No long-term displacement was foreseen; hence plots of land were identified for resettlement purposes (OCHA Reports 10 & 11 2007). As in the 2000 flooding, waterborne diseases were common (OCHA Report 2 2007). In addition to treating diseases that arose from the flooding, other health care and/or promotion activities were provided, for example children were given vitamin A supplements.

b) *Zambia*

The Zambian flooding of 2007 began at different times and impacted on various areas. Approximately 1 553 531 persons were affected and at least 5 people were killed (Dartmouth Flood Observatory 2008 and EM-DAT 2008). See Table 3:

Table 3: Causes of the 2007 flooding in Zambia.

Causes	Effects
Excessive rainfall since December 2006	Widespread flooding across the country
Backwashes from the Cahora Bassa Dam in Mozambique	Increased levels of the Zambezi and Luangwa Rivers caused flooding
In mid-February the Zambezi, Kafue and Luangwa Rivers burst their banks.	Worsening the situation

Source: Consolidated Appeals Process (CAP) 2007: 1 & 3.

There was widespread crop loss, including the loss of traditional varieties and germplasms⁶ and fish camps were destroyed (CAP 2007: 4, 15 & 16). Certain areas were rendered either inaccessible by road, or only accessible by 4-wheel drive vehicles. Thousands were displaced, having to be housed by family members, or in public buildings or temporary shelters (CAP 2007: 4 & 6). The risk of waterborne diseases and malaria was also very high, but flood-induced diseases were treated and various other health services (e.g. psycho-social support) were provided (CAP 2007: 4, 6, 9 & 11).

LOCAL AND INTERNATIONAL MANAGEMENT AND INTERVENTION

The BBC (2000) reported that there were no preparedness policies or actions in place to help the Zambian population cope with the 2000 flooding. No further documentation concerning the government or any other organisations' management or assistance during this event was found, leaving much uncertainty about the authorities' actions (if any).

In comparison, during the Mozambican flooding disaster of 2000, more than 200 NGOs worked together with the government (OCHA Reports 1-30 2000). An On-site Operations Coordination Centre (OSOCC) was established to support coordination efforts between emergency service providers (OCHA Reports 2, 7 & 5 2000). A 'lessons learned' exercise was also planned by the Mozambican authorities and numerous meetings were held throughout 2000. Besides other financial donations, the Reconstruction Conference (held in Rome in May 2000) raised US\$ 452,9 million (OCHA Reports 11 & 26 2000). In addition to financial assistance, Mozambique also received non-food items (e.g. boats) and food aid.

In 2007, Zambia received assistance from UN agencies as well as other institutions (CAP 2007). The government, directed by the Disaster Management and Mitigation Unit (DMMU), assisted the affected population with their most immediate needs (e.g. tents for housing). As part of the management process, the relief and recovery operations were divided into:

- i. 1st phase – provision of relief for 3 months, and
- ii. 2nd phase – long-term recovery (CAP 2007: 4-8).

The government's US\$ 71 million reconstruction and recovery plan which was launched on 5 March 2007 focused on:

- i. agriculture production,
- ii. support to the private, health and education sectors,
- iii. rebuilding of public infrastructures, water supplies and roads, and
- iv. resettlement (OCHA Report 11 2007).

⁶Seed or other plant matter used to reproduce plants.

A cluster approach was utilised to ensure that the government received coordinated support from the various partners (OCHA Report 5 2007). For example, a food security cluster was headed by WFP and Food and Agriculture Organization (FAO), and a health cluster was headed by WHO.

FLOOD DISASTER FOOD ASSISTANCE

By May 2000, the WFP had distributed 71 181 tons of food items in Mozambique (OCHA Report 26 2000). However, due to their remote locations, many people may have been overlooked in the distribution process (OCHA Report 27 2000). Agricultural kits were also distributed so as to help populations resume their food production activities. The only information about the assistance provided to the affected population in the Zambian flooding of 2000 related to the distribution of seed supplies (Mpofu 2000: 34). The research did not discover any further details about how the Zambian population was helped to cope with crop loss.

Similarly to the 2000 flood disaster in Mozambique, thousands of tons of food were distributed in the 2007 disaster. About 463 000 people were supported by food-for-work, food-for-assets and vulnerable group feeding programmes that were run from May to July (OCHA Reports 11 & 12 2007). The authorities and other organisations planned to support the second agricultural season (estimated to produce 60 000 tons of food) by providing vegetable seed kits, cassava and trees (OCHA Report 13 2007). The Zambian government managed the food relief operations in 2007 by utilising their own food stocks to fulfil immediate needs (CAP 2007: 15). In addition, the FAO supported activities aimed at rescuing germplasm resources from flood-affected areas and they also worked towards vaccinating cattle against diseases like Anthrax (CAP 2007: 16). Moreover, dry season cropping was promoted to increase food availability.

EXPLANATION OF RESULTS

The intense, frequent and unpredictable weather events that were experienced by Mozambique and Zambia points to the role of climate change in hydrometeorological catastrophes.

The impacts of flooding on food security

The flooding had repeatedly impacted many of the same areas (Dartmouth Flood Observatory 2008 and EM-DAT 2008), giving the environment very little time for recovery between these episodes. Also, the destruction of tools and implements (e.g. ploughs) prevented people from swiftly resuming food production activities. Moreover, after a flooding event, it may take months before planting can be carried out and before crops are ready for harvesting. Thus, a population that does not have food reserves or a crop to harvest immediately would have to depend on assistance from government or from other institutions.

The loss of animals is another factor that threatens a population's food security and diminishes its asset base and resources such as draught power (WFP, cited in Slaughter 2000). No mention of loss of sheep, goats, chickens and pigs was made in the reports, but it can be assumed that, like the cattle, large numbers of these animals perished: this would further threaten household food security.

The destruction of houses and possessions results in the loss of cooking utensils and food that may have been stored in the home (OCHA Report 2 2007 and Zambia Vulnerability Assessment Committee [ZVAC] 2008: 5). Savings would therefore have to be spent on replacing these necessary possessions. Displaced people who have to be resettled in new areas would have to rebuild their entire lives.

The disruption of essential services will also compromise a population's food security. Damaged transport routes isolate communities, causing their supplies to be cut off. As a result, even if a country has enough food stores, these may not be accessible in the areas where they are most needed. People would also be prevented from travelling to work or to markets, and would therefore not be able to earn money with which to buy food. Without electricity, appliances that are used to store or make food become useless. Damaged and polluted water and sanitation systems increase the risk of water borne diseases (e.g. diarrhoea) that can prevent people from working or benefiting from the food that they do consume (OCHA Report 2 2000).

Children who depend on school feeding schemes would be left without this food source when their schools are damaged and/or disrupted. The spending of resources on repairing and replacing structures and infrastructures (e.g. schools and health care facilities) that were affected by flooding can delay the overall development of a country and increase the country's debt as funds are borrowed to finance recovery operations (UNDP 2007: 1-18 & 73-107). Also, millions in export revenue can be lost: for example, in Mozambique in 2000, at least US\$ 36 million in export revenue from the fishing industry had to be forfeited (UNDP 2000: 36).

The displacement of large numbers of people as a result of these flooding events increases the vulnerability of other already vulnerable groups (e.g. women and children). The Mozambican authorities recognised this and therefore deployed police officers to assist with protection duties in accommodation centres (OCHA Reports 8 & 13 2007). Besides gender-based violence issues, conflict may also arise between minority groups as people compete over limited resources (Brown 2004: 23-26). An example of such conflict is a riot that broke out (injuring 10 people and killing 5) at a camp in Mozambique in 2000, because of unplanned food distribution (OCHA Report 21 2000): these riots can escalate and cause political instability and in turn lead to still more hardships.

When a population is faced with unpredictable weather patterns that disturb their routine, they may be left unprepared or uncertain about what course of action to take. This was the case in the Zambian flooding of 2007 when weather events did not follow their normal patterns (CAP 2007: 3). People then become dependent on the authorities, or other experts, to alert them to approaching dangers and to educate them about appropriate response strategies.

Local and international management and intervention

National and international institutions' decisions before, during and after a disaster, play an important role in a population's experience of an extreme weather event and the food insecurity that may arise from it.

a) The 2000 flooding

The 2000 flooding in Zambia resulted in much criticism of the authorities. Little or no warning about the opening of the Kariba Dam's floodgates was given to the farmers along the Zambezi River. The authorities' lack of responsibility towards the affected population was further highlighted when they donated US\$ 1 million to Mozambique, while they had not provided any assistance to their own people (BBC 2000). Even though the BBC (2000) noted that people in the Lower Zambezi region would have starved without food aid, the only reports regarding assistance referred to seed distributions (Mpofu 2000: 30-33). It is therefore unclear as to what exactly happened with the affected population's food needs, as no further information was provided. This shortage of information points to a lack of interest in the welfare of the affected population.

The scale of the 2000 flooding in Mozambique even moved countries struggling with their own crises (e.g. Malawi) to assist Mozambique. However, the West received much criticism for its late reaction to the crisis (Slaughter 2000). Nevertheless, despite their delayed response, the Western community eventually provided tremendous monetary and non-monetary support. Moreover,

unlike its Zambian counterpart, the Mozambican government (together with international organisations) prevented starvation by providing thousands of tons of food aid to the population (OCHA Reports 13-16 2000).

In addition to relief and rescue operations, rehabilitation and development projects were planned right at the onset of the disaster, assisting the population to recover swiftly from the disaster (OCHA Report 5 2000). The numerous meetings, as well as assistance from the OSOCC office, helped to coordinate the agencies and their functions (OCHA Reports 2, 3, 7, 8, 13, 17-19, 22, 27 & 28 2000). Evaluation of the situation in Mozambique, a necessary strategy to establish the appropriateness of interventions, appeared to be carried out regularly (OCHA Reports 9, 13 & 15-17 2000). On the other hand a lack of attention to livestock problems did pose a concern for the agricultural sector (OCHA Report 24 2000). However, agricultural kits were distributed to assist the affected population to recover their livelihoods (OCHA Report 17 2000).

Nevertheless, even though Mozambique appeared to have handled post-disaster recovery appropriately, both Mozambique and Zambia were found to have neglected early warning activities in the 2000 flooding.

b) The 2007 flooding

Although the 2007 flooding in Mozambique occurred on a smaller scale than the 2000 event, it still had a significant impact on the country. The Mozambican government and their partners appeared to be even more watchful and responsive to the later disaster. Once again, Mozambique received monetary and non-monetary assistance from the international community. There was a greater focus on education requirements in the 2007 flooding, and educational materials were therefore also received (OCHA Reports 7, 11 & 12 2007). In addition, actions not undertaken in the 2000 disaster were in evidence in 2007. For example, forcible evacuation was used and activists were trained in sexual exploitation issues (OCHA Reports 2 & 9-13 2007). These newly introduced approaches indicate that the lessons learnt from the previous flooding were acknowledged and addressed in the later event. This was imperative in order to avoid repeating mistakes, and also to assist the population in coping with, and recovering from, the disaster.

As in 2000, regular meetings were held to coordinate and manage the responses to the 2007 disaster. The cluster approach and Interagency Map Centre provided coordination/management interventions (OCHA Reports 5, 6 & 10 2007). The Mozambican and Zambian water authorities coordinated the release of water from their dams so that downstream flooding of the Zambezi River could be mitigated (OCHA Report 2 2007). The authorities carefully controlled people's movement into accommodation centres and also their registration, in order to facilitate food distribution and the identification of shortfalls in the provision of assistance (OCHA Reports 12 & 13 2007). Furthermore, the 2007 flooding alerted the Mozambican authorities to the importance of making resettlement to safer areas sufficiently appealing so that the population would be encouraged to relocate.

As happened in 2000, the 2007 reports failed to specify how livestock and crop health issues were managed. However, a new approach to post-disaster assistance (i.e. Agricultural Input Trade Fairs) was introduced by the FAO, together with Mozambique's National Institute of Disaster Management (INGC) and the Ministry of Agriculture. This approach was projected to yield about 60 000 tons of food in the second agricultural season, thereby securing the population's access to food (OCHA Report 13 2007).

Although there were more early warning activities in Mozambique for the 2007 flooding, it was still insufficient (OCHA Reports 1 & 2 2007). However the distribution of 200 000 pamphlets on cyclone preparedness, by Save the Children and the INGC, was an important mitigation strategy (OCHA Report 10 2007). On the other hand, even though the pamphlets were produced in the local

languages, they remained inaccessible to the illiterates in the population. Landmine risk education and training were carried out, in order to protect the population from landmines that were moved to previously non-mined areas (OCHA Report 11 2007).

Unlike the 2000 flooding in Zambia, the 2007 disaster was far more widespread and destructive, and could therefore not be ignored by the authorities. Directed by the DMMU, the government headed the relief operations and provided for the population's basic needs. Assistance from the international community was also requested (CAP 2007: 1). However, apart from international institutions (e.g. Oxfam), there was no reference to specific foreign countries providing assistance (CAP 2007: 2 and ZVAC 2008: 3). The absence of foreign nation involvement could point to Zambia's weak relations with other countries, or their improved management ability; on the other hand it could be that they did not want their weaknesses exposed (CAP 2007: 8).

Along similar lines to Mozambique's cluster approach, Zambia organised a sector approach to coordinate and manage the 2007 disaster. However, unlike Mozambique, Zambia appears to have neglected to provide training on gender-based violence issues, HIV/AIDS education and the protection of vulnerable groups. It seems to require improved intervention strategies, and can learn much from Mozambique's approach to social interventions during a disaster. Regular assessments and evaluations, important for revising interventions, were however executed (CAP 2007).

Zambia apparently had enough food to assist the population during the 2007 disaster, as well as in the months that followed (CAP 2007: 5). This could be viewed as a successful feat by the authorities – or possibly not all food stores were destroyed by the disaster. Nonetheless, this local food availability allowed Zambia to feed its population, instead of waiting on external donors for assistance. The low maize prices in 2007/2008 indicated that there was a good grain supply on the market (ZVAC 2008: 10 & 11). Zambia's crop surplus of 250 000 tons was probably the main reason why the country continued to export maize during the flooding. Although reasons for the government's continued export were not found, financial greed could explain this action.

The fishing industry also suffered a major blow, with the loss of tons of fish products in Mozambique and the destruction of fish camps in Zambia, yet there is no reference as to how the fishing industry was supported and/or assisted in these countries.

Mozambique and Zambia are clearly reliant on each other's water sources. Their collaboration when opening dam floodgates in 2007 indicates the importance of mutual support for each other's efforts. If they were to continue sharing knowledge and expertise, they could improve various aspects of future development, as well as enhance living conditions in the region.

ADAPTATION AND RECOMMENDATIONS

Disasters need to be foreseen and forestalled while management in advance human security and development can be maintained and enhanced (Alkire 2003: 2). Adaptation and mitigation have emerged as two necessary approaches. However, how each country chooses to adapt to climate change will ultimately vary. Even though there is no blueprint for successful climate change adaptation, it is "Human development itself [that] is the most secure foundation for adaptation for climate change" (UNDP 2007: 172). Hence, as communities become less vulnerable to disasters, the benefits for development increase as well.

The following are examples of strategies that can be used to foster flood disaster preparedness, and provide mechanisms for risk reduction, coping and adaptation:

- Flood fighting (e.g. sandbagging) and the prevention of further disasters (e.g. landslides)
- Structural (e.g. embankments) and non-structural (e.g. flood forecasting) interventions to be

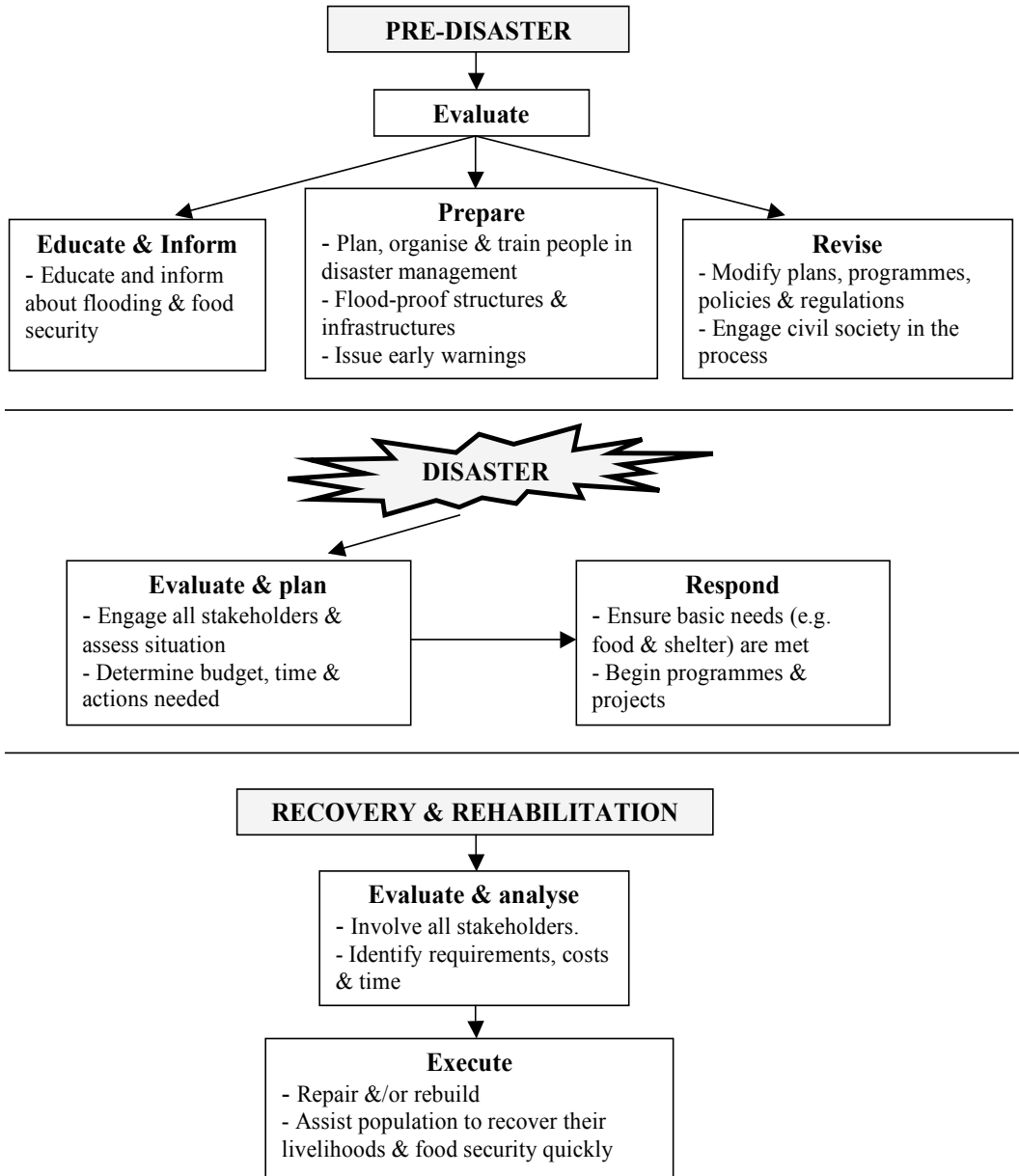
included in development processes and in relief and recovery operations

- Disaster risk reduction, combined with emergency relief and development planning
- Information and early warning to be understood by all – and relevant to various groups
- Continuous assessment of relief and recovery programmes to address actual and current conditions and/or events
- Lessons learnt from past disasters to be applied to the current situation
- Agencies to bear preventative and adaptation requirements in mind when delivering aid and to acknowledge and utilise indigenous knowledge
- Community preparedness to be enhanced by capacity-building, creating groups with a specific function (e.g. life-saving), and by encouraging them to connect with national disaster management structures
- Temporary shelters with water, sanitation and cooking facilities to be provided promptly and swift livelihood recovery to be encouraged
- Farming practices to adapt to the changing climate (e.g. by altering cropping patterns)
- Food safety education to prevent food spoilage or food-borne diseases with improved food production, storage and distribution to increase availability
- Indigenous coping knowledge and skills (e.g. boiling water to prevent waterborne diseases) to be used by a population while receiving aid during a flood disaster.

No evidence of preparedness or risk reduction strategies prior to the flooding in Mozambique and Zambia in 2000 and 2007 was found in the research. Had the populations received optimal early warning information, they would have been better equipped to protect themselves and their belongings. Even though both Zambia and Mozambique supposedly have early warning systems in place, these will have to be improved if they are to be beneficial: timely information is absolutely necessary for the control and management of disasters like flooding. Both Mozambique and Zambia can improve strategies for assisting their population in terms of adaptation, development and security issues.

It should be noted though, that complete protection from flooding is not necessarily suitable or environmentally desirable (Associated Programme on Flood Management [APFM] 2006: 21). Even when strategies are used to decrease flood hazards, there will always be a certain amount of risk present. Thus, flood preparedness, together with provision for response and recovery, play an important role in flood hazard reduction. The following flood disaster/food security management plan can be used as a guideline to reduce risks associated with flood disasters.

Figure 4: Flood disaster / food security management plan outline.



Source: Adapted from APFM 2006:21-27

CONCLUSION

Although climate change increases the intensity and frequency of extreme weather events, it is not merely these climate extremes (e.g. flooding) that can influence a population's food security. Various other aspects (e.g. political, social and economic and other man-made factors) and their interrelationships may determine how this basic human need is experienced.

While flooding is a naturally destructive phenomenon, man's contribution to the process and consequences of flooding (e.g. by changing ground cover) is particularly relevant. Similarly, government or other institutions' decisions on how to provide assistance during such times may determine to what extent the population will be protected and/or supported. People who have lost everything in a natural disaster are largely dependent on such organisations for their survival. Without their assistance, people would perish from hunger, disease and physical harm. However, by linking relief with development, the latter can decrease the need for emergency relief, while concomitantly improved emergency relief can support development (Buchanan-Smith & Maxwell 1994).

The research revealed that food security in Mozambique and Zambia was greatly compromised by the flooding that occurred in these countries in 2000 and 2007, as crops, livestock and implements, amongst other things, were destroyed. Both countries did however improve on their management of the flooding, and appear to have paid attention to the lessons learnt in earlier flooding events. However, early warning systems to protect the population from a potential disaster were not of an optimal standard. Risk reduction therefore emerged as an area that required more attention. In addition, the sharing of knowledge and skills between governments and institutions needs to be enhanced in order to foster more useful and appropriate approaches to the problems connected with flooding. As recommended, preparedness and risk reduction, together with proper information and early warning, and also thorough evaluation and assessment, are essential if a population is to be protected from hazards and insecurities.

Although extreme weather events cannot be controlled, the correct coping mechanisms, timely intervention, and effective management and/or adaptation techniques can contribute to the mitigation or avoidance of many of the negative effects brought about by flooding. Hence, the promotion or maintenance of food security during a flood event can be viewed as a very real possibility. However, as the Economic Commission for Africa (2000: 3) recognises, past policies would need to be reviewed in order to properly address food security challenges.

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HIV/AIDS AS A THREAT TO INVESTMENT IN TOURISM PROJECTS – THE CASE OF BOTSWANA

Ketshabile¹

ABSTRACT

The purpose of this paper is to provide a theoretical underpinning for an exploration of the practical implications of HIV/AIDS on investments in tourism projects in Botswana. Tourism, second only to mining, is a key economic sector in Botswana which – together with the rest of the Southern African region – is faced with a severe prevalence of HIV/AIDS. This paper is based on an in-depth literature review of published journal papers and the results of empirical research surveys conducted by various tourism companies in the country. This paper analyses the possible threat of HIV/AIDS on investment in Botswana with specific reference to the tourism sector; it concludes that the high prevalence of HIV/AIDS in Botswana threatens investments in the country's tourism sector.

Further research on the possible impact of HIV/AIDS on tourism investments is imperative in order to explore the implications of this pandemic on future economic development and diversification in Botswana. This paper proposes that policy makers and tourism investors should also focus their strategies on the fight against HIV/AIDS. These strategies should not be limited to tourism development but should also include minimising the impacts of HIV/AIDS on current tourism businesses. This paper has importance for policy makers and stakeholders who wish to take informed decisions in the fight against the threat of HIV/AIDS on the tourism sector. The paper may also assist academics who wish to expand their knowledge with regard to the impact of HIV/AIDS on the tourism sector of the economy.

Keywords – Tourism, HIV/AIDS, Impact, Economy

INTRODUCTION

Most HIV/AIDS research in Botswana and in a number of countries in the Southern African region is commissioned by governments and NGOs. It usually concentrates on the social implications of HIV/AIDS, including poverty, mortality and morbidity rates. Besides social implications, the research often focuses on national issues such as GDP and economic development. However, relatively little research has been conducted into the implications of HIV/AIDS on businesses and investment, including the tourism sector. This paper therefore focuses on the possible implications of HIV/AIDS on investment, particularly in Botswana's tourism sector.

BACKGROUND

Botswana is among those countries experiencing the severest HIV/AIDS infection rate in the world (UNAIDS 2009). Botswana has 270,000 people projected to be infected with HIV/AIDS out of a population of 1.8 million (Letamo 2003). The adult HIV prevalence rate in the country is projected at 24.1%, which is the second highest in the world after Swaziland (UNAIDS 2006). However, efforts made by the Botswana government and other stakeholders in the fight against the disease have benefited the country significantly (Botswana's Ministry of State President National AIDS Co-ordinating Agency 2005). For example, the prevalence of HIV/AIDS in the country significantly declined from 37.4% in 2003 to 32.4% in 2006 (ACHAP, NACA & UNAIDS 2008).

The prevalence of HIV/AIDS in Botswana varies according to the country's various districts/

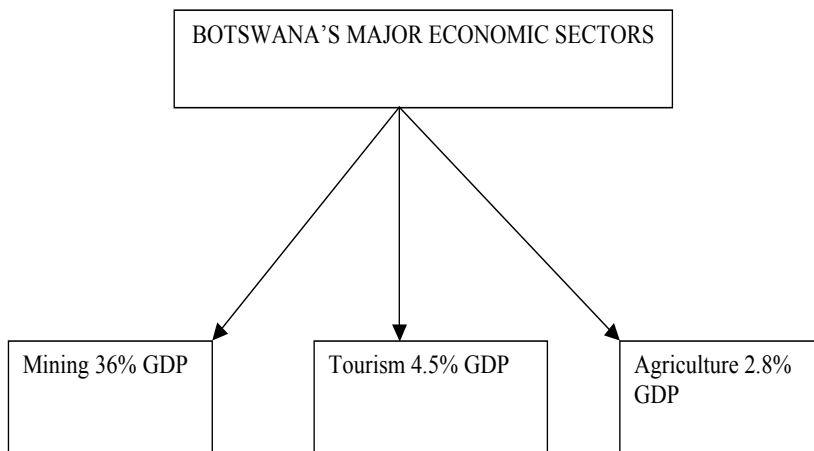
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regions (Central Statistics Office 2005). Chobe District in particular is projected to have an HIV/AIDS prevalence rate of 42% which is the highest in the country while Kgalagadi District a prevalence rate of 19.1% (ACHAP, NACA & UNAIDS 2008). Generally, the prevalence of HIV/AIDS in Botswana is reported to be highest in the northern and eastern parts of the country: for example, Ngamiland (Maun) has a prevalence rate of 35.4%, Selibe-Phikwe 41.1% and Chobe/Kasane 42% (ACHAP, NACA & UNAIDS 2008). Chobe and Ngamiland are key Botswana's tourism destinations, hence the need to investigate the possible threat of HIV/AIDS on tourism investments within these districts.

Botswana boasts one of the fastest growing economies in Africa: this is largely dependent on natural mineral resources and the tourism sector (Wood & Sekhwela 2006). Mineral mining, particularly diamond mining, accounts for 60% of Botswana's mineral output. Botswana's tourist attractions include unspoilt vegetation and many different species of wild animals found abundantly in the northern part of the country (Botswana's Department of Tourism 2009). This sector of the economy is projected to be contributing US\$240 million to the country's annual government revenue (Mmopelwa & Bignaut 2006). Diamond mining, tourism and agriculture are therefore Botswana's major economic sectors with diamonds in particular, accounting for 45% of government revenue and 75% of export earnings (Mbendi 2007). However, tourism also plays a vital role in the economy of Botswana, coming second after diamond mining (Woods & Sekhwela 2006).

Figure 1 illustrates the relative contributions to Botswana's GDP made by these sectors. However, these economic contributions are based only on the gross domestic product (GDP), and they do not include other economically significant contributions such as employment creation. Judging by the statistics given in Figure 1, it is clear that the impact of Botswana's high HIV/AIDS prevalence rate could seriously affect the country's economy (Botswana's Ministry of Health 2008). The tourism and mining sectors are labour intensive, and they employ large numbers of migrant workers. However, this paper will focus only on the possible impact of HIV/AIDS on investment in the former sector. When observing the contribution of tourism to Botswana's GDP and its employment creation, it becomes evident that the impact of HIV/AIDS on this sector could jeopardise the country's economic growth (Goodwin & Robson 2004). Moreover, the fact that the global economic recession affects the mining sector adversely means that much more needs to be done in promoting and encouraging investments in the tourism sector.

Figure 1: Botswana's major economic sectors



Source: Mbaiwa, 2005.

The government of Botswana encourages the country's economic diversification, which is largely dependent on mineral mining: it encourages and welcomes foreign investors in various economic sectors, including the tourism sector (Mogalakwe 2008). Botswana does not have excessive foreign exchange controls, and the corporate tax rate is 15%. The country has a free market type of investment policy, and foreign ownership of companies is not restricted. As a result foreign investment is growing significantly in the country (Mogalakwe 2008). For example, in the early 1990s, two American companies, Owens Corning and H.J. Heinz invested in production sectors in Botswana. In 1997 the St. Paul Group bought Botswana Insurance, one of the country's major short-term and life insurance service companies. The United States of America's (USA) investments in Botswana are gradually increasing: for example, major USA investors in Botswana include Kentucky Fried Chicken (KFC) and Remax.

Botswana economic governance is the key component encouraging foreign investors in the country (Matshediso 2005). The government of Botswana has established an environment conducive to private sector investment in both mineral and other economic sectors including the tourism sector (Kaynak & Marandu 2006). It permits various economic activities and it provides a liberal exchange control system, providing opportunities for free repatriation of dividends and profits without restrictions for importing goods and services (Matshediso 2005). Table 1 below presents a summary of the investment environment in Botswana.

Table 1: Investment environment in Botswana

CATEGORY	STATUS
Political Security Risks	Low / insignificant
Corruption	Low
Mineral Potential	Good
Mineral Legislation and Ownership	Mining rights vested in state
Institutional Equity	15 – 35%
Mining Policies and Licensing Procedures	Act of 1999
Environmental Management	Act of 1976
Fiscal Regime and Corporate Tax	25 – 35%
Royalty	3 – 10%
Infrastructure	Fairly good

Source: World Bank 2004; Matshediso 2005; Botswana's Ministry of Minerals, Energy and Water Resources 2007.

Botswana is confronted by many risk factors associated with the spread of HIV/AIDS, which include the migratory patterns of wage workers, alcohol abuse and ignorance (Botswana's Ministry of Health 2005). Other susceptibility factors are family and communal disruption (transfers), poverty, low status of women, high proportion of single parents and early parentage (Botswana's Ministry of Health 2005).

The impact of HIV/AIDS has been felt across various economic sectors in Botswana, including tourism. HIV/AIDS threatens the economy of Botswana through its impact on the general workforce, including people working in the tourism sector (National AIDS Coordination Agency/NACA 2002). The majority of the workforce across various sectors in Botswana comprises sexually active young people (Globastat 2005). Because of HIV/AIDS, the number and

quality of the active workforce available in Botswana tourism and other economic sectors in the country is expected to shrink (NACA 2002). This may impact on investment in the tourism sector of the country: HIV/AIDS affects Botswana's GDP, average incomes, savings, investments and employment including the country's tourism sector (UNDP 2006). Moreover, the pandemic affects households through increased poverty and skewed income distribution. The disease also results in increased morbidity and mortality rates (BER 2006), thus undermining productivity. This is because a number of workers (including those in tourism) often take time off duty, either on sick leave or to look after family members who are infected with the disease. Low productivity may also result from employees who are demoralised by their health status (UNDP 2006). This means that it may be difficult to attract investment in the tourism sector in the country.

HIV/AIDS also leads to increased expenditure for government and the private sector in Botswana (UNDP 2006). For example, tourism companies have to replace their employees due to illness: this exacerbates recruitment and training costs. Increased costs result in low savings which is likely to reduce investment because of lower profits. Nevertheless, despite the impact of HIV/AIDS on Botswana's economy, the country's GDP records positive growth (UNDP 2006). However, the country's economic growth is reported to be relatively slower than it would be in a no-HIV/AIDS scenario. Besides HIV/AIDS, slow economic growth in Botswana is a result of the global economic recession. Slow economic growth also affects consumption demands particularly by markets from poorer countries, and this in return may negatively affect investments in the tourism sector.

Besides its impact on the economy, HIV/AIDS also results in increased poverty, particularly in countries that have a high HIV/AIDS prevalence rate: this in turn exacerbates the spread of HIV/AIDS. It is projected that 48% of households in Botswana live below the poverty datum line, and in the rural areas in particular, more than 55% of the population is living in poverty (NACA 2002). These people often find it difficult to participate in tourism activities as clients because tourism is a discretionary activity which demands disposable income. Poverty in rural areas influences population migration from rural to urban areas and across the country's borders (Blackstock 2005). Besides its impact on the economy and on poverty levels, HIV/AIDS also threatens the Botswana's tourism sector's image. It often claims the lives of skilled people, including those working in the tourism sector, resulting in poor service rendered to tourists (Caelers 2006).

Disturbingly many tourism companies in the country fail to take action in the fight against the disease: for example, a number of organisations, including those in the tourism sector in Botswana, do not incorporate HIV/AIDS education into their strategic plans (Preece & Ntseane 2004). On the other hand, there are various educational and counselling programmes available in selected companies, but many companies in the country, including those in the tourism sector, still do not actively engage in the fight against HIV/AIDS in the workplace, but rely on government policies and strategies.

The response to the impact of HIV/AIDS by many companies in Botswana differs from sector to sector (USAIDS & WHO 2005). For example, the mining sector is generally unique in its operations; therefore its utilisation of employees varies from other economic sectors such as tourism. However, both mining and tourism sectors operate in a global market earmarked by intensified competition. The mining sector in particular, relies on employees' productivity which is threatened by HIV/AIDS. Tourism on the other hand, relies on quality service rendered to clients, and HIV/AIDS puts experienced and skilled workers at risk (USAIDS & WHO 2005). Workers in both tourism and mining are vulnerable to HIV/AIDS because of their work and lifestyle conditions. Most of the working stations of these two sectors in Botswana are often located in remote areas, with limited opportunities for leisure, often resulting in workers engaging in risky behaviour.

HIV/AIDS also impacts on the economy through escalating medical expenses: this affects the savings both of individuals and businesses (Lisk 2002). Tourism suffers because people who spend more on medical expenses have less disposable income to be spent on tourism-related activities. This in turn may affect investment in that investors may only be comfortable investing in businesses where the market is satisfactorily buoyant. Failure to take appropriate action in mitigating the impact of HIV/AIDS may result in a number of tourism organisations – and Botswana in general – encountering serious macroeconomic instability and difficulties in the future. This may also have an adverse impact on investment due to loss of confidence by investors, not only in the tourism sector, but also in general (Lisk 2002). Reduced savings directly affects investments in small-scale tourism businesses, which are sources of livelihood for many people in Botswana and in a number of other Southern African countries (Ramsey *et al* 2002).

HIV/AIDS disrupts budgeting and spending plans and makes saving difficult or impossible because a lot of money is spent on health care and on funerals rather than on tourism activities (South Africa's Department of Economic Development and Tourism 2004). HIV/AIDS therefore threatens direct foreign investment in Botswana (Botswana's Department of Tourism Research and Statistics 2008). This is a serious problem as the country's tourism sector has traditionally attracted foreign investment to the country (Ashley 2006). An increasing number of tourism workers with deteriorating health pushes up health care costs and lowers productivity (Botswana's Department of Tourism 2003). A number of tourism organisations in the country, particularly those in the private sector, are forced to overspend due to the fact that some of their employees fall sick and have to take days off but still have contracts binding the companies to pay their salaries. This is a challenge because the concerned organisation often operates with temporary employees who also have to receive salaries (Ellis & Terwin 2004). This shows that HIV/AIDS indeed threatens investments in the Botswana tourism sector (Botswana's Ministry of Environment, Wildlife and Tourism 2008). However despite these challenges the government of Botswana continues to encourage foreign investors to invest in the country's tourism sector.

OBJECTIVES OF THE STUDY

The objectives of the study include investigating the possible threats of HIV/AIDS on investment in the Botswana's tourism sector and the overall effects of HIV/AIDS on the tourism sector in Botswana.

RESEARCH METHODOLOGY

A quantitative approach has been utilised. The sampling method used in identifying the respondents for this research is the non-probability (snowballing) method. The target group comprises the tourism managers from various tourism companies in Kasane and Maun. The purpose of the research was discussed after which they were asked to identify and ask their subordinates, also in managerial positions, if they were willing to participate in this research. HIV/AIDS is a sensitive issue and generating information from people who do not know one as a researcher could be more difficult than when they are asked by their own managers. However, in order to avoid a feeling of coercion the researcher made it clear to the general managers and CEOs that respondents were not to be forced to participate in this research, and that voluntary participants would retain anonymity.

The results were statistically analysed using descriptive statistics, a method of statistical analysis often used in research in the tourism field. Before the analysis was conducted, Cronbach's Alpha was used to test the reliability of the measurement scale that was used. The measurement scale used in this research is the Likert Scale: respondents were thus given five options (strongly agree, agree, neutral, disagree and strongly disagree) to choose from. Statistical tests

were conducted using ANOVA to find out whether the impact of HIV/AIDS on the individual tourism businesses vary according to company size, length of business operation, ownership and location. In cases in which the differences according to the above variables were significant, T-tests were conducted to further explore the differences.

The research was conducted with tourism managers as respondents using a self-administered questionnaire in 241 registered tourism companies based in Kasane and Maun, two key tourism destinations in Botswana. However, tourism here and in Botswana in general is still in a developmental stage. The general population targeted by this research are thus people in management working in various tourism organisations in both the Kasane and Maun areas which are among those most struck by HIV/AIDS in Botswana.

Table 2 shows the number of tourism managers who participated in this research at the two locations in which the research was conducted. Sixty-nine registered tourism businesses in Kasane and 80 managers indicated that they were willing to participate in this research, and the researcher therefore issued 80 questionnaires to the aforesaid managers. From these 73 responses were obtained. The same approach was used in Maun where all the registered tourism businesses were included in the research. People who participated in the research included the general managers, financial managers, human resources managers and any other individuals in managerial positions such as company chief executive managers, section heads and supervisors.

In Maun there are 172 registered tourism companies: from these 87 tourism managers indicated that they were willing to participate in this research and hence 87 questionnaires were distributed throughout an area which included the Okavango Delta. 76 responses were subsequently obtained. This return was smaller than expected because not all the selected tourism managers and CEOs were willing to participate in this research.

The total number of questionnaires given to tourism managers within the two areas in which the research was conducted was 167: of these 149 responses were obtained. This means that 18 tourism managers did not complete and return the questionnaire. A number of tourism managers who did not complete and return the research questionnaires cited shortage of time resulting from busy schedules as the main constraint that contributed to their failure to honour their agreement that they would return completed questionnaires.

RESULTS AND DISCUSSION

Table 2: Number of respondents from various types of tourism organisations

Location	Kasane: number of registered tourism organisations	Number of tourism managers who answered the questionnaire in Kasane	Maun: number of registered tourism organisations	Number of tourism managers who answered the questionnaire in Maun
Hotel	0	0	13	12
Lodge/Camp	28	59	64	52
Guesthouse	2	0	4	1
Other (mobile safaris)	39	14	91	11
Total	69	73	172	76

Table 3 shows the respondents' positions in their respective organisations. Although the specified positions include General Managers, Food and Beverage Managers and Human Resources Managers, most of the respondents fall under the category 'other'. This is because most of the respondents are company owners who indicate that they are either the Chief Executive Officers (CEO) or Managing Directors (MD). In addition to these individuals, a number of respondents indicated that they were section heads. Although all who participated in the research were managers from various tourism organisations, different organisations have different names for their various departmental managerial positions; hence the category 'other' dominates. The fact that tourism in Botswana is still in a developmental stage also means that most of the people own and manage their own business as CEOs and Managing Directors.

Table 3: Respondents positions in the organisation

Position	Number	Percentage
General Managers	17	12
Food and Beverage Managers	6	4
Human Resources Managers	4	3
Other (CEO and MD)	117	81
Total	144	100

Most of the tourism managers who participated in this research are young Botswana citizens who are actively at work. The majority of the respondents have at least basic educational qualifications.

Table 4 shows the respondents' nationalities and educational levels. This question aimed to establish the active roles played by Botswana citizens as opposed to non-Botswana citizens together with their highest educational levels. Most of the tourism managers who participated in the research have a certificate/diploma as their highest educational level. Some respondents had either undergraduate credits or postgraduate degrees while a few had either primary or other qualifications such as professional qualifications. Tourism managers were selected irrespective of their gender and age. The following table presents the respondents' citizenship status and educational qualifications.

Table 4: Respondents' nationality and education level

	Number	Percentage
Respondents' Nationality		
Botswana Citizen	124	85
Non-Botswana Citizen	22	15
Total	146	100
Respondents' Highest Educational Level		
Primary	3	2
Secondary	37	25
Certificate/Diploma	77	53
Undergraduate Degree	18	12
Postgraduate Degree	9	6
Other	3	2
Total	147	100

Table 5 shows the respondents' gender and age. The table indicates that most of the tourism managers who participated in the research are females. This shows that women play an active role in the development and management of tourism in Botswana. Moreover, as indicated in Table 5, most of the tourism managers who participated in the research ranged between the ages of 20 and 39 years. This is the age group that is economically active and as already stated in this research, this is the age group most vulnerable to HIV/AIDS in Botswana (UNDP 2006).

Table 5: Respondent's genders and age

Respondents' Gender	Number	Percentage
Male	61	41
Female	87	59
Total	148	100
Respondents' Ages		
Under 20 years	1	1
20 – 29 years	56	38
30 – 39 years	63	43
40 – 49 years	17	11
50 – 59 years	9	6
60 years and above	2	1
Total	148	100

Table 6 presents the number of tourism companies participating in the research that have an HIV policy. It also shows the location of these companies. As can be seen the majority are in Maun which has more tourism companies than Kasane. Table 6 indicates that a majority of the tourism companies that participated in the research have HIV/AIDS policies. However 46% have no HIV/AIDS policy, which is high bearing in mind the seriousness and the high prevalence rate of HIV/AIDS in Botswana. This shows that more work needs to be done to encourage tourism companies to fight the impact of HIV/AIDS.

Table 6: Company location and HIV policy

	Number	Percentage
Location		
Kasane	72	48
Maun	77	52
Total	149	100
HIV POLICY		
Yes	75	54
No	63	46
Total	138	100

Table 7 depicts the type and ownership of tourism organisations that participated in the research. To be more specific, both hotels and lodges/camps from which tourism managers came are owned in partnership between Botswana citizens and non-Botswana citizens (80% and 35% respectively). Only one of the tourism managers came from a guest house owned by a Botswana citizen. This is because according to the Botswana tourism policy, guesthouses may only be owned by Botswana citizens because they are categorised as small-scale tourism businesses. On the other hand 45% of

the mobile safari companies from which the tourism managers came are owned by non-Botswana citizens. These results indicate that tourism indeed plays an important role in the lives of many citizens of Botswana by creating both employment and entrepreneurial opportunities. These results also vary, with many studies indicating that the Botswana tourism sector is generally dominated by expatriates.

Table 7: Organisational type and ownership

Organisational Ownership

Type of Tourism Organisation	A Botswana Citizen	A Non-Botswana Citizen	A partnership between a Botswana citizen and a non-Botswana citizen	Total
Hotel	1 (10%)	1 (10%)	8 (80%)	10 (100%)
Lodge/Camp	44 (44%)	21 (21%)	35 (35%)	100 (100%)
Guesthouse	1 (100%)	–	–	1 (100%)
Other (Mobile Safari companies)	5 (25%)	9 (45%)	6 (30%)	20 (100%)
Total	51 (39%)	31 (24%)	49 (37%)	131 (100%)

RELIABILITY TEST AND ANALYSIS

Initially, before running an analysis related to addressing objectives in this research, a reliability test was prepared on three scales, namely tourism and HIV/AIDS in Botswana, tourism and communities relative to HIV/AIDS and finally, the impact of HIV/AIDS on tourism businesses. Cronbach's Alpha was used in conducting the reliability test and the results show a high reliability as follows: tourism and HIV/AIDS in Botswana in general: $\alpha = .84$; tourism and communities relative to HIV/AIDS: $\alpha = .70$; and the impact of HIV/AIDS on the tourism businesses: $\alpha = .90$.

Table 8 presents research of the results of the reliability tests conducted on the three measurement scales. The purpose of these tests is to confirm the reliability of the measurement scales that were used in this research. In general, the results show that the scales are reliable because they present results not far from positive (0.84). However, the one item that presents negative results is the last measurement item on scale 1. This does not mean that the item is not reliable: rather that it is as a result of the way in which the question was structured. The section that follows addresses the research objectives based on how the participants responded on each measurement scale.

Table 8: Reliability test on the scale of tourism and HIV/AIDS in Botswana in general (CRONBACH ALPHA = 0.84)

Measurement Items	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Tourism is one of Botswana's important economic activities.	.206	.840
Botswana is one of the countries in the world with highest rate of HIV/AIDS infection.	.295	.838
HIV/AIDS increases the levels of poverty in a number of rural areas in Botswana.	.452	.832
Botswana tourism is losing experienced workers to HIV/AIDS.	.434	.833

Botswana tourism sector is seriously threatened by HIV/AIDS in future.	.602	.825
Gender inequality contributes to the spread of HIV/AIDS in Botswana.	.419	.833
Government should do more to address HIV/AIDS problems.	.251	.839
Prospective domestic tourism demand in Botswana is threatened by the HIV/AIDS pandemic.	.602	.826
HIV/AIDS threatens new investments in the tourism private sector.	.616	.825
HIV/AIDS increases health expenditure on individuals and on tourism business.	.435	.833
HIV/AIDS reduces individuals' savings due to medical expenses.	.520	.829
HIV/AIDS reduces government investment in the tourism Public sector.	.521	.829
Tourism organizations often discuss HIV/AIDS problems among themselves.	.168	.844
The prevalence of HIV/AIDS results in lower population growth.	.318	.837
Tourism companies are not doing much in fighting the impact of HIV/AIDS in their organizations.	.143	.846
The prevalence of HIV/AIDS is expected to become much worse in future.	.388	.834
Quality of service is affected by HIV/AIDS.	.593	.825
Alcohol abuse influences the spread of HIV/AIDS in Botswana.	.416	.835
HIV/AIDS increases the costs of operating tourism businesses.	.474	.831
Tourism organisations experience low labour productivity resulting from HIV/AIDS.	.627	.824
HIV/AIDS is a serious problem for the tourism industry.	.500	.830
The tourism business community in Botswana often discusses the HIV/AIDS problem with local community members.	-.105	.854

In order to address the key research objectives the respondents were given a self-administered questionnaire to record their perceptions (based on their experience and expertise) regarding the possible impact of HIV/AIDS on Botswana tourism in general; to determine how host communities perceive tourism development in relation to the prevalence of HIV/AIDS; and on the possible impact of HIV/AIDS on tourism-based businesses in Botswana.

Table 9 presents the perceptions of tourism managers who participated in the research on the possible impact of HIV/AIDS on the Botswana tourism sector. On average most respondents confirm that HIV/AIDS has impacted negatively on the Botswana tourism sector. The tourism managers all agree that tourism is one of the Botswana's most important economic activities (see Table 9). In addition, most respondents agree that Botswana is one of the countries with the highest prevalence of HIV/AIDS, and that HIV/AIDS impacts negatively on the country's tourism sector through the ways it affects experienced workers within the sector.

On average most respondents agree that the increased death rate resulting from HIV/AIDS related illnesses threatens Botswana's prospective domestic tourism demand and also investment in tourism both in the public and private sectors. Moreover, HIV/AIDS results in reduced individual savings through the increased medical expenses it incurs. The companies that suffer a severe HIV/AIDS prevalence rate among their employees also experience poor quality service: this affects the daily running of tourism businesses. Besides its impacts on quality of service, most respon-

dents indicate that HIV/AIDS also results in low labour productivity, particularly for those tourism companies that most experience its adverse impacts. On average, many respondents agree that HIV/AIDS results in a lower population growth than in a no-AIDS scenario. Reduced population growth affects both the availability and the quality of the tourism workforce and it also reduces the local tourism market.

Table 9: The perception of tourism managers on the possible impact of HIV/AIDS on the Botswana tourism sector (Total respondents: N = 149)

Descriptive Statistics

Measurement Items	N	Mini- mum	Maxi- mum	Mean	Standard Deviation
Tourism is one of Botswana's important economic activities.	149	1	2	1.17	.375
Botswana is one of the countries in the world with highest rate of HIV/AIDS infection.	149	1	5	1.97	.918
HIV/AIDS increases the levels of poverty in a number of rural areas in Botswana.	144	1	5	1.85	1.051
Botswana tourism is losing experienced workers to HIV/AIDS.	148	1	5	2.18	1.113
The future of the Botswana tourism sector is seriously threatened by HIV/AIDS.	147	1	5	2.24	1.144
Gender inequality contributes to the spread of HIV/AIDS in Botswana.	145	1	5	2.36	1.182
Government should do more to address HIV/AIDS problems.	148	1	5	1.77	.990
Prospective domestic tourism demand in Botswana is threatened by the HIV/AIDS pandemic.	147	1	5	2.50	.989
HIV/AIDS threatens new investments in the tourism private sector.	147	1	5	2.56	1.099
HIV/AIDS increases health expenditure on individuals, and so threatens tourism business.	143	1	5	2.02	.968
HIV/AIDS reduces individuals' savings due to associated medical expenses.	147	1	5	2.23	1.194
HIV/AIDS reduces government investment in the tourism public sector.	143	1	5	2.36	1.098
Tourism organisations often discuss HIV/AIDS problems among themselves.	144	1	5	2.49	1.194
HIV/AIDS problem results in lower population growth.	148	1	5	1.89	.977
Tourism companies are not doing much in fighting the impact of HIV/AIDS on their organisations.	146	1	5	2.95	1.294
HIV/AIDS problem is expected to become much worse in future.	146	1	5	2.79	1.128
Quality of service is affected by the HIV/AIDS problem.	145	1	5	2.54	1.184

Alcohol abuse influences the spread of HIV/AIDS in Botswana.	148	1	5	1.52	.804
HIV/AIDS increases the costs of running tourism businesses.	148	1	5	2.65	1.118
Tourism organisations experience low labour productivity resulting from HIV/AIDS.	147	1	5	2.54	1.178
HIV/AIDS is a serious problem for the tourism industry.	141	1	5	2.19	1.114
Tourism business communities in Botswana often discuss the HIV/AIDS problem with local community members.	137	1	5	2.58	1.142
Valid N (listwise)	108				

Note: 1=Strongly agree, 2=Agree, 3=Neither agree nor disagree, 4=Disagree and 5= Strongly disagree

CONCLUSION

This research investigated the possible impact of HIV/AIDS on investment in Botswana, focusing on the country's tourism sector. Botswana boasts one of the fastest rates of economic growth in Africa, largely depending on its natural mineral resources and the booming tourism sector.

Tourism is one of the most important economic activities in Botswana. Tourism creates employment and entrepreneurial opportunities for local people: it attracts investors and contributes to the country's GDP. Besides its economic contribution, tourism also creates national pride. Tourism development and facilities improve the appearance of the area in which tourism activities are taking place. Tourism also contributes to the conservation of the natural environment. However, HIV/AIDS constitutes a major threat to the tourism sector in Botswana. This means that tourism planners and investors should not focus only on tourism development but also fight HIV/AIDS because of its negative impact on tourism.

HIV/AIDS also reduces population growth thus affecting the availability and quality of a tourism workforce. It causes a shortage of skilled labour because tourism is labour intensive.

Most of the tourism companies in Botswana do not take the initiative in fighting the impact of HIV/AIDS but rely on government policies and strategies. This conclusion is based on the fact that many tourism managers who participated in this research indicated that their companies do not have HIV/AIDS policies. Failure to be proactive in the fight against HIV/AIDS may threaten the future of many tourism businesses in Botswana. This fight should not be the sole responsibility of government but rather a collective responsibility involving all stakeholders including tourism organisations in the private sector and host communities in which tourism activities take place.

However, the fact that HIV/AIDS has had a negative impact on the Botswana tourism sector does not necessarily mean that the country's tourism sector is in a bad situation. The Botswana government's interventions in the fight against HIV/AIDS, such as providing free HIV/AIDS treatment like ARV to infected people, prolong the lives and boost the immune systems of people living with HIV/AIDS. The people who are on ARV treatment include some working in the tourism sector. The treatment interventions therefore are of benefit to the tourism sector because they reduce staff absenteeism and death rates that could affect tourism companies in a no-treatment intervention scenario. However, the Botswana government, the tourism business community and host communities need to work together to fight the spread of HIV/AIDS. Further HIV/AIDS infections may threaten future investments in the Botswana tourism sector particularly with the advent of the global economic downturn.

Increased demand for people in need of ARV and other HIV/AIDS treatments may put pressure on government budgets. The other worrying factor is that HIV/AIDS treatments like ARV do not cure HIV/AIDS, but prolong the lives of the infected people for a certain period. The increasing number of people in need of ARV treatment means that the death rate may rise in the future; this may impact negatively on the country's economic sectors, including tourism.

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ENVIRONMENTAL ASPECTS IN NAMIBIA WITH REFERENCE TO THE TOURISM AND HOSPITALITY SECTORS

N Visser¹

ABSTRACT

The various environments in a country usually include biophysical, social, economic, cultural, historical and political components. Such components are utilised to develop accommodation and tourism businesses. All living organisms emanate from the environment, which, in turn, is the basis for all development.

There is an innate relationship between the environment and the hospitality sector; hence environmental management principles for the hospitality sector were set up by the International Hotels Environment Initiative (IHEI), which has since become the International Tourism Partnership (ITP).

In the Namibian hospitality sector a number of attractive destinations are situated in ecologically fragile areas. As a result, the Namibian government implemented an Environmental Assessment Policy to control the development of projects and to ensure that environmental impacts are kept to preset limits.

In the above context, from 1992 onwards, a number of government policy documents regulating the tourism and hospitality sectors in Namibia have seen the light.

The Namibian government is committed to setting specific guidelines to ensure that the development processes of tourism and related sectors take place according to existing ecologically friendly policies.

In the above context, the ecologically fragile Sossusvlei area contains approximately 15 accommodation establishments that contribute to a degree of environmental damage. In this context, the hotel sector contributes substantially to ecological degradation, where energy, water, food, wood and plastics are consumed. The waste products are often discarded in delicate areas, giving rise to excessive emissions of, for example, carbon dioxide, chlorofluoro carbons (CFCs), noise, smoke and smells. This indicates that the use of water, food, wood, energy and plastics requires properly planned disposal measures that, if not dealt with appropriately, often leads to further environmental concerns.

This article deals with environmental issues relevant to tourism and hospitality, including transformation towards environmental conservation and the significance and state of environmental awareness in sub-Saharan Africa in general and Namibia in particular.

Keywords: Tourism Hospitality, Ecology, Green Revolution, Biodiversity

INTRODUCTION

The environment includes the biophysical, social, economic, cultural, historical and political components that are utilised to develop accommodation and tourism businesses. All living organisms draw their very being from the surroundings called the environment, which is the basis for all developments.

There is an innate relationship between the environment and the hospitality sector; hence environmental management principles for the hospitality sector were set up by the International Hotels Environment Initiative (Kirk 1995: 5). In the Namibian hospitality sector, the most beautiful places are situated in ecologically fragile areas. As a result, the Namibian government

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implemented an Environmental Assessment Policy to control the development of projects and to see that environmental impacts are kept to the limit.

To strengthen this, a White Paper on Tourism was drawn up in 1992 and reviewed in 2005. This shows that the Namibian government is committed to setting guidelines to ensure that the development process is according to set-up policies.

The hotel sector contributes a lot to the pollution of the environment where energy, water, food, wood and plastics are consumed leading to emissions such as carbon dioxide, chlorofluoro carbons (CFCs), noise, smoke and smells (Kirk 1995: 5).

According to Kirk (1995: 5), the usage of water, food, wood, energy and plastics requires disposal and this leads to more environmental concerns.

The international as well as domestic tourists are becoming more environmentally conscious. Kirk (1995: 5-6) found that 75 per cent of frequent travellers were environmentally conscious consumers and 54 per cent of the respondents were environmentally conscious travellers, as they preferred "green hotels."

This notion places particular responsibilities on environmentally conscious-minded entrepreneurs as well as policy and strategy developers to have such policies implemented through available Environmental Management Systems (EMS).

EMS is a framework for improving operational efficiency and reducing environmental impacts, which are usually based on key aspects of environmental management. The main aspects of environmental management include:

- Environmental performance monitoring
- Water usage
- Energy usage
- Solid and hazardous waste generation
- Water and wastewater treatment
- Best practice assessment
- Evaluation of best practice assessment findings
- Preventative maintenance.

The Namibian government has realised the importance of EMS and as a result, in conjunction with the private sector and donor partners, has started with the eco awards programme aimed at participating accommodation establishments. Eco awards Namibia is a partnership between civil society and government to support and facilitate the development of sustainable tourism establishments in Namibia, and to increase Namibia's reputation as an environmentally responsible tourism destination. The eco awards Namibia programme acknowledges accommodation establishments that operate according to eco-friendly principles.

The awards are granted based on criteria reflecting eight categories:

- Conservation;
- Water management;
- Waste management & sewerage disposal;
- Energy management;
- Suitable & appropriate construction & landscaping;
- Guiding;
- Staff development; and
- Social responsibility & human welfare (www.sustainabletourismnetwork.co.za/country-info/namibia).

The article represents a brief analysis of secondary data related to environmental conservation pertaining to the tourism and hospitality sector, as found in literature.

This next section deals with environmental matters including the “green” revolution, significance of the environment, and state of environmental awareness in Africa. The Green Revolution refers to a series of research, development, and technology transfer initiatives, occurring between the 1940s and the late 1970s, that increased agriculture production around the world, beginning most markedly in the late 1960s (Jain 2010: 11).

ENVIRONMENTAL LINKAGES TO TOURISM AND HOSPITALITY

Georgiou *et al* (1997: 4) explain that the value of the environment cannot be overlooked. They assert that “Valuation is fundamental to the notion of ‘sustainable development’” (Georgiou *et al* 1997: 4).

According to the World Tourism Organisation (WTO), sustainable development is described as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” Sustainable tourism and hospitality development should meet the needs of present tourists and host regions while simultaneously protecting and enhancing opportunities for the future.

According to the International Union for the Conservation of Nature (IUCN), every country should have a “conscious population policy” to have leverage between population numbers and the environment (Adams 1992: 47).

Continued development, at the expense of the environment leads to decline in the health of people, increases environmentally induced diseases and may result in a decline in long-term labour productivity. Bartelmus (1986: 8), states that the “environment and development are linked together so intricately that separate approaches to either environmental or developmental problems are piecemeal at best” (Bartelmus 1986: 9).

The above means that without the environment, development would be non-existent and thus the developers of today need to have a productive environmental knowledge management system in place as this is the basis for a good strategy formulation (Nicolas 2004).

Another view is that the preservation of ecosystems and endangered species is focused, neglecting socioeconomic conditions and consequences (Bartelmus 1986: 11).

The question can be posed whether protection of the environment is afforded the necessary priority to ensure a viable environmental base that can serve future generations.

THE NATURE OF ECOLOGY

The so-called father of ecology, Ernst Haeckel, described ecology as the body of knowledge concerning the economy of nature. In this context, ecology can be seen as a complex interrelationship between nature and wildlife. This term was given substance by Haeckel in 1869. The word ecology comes from the Greek word ‘oikos’ – meaning home or place to live and ‘logos’ – relates to the study of the habitation of an organism (www.shsu.edu/~bio_mlt/intro.html 2006).

Fundamentals of ecology

- The ecosystem is the major ecological unit, consisting of both biotic and abiotic components through which nutrients are cycled and energy flows.
- The ecosystem should be able to have structured interrelationships among its components (soil, water, nutrients, producers, consumers and decomposers).
- The function of the ecosystem is related to the flow of energy and the cycling of materials through its structured components.

- Ecosystems tend toward maturity; they pass from a less complex to a more complex state in a process called succession.
- When an ecosystem is exploited and the exploitation is maintained, the maturity of the ecosystem declines.
- The main functional unit of the ecosystem is the population. A self-maintaining population of more than one species cannot simultaneously and indefinitely occupy a niche within a given ecosystem.
- The amount of energy fixation in the environment and any ecosystem is limited.
- Immigration rates tend to balance extinction rates.
- The changes and fluctuations in the environment represent selective pressure upon the population.
- Species diversity is related to the physical environment. This means that a forest will host a wider diversity than grasslands.

On islands ecosystem has historical aspects; the present is related to the past, and the future is related to the present (www.shsu.edu/~bio_mlt/intro.html 2006).

The above fundamentals of ecology have been included above to show the need for sound environmental protection practices in the tourism and hospitality sectors.

The Green Revolution

The Green Revolution movement started in the 1970's as air and water pollution endangered wild-life and the use of natural resources became public concerns. At the time, the movement advocated policies to protect the environment and all that lives in it. It was only in the 1970's that conservation movements started to grow and put the imbalances perpetrated by mankind in order.

Brown, from the Worldwatch Institute (www.earth-policy.org/about_epi/C31) states that there are more and more clear signs that the world is in the early stages of a major shift in environmental consciousness. One concern is that uncertainties exist whether all role-players will cross this "threshold in time to avoid the disruption of global economic progress."

Before the start of the Green revolution in the 1970's, green parties had already been active in New Zealand where the first green party, the Values Party of New Zealand, was established in the late 1960's (Mannion & Bowlby 1992: 167).

Namibia does not have Green Parties and this could be a setback to the institution of green policies, environmental programmes and getting people to buy into these sensitive issues. Non-governmental organisations that deal with environmental issues do exist, but these organisations are mainly engaged in work initiated by the government. The introduction of green parties may assist in recruiting more people to advocate for environmental issues.

CLIMATE CHANGE AND BIODIVERSITY IN NAMIBIA

The tourism and hospitality sectors in Namibia are dependent on climate change and other elemental factors.

Climate change, causing natural disasters, has become a potential threat to the tourism and hospitality sectors. The increasing human population and the rising level of technology is said to be an agent in the variations in world climate changes (Goudie 1992: 262). Factors said to be contributing to climate change include: gas emissions, thermal pollution and alteration of ocean currents by constricting straits and the diversion of fresh waters into oceans (Goudie 1992: 262).

Ecosystems and biodiversity are the most vulnerable to climate change (UNEP 2002). If there is no healthy ecosystem, the biodiversity of the area is being affected and as a result the tourism and hospitality sectors suffer.

Tourism and hospitality are the fastest growing sectors and as the major source of foreign exchange earning and employment for the majority of developing countries. The sectors are increasingly focussed on natural environments (Convention on Biological Diversity, CBD 2006). Although tourism and hospitality activities contribute positively to the socio-economic conditions of a destination, the pace and uncontrolled way in which tourism and hospitality take place is a major cause of the degradation of the ecological environments as well as the loss of local identity and traditional cultures (www.biodiv.org/programmes/socio-eco/tourism/default.asp).

Climate change and biodiversity and its impacts on the Namibian tourism and hospitality sectors

Namibia is viewed as a dry country. This perception is substantiated by the fact that 20 per cent of the land is hyper-arid, 33 per cent arid with annual rainfall between 100-300 mm and 37 per cent being semi-arid with rainfall ranging from 301-500 mm annually (MET 2002: 2). Namibia's tourism and hospitality sectors rely on its climate and scenic beauty. According to the National Development Plan 1 (NDP 1) (Rep. of Namibia 1995), the Namibian economy largely depends on primary production, which is vulnerable to climate change (MET 2002).

As climate change is becoming a reality and having a potential impact on Namibia's tourism and hospitality sectors, Namibia's biodiversity hotspots are particularly vulnerable.

Namibia's ten-year strategic plan forecasts on major challenges for the country because dry, hot countries are expected to get drier and hotter and this is expected to have serious impacts on biodiversity and development (Barnard, P., Shikongo, S., Zeidler, J. Ed 2001). With climate change as an eminent phenomenon, affecting the economic growth and development of the country, tourism and hospitality are two economic sectors that will be adversely affected. The climatic change will affect the ecology of the Namib Desert, which is described as a hyper-arid area and the many accommodation establishments in the Namib Desert.

With the Namib Desert described as a hyper-arid area, numerous organisms of this area are adapted to the hot, dry conditions and are partially protected against climate change by the proximity of the Atlantic Ocean (MET 2002: 41). Since most establishments are situated in close proximity to the Namib Desert, problems are foreseen in the way they affect the ecology of the desert.

The mean annual rainfall ranges from over 700 mm in the North East to less than 25 mm in the south-west and the western part of the country (MET 2002: 1). Namibia's rainy season begins in October and ends in April when the Inter-Tropical Convergence Zone (ITCZ) moves southwards to about 20°S, bringing with it moisture to the north-eastern parts of the country, where low-pressure cells influence the rest of the country (MET 2002: 1).

Moist air from the tropics associated with the ITCZ is warmed by intense radiation and leads to convective storms and as a result the air becomes drier over the central and southern parts of the country as most of the moisture is shed over the north-eastern parts of the country. The succulent Karoo and Nama Karoo areas in the South of Namibia, bordering with South Africa, experience winter rainfall as a result of its proximity to the Cape Town region which has south-westerly waves displacing the cell northwards bringing in moisture bearing air from the southwest thus bringing rain up to 23°S (MET 2002: 1). This state of affairs is particularly relevant to the environment and its impact on the tourism and hospitality sectors in Namibia.

Potential threats of climate change

Climate change is expected to force changes in the distribution of species and habitats, especially along Namibia's escarpment where unique species occur in restricted areas (MET 2002). Since the

Namib Desert stretches for a hundred to a hundred and fifty kilometres inland from the Atlantic Ocean, it is expected that this will have an effect, as the adjacent sea becomes warmer, causing less fog that is scattered over the Namib Desert. Coastal fog a key source of water for the desert fauna and flora where the precipitation is often high (MET 2002: 2).

- Climate change is expected to make the living conditions of rural people in Namibia's dry rangelands more difficult due to increased unpredictability of rainfall. Since this is a reality, the government has enacted a law to give rights to local communities; rights that give them ownership to the land and wildlife in the said conservancies (NACSO 2004).
- Climate change is also likely to change patterns of infectious diseases transmission in the country. Since temperatures are going to change, diseases that thrive in warmer climates will become a problem for the country.
- With the cold Benguela current being the lifeline of the Namibian fishing sector, climate change may have an adverse effect on coastal and marine activities through sea-level change and alterations to the Benguela current (Barnard *et al* 2001: 19).

The effects of sea-level rise

Some bio geophysical effects of sea-level rise such as stated by the United Nations Environment Programme (UNEP) include:

- Increased coastal erosion;
- Flooding, inundation and displacement of wetlands and lowlands;
- Impairment of water quality into freshwater aquifers and estuaries due to increased salt intrusion and
- Reduced protection from extreme storm and flood events.

BIODIVERSITY IN NAMIBIA

The Convention on Biological Diversity (CBD 1992) states in article 10 of its preamble that each contracting party shall, as far as possible and as appropriate:

- Integrate consideration of the conservation and sustainable use of biological resources into national decision-making;
- Adopt measures relating to the use of biological resources to avoid or minimize adverse impacts on biological diversity;
- Protect and encourage customary use of biological resources in accordance with traditional cultural practices that are compatible with conservation or sustainable use requirements;
- Support local populations to develop and implement remedial action in degraded areas where biological diversity has been reduced; and
- Encourage cooperation between its governmental authorities and its private sector in developing methods for sustainable use of biological resource (CBD 1992).

Namibia's constitution, under article 95 (L) stresses the maintenance of eco-systems, essential ecological processes and biological diversity of Namibia and utilization of living natural resources on a sustainable basis for the benefit of all Namibians, both recent and future (NID 2002). The biological diversity contributes to prosperity and facilitates economic growth. The Namibian National Biodiversity Strategy plans to fulfill certain strategic aims in its ten-year strategic plan of action for sustainable development through biodiversity conservation from 2001 through to 2010 (Barnard *et al* 2001).

RECOMMENDATIONS TO IMPROVE THE ENVIRONMENTAL/ TOURISM/ HOSPITALITY RELATIONSHIPS

Identify and fill specific gaps in the protected area network

What is needed is a systematic biodiversity area-prioritisation process to identify high-value areas for biodiversity. Since Namibia is one of the few countries in Africa with internationally recognised biodiversity hotspots, protecting them is of utmost importance as it occurs in the Succulent Karoo shared with South Africa and being the world's only arid hotspot (Barnard *et al* 2001: 26).

The Succulent Karoo biome is one of the world's top 25 biodiversity hotspots shared by Namibia and South Africa (MET 2002; Henschel *et al* 1998). Namibia's biodiversity hotspot has been protected since it occurs in the Sperrgebiet, a restricted diamond mining area where strict control was and still is exercised. Since 14 per cent is the basic criterion for basic coverage in the protected area network, almost three quarters of Namibia's traditionally recognised fourteen vegetation types are inadequately covered with many having a zero or no representation in the protected area network.

Promote and support communal freehold conservancies

According to Barnard *et al* (2001), promotion and support of communal freehold conservancies can be achieved by:

- Supporting the conservancies by integrated landscape management for biodiversity
- Using biodiversity data to guide the development of new conservancies
- Assessing the compatibility of conservancies by means of national biodiversity goals.

With conservancies gaining rights on how to manage their area, the biodiversity of the conservancies has improved significantly. Emphasis is placed on the biodiversity of ecologically sensitive areas, especially in the conservancy areas (Barnard *et al* 2001: 29).

Conservancies are viewed as critical assets, which "supplement the protected area network, harness the skills and energy of landholders and bring sustainable development to rural areas" (Barnard *et al* 2001: 29).

Strengthen conservation measures in and outside protected areas.

There are three main components of biodiversity as set out by the Green Paper on biodiversity:

- Genetic diversity genes are the biochemical packages that are passed on by parents to their offspring, and which determine the physical and biochemical characteristics of offspring. Gene diversity also refers to the variation of genes within species, making it possible to develop new breeds of crop plants and domestic animals, and allowing species in the wild to adapt to changing conditions;
- Species diversity refers to a species or a group of plants or animals whose genes are so similar that they can breed together and produce fertile offspring. Species diversity refers to the variety and abundance of species within a geographic area;
- Ecosystem diversity, as an ecosystem, consists of communities of plants, animals, soil, water and air on which they depend. These all interact and contribute to processes such as the water cycle, energy flow, provision of oxygen, soil formation and nutrient cycling. Ecosystem diversity refers to the variety of ecosystems found within a certain political or geographical boundary, or to the variety of species within different ecosystems.

Most tourism developments depend largely on a healthy ecosystem to flourish. As tourism has a bigger potential and minimum impact than agriculture, it would be wise to have more

tourism developments and in this way promoting environmental awareness. Unfortunately, Namibian farmers still practice conventional farming, resulting in chemicals reaching the underground water and causes eutrophication (Eutrophication is defined as an increase in the rate of supply of organic matter in an ecosystem. 1995 Online at: [<http://toxics.usgs.gov/definitions/eutrophication.html>]).

Capacity building for biodiversity management in support of sustainable development

Namibia's ten-year strategic plan of action for sustainable development through biodiversity conservation aims to 'strengthen', Namibia's human, institutional and national capacity to understand biodiversity and ecosystems, and manage Namibia's natural resources and ecosystems appropriately (Barnard *et al* 2001: 79).

Namibia is dependent on natural resources and is most vulnerable to environmental degradation. It has ratified most of the United Nations (UN) environmental conventions and is thus obliged to fulfil certain requirements (Barnard *et al* 2001: 76). Although 15% of the total land must be under conservation according to international law, Namibia has so far more than 30% of the total land under conservation.

Promote public awareness of biodiversity conservation and sustainable resource use

Promotion of public awareness of biodiversity conservation and sustainable resource use has been covered partly by the introduction of conservancies and what is left is the public at large to grasp the idea of conservation. The media plays an important role in informing and educating people. In Namibia, not much attention is focussed on environmental programmes. Recently the government started has started a programme called Government Scorecard where they mainly focus on the Community Based Natural Resource Management (CBNRM) programme and what it means to the local communities.

Promote effective participation of disadvantaged groups in implementing this biodiversity strategy

Bringing disadvantaged groups on board and involving them in the development and implementation of biodiversity strategy aims can promote effective participation. The success of conservation efforts was limited because most of the disadvantaged groups in the previous political dispensation were neglected and not made part of conservation efforts (Khan 1999). Conservancies have and still play an important part in promoting the participation of previously disadvantaged groups. As such the main aim of conservancies is to introduce the original biodiversity to the area.

CONCLUSION

The environmental revolution, which started in the 1970's in the United States, has had a profound impact on environmental conservation in Africa and, as a result, the significance and value of the environment has gained high priority in African countries.

The value of the environment cannot be overlooked as the tourism and hospitality sectors depend on well-managed environmental activities for sustainable success.

The depletion of biological diversity and climate change in Namibia are going to have a profound impact on the success of the hospitality sector, as the country is dependent on the tourism and hospitality sectors for gaining foreign exchange.

One of the aims of the Namibian strategic biodiversity plan is for the promotion of "effective participation of previously disadvantaged groups in implementing this biodiversity strategy" (Barnard *et al* 2001: 76). This is gaining ground as local accommodation establishments are involving previously disadvantaged groups in the understanding of the importance of the hospitality sector with the establishment of a Tourist Information Centre in the succulent Karoo town of Aus in

Namibia (Travel News Namibia 2006: 23).

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BOOK REVIEW

By Prof CVR Wait

Essentials of Macroeconomics

By Peter Jochumzen

Peter Jochumzen and Ventus Publishing, Aps 2010/65 pages, ISBN 978-87-7681-558-5

Copy obtained from bookboon.com

The book is divided into two main sections.

Chapters one to seven deal with basic macroeconomic variables and institutions. Chapters eight to sixteen deal with macroeconomic models.

The macroeconomic variables and institutions which each cover one chapter each are:

- Prices and inflation
- Exchange rate
- Gross domestic product
- The components of gross domestic product
- The labour market
- Money and banks
- Interest rates

The macroeconomic models which are getting a chapter each are:

- A chapter on macroeconomic models in general
- Growth Theory
- The Classical Model
- The Keynesian Cross Model
- IS-LM Model
- AS-AD Model
- The Complete Keynesian Model
- Neo-Classical Synthesis
- Exchange rate determination and the Mundell-Fleming model.

The book starts without any review of what Macroeconomics is about; it thus starts with the first chapter on prices without any foreword or something of the kind.

Once started the book justifies its title: Essentials of Macroeconomics. It describes and explains each concept or institution dealt with in a clear manner.

However, a tricky concept like the Yield Curve gets very shallow attention. Anyone getting to this concept for the first time will be none the wiser.

Chapters eight to sixteen on macroeconomic models are arranged in a manner which illuminates how one model is built on the previous one, what the shortcomings of a model are and how the next model attempts to overcome those shortcomings.

From a pedagogical point of view, the following matters can be mentioned:

POSITIVES:

- Each section and sub-section is headed by a small box that states the most essential functional relationships revealed or applied in that section

- Tables, like Table 8.3, which summarise concepts are very useful
- The inclusion of the Classical Growth Model of Thomas Malthus
- The warning to students to be careful of two or more concepts which could be confused. An example is “the classical model” and the “classical growth theory”
- The clear illustration of the difference between economic growth and economic fluctuations and the undertaking that writing to follow is about economic fluctuation (business cycles)
- A list of macroeconomic models which are all housed under the umbrella concept of the Keynesian Cross Model
- Good explanation of changes in the exchange rate and how to describe such changes in the correct terminology.

NEGATIVES:

- The absence of any support material for either students or lecturers
- The absence of any study objectives and self-assessment exercises for students
- In places, a poor translation from, it seems, the original German, such as:
 - o Par 8.3 “We have summarizes.....
 - o P. 16 “Where” in the place of “were” or “was”
 - o Par 8.3 The table is not fully translated
 - o Table 4.1 is also not fully translated
 - o Par 3.5 A sentence like “..... you have 2400 Euro period” makes no sense
 - o Par 5.2 contains poor English grammar
- No indication of how certain chapters can be put together for certain types of courses

In general it can be stated that the book is a useful reference work for a clear exposition of the essentials of macroeconomics. In addition, it is produced with cost in mind because it is printed in black and white only.

Reviewer Credentials

Charles Wait is the holder of a doctorate in Economics from the University of Stellenbosch.

Before retiring in December 2003 his academic career spanned a period of 32 years at the University of Port Elizabeth, now Nelson Mandela Metropolitan University. Here he held the full-time position of Dean of the Faculty of Economic and Building Sciences and of Pro-Vost Vice-Chancellor.

His lecturing has been in a number of sub-disciplines within the Department of Economics.

Four students completed their doctoral theses under his promotership and three master’s degrees.

On 1 October 2011 he took up the post of visiting Professor of Economics at the Warsaw School of Economics in Warsaw, Republic of Poland.

He presents an on-line certificate course in UNITAR’s Public Finance and Trade Programme on the topic of The Economics of the Public Sector. (UNITAR = United Nations Institute for Training and Research)

JDL JOURNAL POLICIES

The Journal for Development and Leadership (JDL) is a peer-reviewed journal of the Faculty of Business and Economic Sciences at the Nelson Mandela Metropolitan University in Port Elizabeth, South Africa. This journal is aimed at providing practical guidance and empirical evidence to researchers and practitioners specialising in Business and Economics and related fields.

The journal provides a communication forum to advance entrepreneurship, innovation, small business management and various disciplines in Business and Economics, as well as the application of the disciplines in practice. Its aim is the improvement and further development of these fields and it is designed to appeal to academics, researchers and practitioners.

A double-blind review process is followed, supported by a national and international Editorial Peer Review Board.

Full academic accreditation will be applied for at the DoHE when the set requirements have been met.

The mission of the Journal for Development and Leadership (JDL) is to be a dynamic and internationally-recognised academic journal of excellence that will stimulate sustainable development and leadership by generating and disseminating cutting-edge knowledge and understanding.

It is envisaged that the JDL will serve as a platform for presenting information central to the concerns of academics, researchers and practitioners. In this manner, JDL will stimulate research and simultaneously shape theories for future application in the relevant societal contexts.

The Journal is published bi-annually in June and December by the Faculty of Business and Economic Sciences of the Nelson Mandela Metropolitan University.

The views expressed in the journal are those of the respective authors.

INFORMATION FOR CONTRIBUTORS OF ARTICLES

Editorial policy

The editorial policy includes taking cognisance of the objective to advance all disciplines, fields and sub-fields within the Faculty of Business and Economic Sciences, such as those mentioned above as well as the advancement of entrepreneurship, innovation, small business development, and the application of the various, relevant disciplines in practice.

The primary purpose of the journal is to publish research articles in the various fields, to disseminate information and to serve as a publication vehicle for academics, researchers and practitioners. For example, practical papers, empirical papers, new approaches and techniques, case

studies, and conceptual papers will be considered for publication, as well as book reviews and, when appropriate, conference papers.

Review process and proofing

The decision of the Editorial Committee to publish a given article is based on the judgement of the reviewers, who are all knowledgeable in their respective fields.

Authors will be informed of the committee's decision, including any relevant comments, after the article has been reviewed. Neither authors nor reviewers are identified during the review process.

Submission requirements

When submitting articles, authors have to agree that:

- They have not submitted and will not submit their article to another entity while the article is under review at JDL.
- They will only submit articles and empirical reports that have not been published previously.
- Their articles are prepared according to the prescribed style of JDL.
- Articles that have not been appropriately prepared according to the set guidelines will be returned to the authors prior to peer-reviewing.

Format

Font and font size should be Times New Roman in 12 pt font size.

Abstract

The abstract should consist of approximately 200 words.

Keywords

Authors should identify up to five keywords on the title page that characterise the principal themes covered by the paper.

Language

Papers should be written in English.

Title page

This page should contain the title of the article and the name, affiliation, full address and contact information of every author. If the article is co-authored, then the name of the author to whom correspondence should be sent has to be marked with an asterisk (*).

Body

The article has to be typed on one side of the page only in 1.5 line spacing. Appropriate headings and sub-headings should be used to segment the article to enhance readability. The length of the article should not exceed 10000 words of typed text (approximately 30 typewritten A4 pages).