



Changes in attitudes towards business ethics held by
past South African business management students

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A research project submitted to the Gordon Institute of Business Science, University of Pretoria, in partial fulfilment of the requirements for the degree of Master of Business Administration.

10 November 2010

Abstract

The objective of this study was to assess whether, and how, the attitudes towards business ethics of South African business students have changed between the early 1990s and 2010. The research was conducted as a cohort study utilising the same instrument, the Attitudes towards Business Ethics Questionnaire (ATBEQ). This study compared the results of the survey of the MBA alumni of the Gordon Institute of Business Science (GIBS), to the published results from a similar study at Rhodes University from the early 1990s.

The study found a significant change in attitudes, with a trend towards stronger opinions, on business ethics and espoused values. A factor analysis of the responses showed eleven factors although it was less able to explain the variation in the attitudes than the previous study. A significant change in the rankings of variables also indicated a shift in priorities.

These results indicated a shift towards a teleological moral philosophy as well as utilitarian motives. This shows a clear trend towards compliance-based ethics which can be explained by the proliferation of business legislation and regulation in the wake of recent corporate governance failures and the subsequent global financial crisis.

Keywords

Business Ethics, South Africa, Attitudes, Longitudinal Study

Declaration

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

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10 November 2010

Acknowledgements

I would like to express my gratitude towards my wife, Tanya, for managing the household while I was occupied with this research. I would also like to thank Gavin Price at the Gordon Institute of Business Science for his valuable input and guidance as my research supervisor. Lastly, I would like to thank the Liberty Group for affording me the opportunity to complete an MBA.

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1. Introduction and Problem Definition

1.1. Research Title

Changes in attitudes towards business ethics held by past South African business management students.

1.2. Research Problem

The failures of companies such as Enron and WorldCom and the global financial crisis of 2008, which was brought on through a failure of corporate governance in general, and business ethics in particular, has led to an increased focus on business ethics around the world (Tseng, Duan, Tung, & Kung, 2010). This is reflected in a significant increase in business ethics courses at top business schools over the last two decades (Christensen, Peirce, Hartman, Hoffman, & Carrier, 2007). Christensen *et al.* argues that even though the ethics component in course content is increasing, there is still much debate on the role and form of ethics education in business courses.

From a governance perspective, the demand for high ethical standards on South African business management is also continually increasing through the introduction of new codes and legislation, such as the new Companies Act (2007) and the King Code on Governance for SA (IoDSA, 2009). Further requirements such as privacy legislation and industry-specific codes of conduct will become effective over the next five years. These requirements will drive companies to establish codes of ethical conduct, ethics committees and reporting on business ethics. Even though these

elements improve ethical behaviour (B. Stevens, 2008; J. M. Stevens, Steensma, Harrison, & Cochran, 2005), there is still no standard framework for managing business ethics.

On the other hand, there seems to be an unending stream of media reports detailing the unethical behaviour of senior business decision makers in South Africa. In the latter half of 2010 the business headlines were dominated by stories of, *inter alia*:

- The hijacking of a multi-million rand company, Kalahari Resources, through the illicit changing of directors at the Companies and Intellectual Property Registration Office (Sergeant, 09 Sep 2010).
- Imperial Crown Trading (ICT), an unknown company, compiled an application for prospecting rights at Kumba Iron Ore's Sishen mine, after ArcelorMittal inexplicably let their mining right lapse. ICT falsified documents, but were able to obtain the rights before ArcelorMittal offered to buy ICT for R 800m (Xulu & Sergeant, 2010).
- Sharemax sold shares in shopping centres through a syndication scheme knowing full well that their rental income would have to be approximately triple the market rate in order to achieve the returns promised to their, mainly retired, investors (Van Zyl, 01 Aug 2010).

The core problem is to identify the aspects of business ethics which should be of greatest concern to businesses, and therefore to business education. This is of special interest in South Africa as South Africa is culturally diverse and has undergone major socio-political changes during the past 20 years.

1.3. Research Aim

The fundamental questions which this study will answer are: *“How have attitudes towards business ethics changed between the early 1990s and 2010? What are the aspects of business ethics which needs to be addressed the most urgently by business schools, business practitioners and government?”*

The objectives of this study are therefore

- to describe the current attitudes towards business ethics in South Africa
- to identify the underlying factors which are currently driving ethical behaviour
- to determine how attitudes towards business ethics have changed over the past twenty years

2. Theory and Literature Review

2.1. Introduction

Recent studies have shown that business ethics influence customer loyalty (Valenzuela, Mulki, & Jaramillo, 2010) and employee behaviour (Rego, Ribeiro, & Cunha, 2010). Ethics are also one of the cornerstones of good corporate governance (IoDSA, 2009).

2.1.1. Ethics and Business Ethics Defined

Ethics is the branch of philosophy concerned with issues of morality which is defined as “*of or concerned with what is right and wrong in conduct*” (*The oxford paperback dictionary*, 1988, p.273). The main branches of ethics are meta-ethics, normative ethics, applied ethics, moral psychology and descriptive ethics (Vance, 2002).

Business ethics is, in turn, a branch of applied ethics as a philosophical examination of business issues which are matters of moral judgement (Micewski & Troy, 2007). A more pragmatic definition is that business ethics is everything that addresses a company’s obligations towards its stakeholders (International Business Ethics Institute, 2005).

2.1.2. The Current Status of Business Ethics Research

There are numerous academic publications across the world specialising in business ethics and thousands of companies providing business ethics services. In fact, searching for the term “business ethics” on the Internet identifies approximately 2.5 million documents including more than 143,000 scholarly articles dealing with the subject. It may therefore be assumed that

the field is well researched and that most significant aspects and impacts of business ethics are addressed.

Tseng *et al.* (2010) completed a study where they analysed 85,000 references in the primary sources for business ethics research to identify the most topical concepts, theories and relationships in the field. They identified three concentrations of research, specifically, the ethics of decision making, corporate governance and corporate performance measurement and, lastly, ethical principles and codes of conduct.

2.2. A Framework for Assessing Attitudes

In building a framework for assessing attitudes towards business ethics it is necessary to define a framework in which to position individuals' attitudes. Miesing and Preble (1985) suggested a framework by assessing both the individual's moral philosophy and the primary motivators of his behaviour.

2.2.1. Deontological and Teleological Moral Philosophies

There are three main schools of thought in applied ethics in general and business ethics in particular (Etzioni, 1991). The first is the consequentialist or teleological view as defined by John Stuart Mill, where the base principle is that intent justifies action and is popularly espoused as "*the ends justify the means*".

The second is the rules-based or deontological view, as developed by Immanuel Kant, where the rightness of an action is determined by the applicable rules and regulations. The third school is the virtue-based view where the intent and moral character of the agent determines the ethical nature of an action, as discussed by Aristotle and Confucius.

It is therefore possible to construct a continuum of how flexible an ethical stance can be with the teleological philosophy at one extreme and the deontological ethics at the other.

A typical ethical dilemma, based on moral philosophy, would question whether or when it is “right” to break a law.

2.2.2. Egoistical and Utilitarian Motives

The most basic motivator of any human activity is the urge to have decedents and the greatest determinants of procreation is the “social success” of the individual and the continued existence of the societal context of the individual (Leakey, 1981). It is therefore necessary for the individual to promote himself into as successful a position as possible by serving his own interests whilst also ensuring the success of his family, company, nation or any other social grouping.

Fundamentally, egoism is acting on a basis of self-interest and seeking satisfaction of the individual’s desires or well-being. Egoism should best be regarded as a complex motivator and that it should always be evaluated within the context of the action (Shaver, 2010).

Utilitarianism or utilism, defined as taking the morally “right” action, is the one which produces the most good for all parties involved. This definition can be interpreted in many different ways, but the basic premise is that the goodness of an outcome is measured by the impartial consequences of the actions (Driver, 2009).

Human motives can therefore also be seen as a continuum with hedonism at the egoistical extreme and martyrdom at the other. A typical ethical dilemma, based on motive, would be whether or when it is “right” to act in self-interest rather than societal interest.

2.2.3. Business Ethics Philosophies

By combining the moral philosophy and motivational dimensions it is possible to construct a simple framework for the evaluation of business ethics. This framework consists of quadrants, each embodying a specific business ethics philosophy (Miesing & Preble, 1985).

Table 1: Business Ethics Framework

		Moral Philosophy	
		Teleological (Ends)	Deontological (Means)
Motive	Egoism (Self)	Machiavellianism	Objectivism / Social Darwinism
	Utilitarian (Society)	Universalism	Relativism

Machiavellianism

Niccolo Machiavelli published *The Prince*, a guide on how to rule, in 1513. He provided a rational and pragmatic approach to maintaining power through the use of expedient methods of manipulation that is entirely without trust, honour and decency. Machiavellianism, as a business philosophy, is therefore an attitude where people or businesses are manipulated for selfish interests. These attitudes are characterised by a relative lack of emotion in personal relationships in the workplace, a disregard for accepted rules, morality and decency, a low commitment to

the business's goals and objectives and, frequently, a rationalised view of others and their relationships (Kessler et al., 2010).

Universalism

Universalism holds that there is an absolute measure of morality that is independent of time, culture or context and that all actions can be measured according to the same rules. This is similar to the virtue-based school of ethics as espoused by Confucius, where the principle objective is to cultivate virtue to achieve moral perfection (Shijun, 2009). Aristotle had a similar notion of ethics in that all human activity is for the achievement of some "good", but with some "good" more important than others, and the greatest good achieving "happiness" or "Living well" (Kraut, 2010).

Universality in ethics provides a specific paradigm where the moral choice is based on creating the right outcome of an action considering all humanity. A distinction should be made between universality – pertaining to the universal validity of an attitude – and generality, meaning the extension of specific ideas or attitudes into broader concepts (Shijun, 2009).

An absolutist view is important in evaluating attitudes towards business ethics as 80% of respondents in a study by Brenner and Molander (1977) indicated that an absolute standard of morality should exist. One example of such an absolutist moral code is the Universal Declaration of Human Rights.

Objectivism

The founder and one of the greatest proponents of objectivism was Ayn Rand, a Russian-American author and philosopher. She defined objectivism as:

“My philosophy, in essence, is the concept of man as a heroic being, with his own happiness as the moral purpose of his life, with productive achievement as his noblest activity, and reason as his only absolute.” – Ayn Rand, Atlas Shrugged, 1957

Although objectivism, like Machiavellianism, is founded in self-interest, it is bound by the natural rights of individuals. It is this rule of reason over emotion which creates the ethical society where free choice and competition leads to productivity and personal fulfilment (Miesing & Preble, 1985). This is then also postulated as the basis of a free-market economy, where businesses compete and this competition drives economic growth, productivity and profitability. Friedman (1970) went so far as to argue that it is immoral for business executives to pursue any other objective than to maximise profit – any ulterior motive would ultimately result in the suppression of the rights and privileges of the individual.

More recently, the debate on objectivism has been mostly against the principles and validity of objectivism as a moral philosophy. Alan Greenspan, who was a close companion of Ayn Rand and an avid objectivist in the 1950s and 1960s, has recently acknowledged that a minimum level of business regulation is necessary for the maintenance of an equitable business environment (Lanman & Matthews, 2008). Other academics, such as Dr. Geoff Lewis from the Melbourne Business School,

have also countered that the principle of maximising shareholder value, i.e. profits, is inadequate in the modern economic context and that the overriding principle must rather be one of maximising value across all stakeholders (Lewis, 2010).

Even though it is principally discredited as a viable moral philosophy, objectivism is one of the business philosophies on which the research instrument for this study is based. It is therefore important to include this philosophy in the analysis of the results.

Social Darwinism

Social Darwinism is a synthesis of Charles Darwin's theory of evolution and Adam Smith's "invisible hand" where individuals, through self-interested activities, promote the social welfare (Miesing & Preble, 1985). Some firms will be more successful than others as they compete in a market. As the weaker firms are eliminated, the survivors create an improved society. It is therefore the most competitive firms which are the best for society and therefore ethically superior.

On the contrary, Miesing and Preble (1985) argue that it may not necessarily be the morally superior firms which survive, but that the more unethical and ruthless firms may have the advantage in the market. Furthermore, firms may also not have the social good as an objective, but rather the maximisation of profits at society's expense.

Relativism

Ethical Relativism is defined as that concepts of truth, justice and ethics are not absolute and must be assessed within its social context (Swoyer, 2003).

The basic tenets of the philosophy are that there are significant differences between societies regarding their moral stance, that the differences are much more significant than any agreements and, therefore, that these differences invalidates any absolute moral judgements (Gowans, 2008).

Relativism is therefore in direct opposition to Objectivism, as any action must be judged in its specific context rather than the individual's own moral framework (Miesing & Preble, 1985). This stance then also invalidates the teleological view that there should be laws or rules to govern societal behaviour as the ethical "right" is dependent on the social context.

2.3. Changing Attitudes towards Ethics

There is an abundant store of literature which assesses the differences in attitudes towards business ethics based on factors of commonality or difference (Arlow & Ulrich, 1988) or describing how ethical attitudes are being changed though intervention in areas as diverse as socio-economics, politics or environmental issues (Gao, 2008; Newell, 2008). These studies often take on the form of a comparative analysis or a factor analysis. Gao (Gao, 2008) also reported that there are societal differences in how business ethics is measured and reported with the USA providing a large number of studies whilst China has very little research on this subject.

Much less frequent are studies measuring how attitudes towards ethics change over time. The published studies can be grouped into studies relating to the moral development of individuals and studies comparing groups or cohorts over time. These sets are related as the individuals within a cohort study will each develop their moral frameworks with numerous

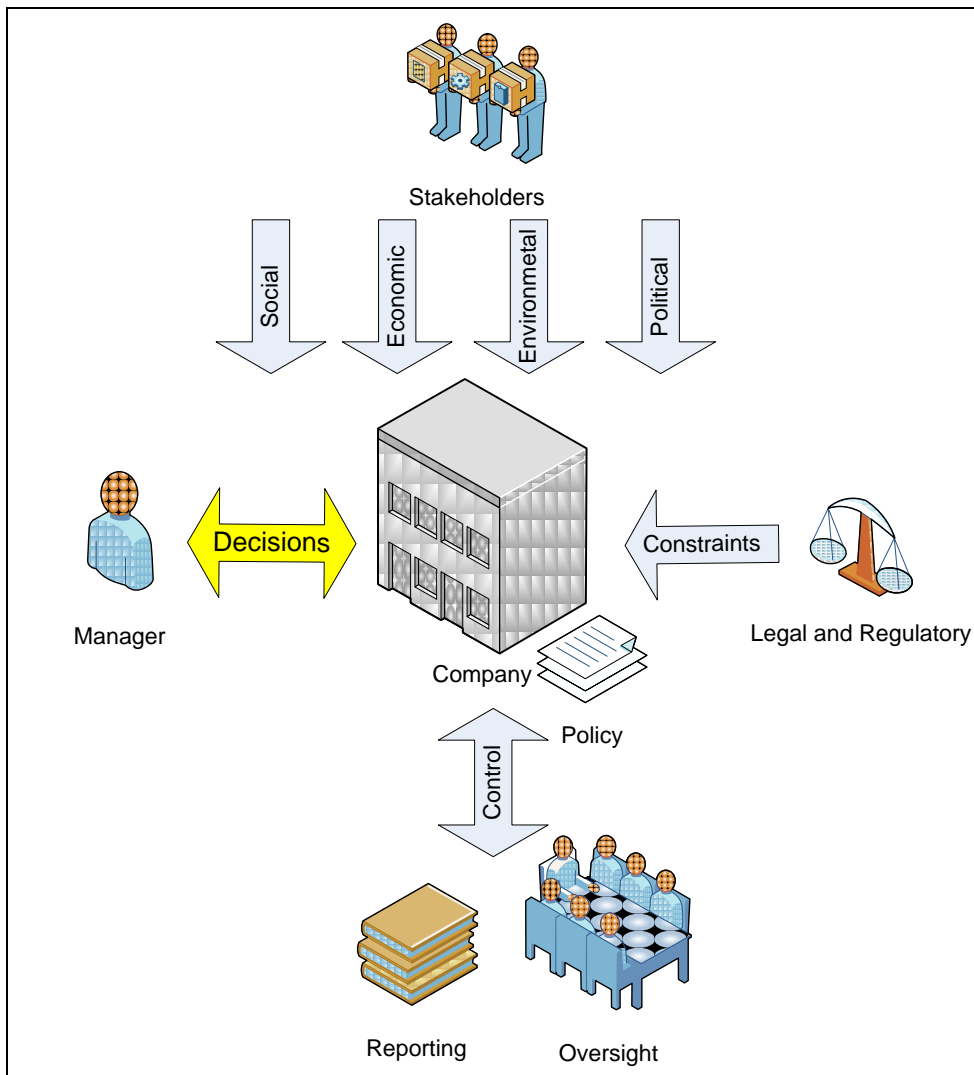
factors influencing this development (Minnameier, 2009). The resultant combined effect may manifest as complex patterns in the generalised attitudes of groups.

The few longitudinal studies of attitudes towards business ethics found that the attitudes have generally become stronger (Emerson & Conroy, 2004) and that there are some significant generational differences between cohorts (Twenge, 2010). This implies that the ethical stance of companies should improve over time and that that should lead to fewer and less severe failures in ethical governance. However, this raises questions on how the most devastating financial crisis in recent history could have been caused by what was principally a failure of ethics (Yandle, 2010).

2.4. Business Ethical Issues in South Africa

Business ethics centres on the decisions individual managers make on the strategy, tactics and operations of a business with due regard to stakeholder requirements, legal and regulatory requirements, company policy and the oversight and reporting requirements. The key ethical issues may be extracted from the King Code on Governance for South Africa (IoDSA, 2009) and represented as:

Figure 1: Ethical Issues Framework



2.4.1. Stakeholder Factors

There are numerous factors which pose severe ethical issues on the business agenda. These are the realities within which businesses must operate in South Africa, but are also shaped and changed by business. A few of the key indicators are:

Table 2: Socio-Economic Issues in South Africa

Social Issue	1995	Latest	Source
Inequality (GINI Coefficient - IES)	0.64	0.68	(The Presidency, 2009)
Poverty (Population below	53%	49%	(The Presidency, 2009)

R524/month)			
HIVAIDS (Pregnant women HIV+)	10.4%	28.0%	(The Presidency, 2009)
Unemployment (Broad Classification)	28.2%	32.5%	(The Presidency, 2009; Banerjee, Galiani, Levinsohn, McLaren, & Woolard, 2008)
Education (Senior Certificate pass rate)	53.4%	60.7%	(The Presidency, 2009)
Crime (Contact Crime per 100,000 people)	1,653	1,407	(The Presidency, 2009)
Socio-political philosophy	Apartheid	BBBEE	(The Presidency, 2009)
Life expectancy (Years, Females)	68.3	57.2	(The Presidency, 2009)
Environment (Mt CO ₂ equivalent est.)	385	550	(The Presidency, 2009)

Although government has the primary responsibility for addressing these issues, they impact directly on the individual businesses on both a strategic and operational level (IoDSA, 2009). This means that these ethical issues must be dealt with by the management as well as the boards of organisations and should be reported on in the annual reports of the companies (IoDSA, 2009; Tseng et al., 2010).

2.4.2. Legal and Regulatory Factors

A degree of government regulation, intervention and legislation is essential for modern markets to function adequately. Parties to business agreements must have confidence that contracts are enforceable and will be abided by

(OFT, 2009). Furthermore, a legal and regulatory framework is necessary to provide protection to vulnerable sections of society by setting a framework to delineate the behaviour of business.

There are, of course, also unintended consequences to legislation and regulation, such as creating barriers to entry in markets, influencing decision makers, distorting competition or impacting negatively on one sector by protecting another (OFT, 2009). There are a number of South African laws which specifically aim to control and regulate the ethical behaviour of businesses. This is supplemented by the government's 2010/11 – 2012/13 Industrial Policy Action Plan (DTI, 2010), which frames the government's medium-term industrial development strategy and how government (and business) policy and regulation should be developed.

The legal and regulatory factors set the parameters of what defines morally or ethically acceptable behaviour. Their objectives should provide guidance to business decision makers and should be a tool for developing policies, processes, standards and codes of conduct within organisations.

2.4.3. Individual Responsibility and Accountability

All decisions in business are ultimately either the responsibility or accountability of an individual – an individual who acts as agent for the organisation. This individual is therefore faced with the very basic dilemma, deciding in whose best interest he should act.

Card (2005) has shown that individuals may sometimes abdicate their moral obligations when acting on behalf of an organisation and that there is a systematic erosion of agency over time where there tends to be less

accountability for actions taken by the organisation. He argues that an organisation, with its hierarchy and policies, may reduce an individual's willingness to accept responsibility for his actions and the individual may therefore be able to act immorally while acting on behalf of the organisation.

The development of Corporate Social Responsibility (CSR) has also seen the reduction of the individual as moral agent for the organisation (Liedekerke & Dubbink, 2008). They argue that the development of an organisation, with its processes and technology, encodes many decisions into the operations of the organisation and thereby atrophy the role and importance of any individual's actions. Furthermore, they propound the concept that the organisational and technological design should be re-examined as the source of morality in the organisation.

The new Companies Act sets a framework for accountability, at least for directors of companies, where the individual directors may be held liable for any activities in the company which do not pass moral muster and which should have been prevented by a reasonably competent director.

It is therefore clear that the role of the individual, where he functions in the organisation, the policies, processes, standards and technology employed by the organisation, are all determining factors of an individual's attitude towards business ethics.

2.4.4. Oversight and Reporting

The ultimate control on the activities of a business is its financial statements and reports – as an expression and summation of all that it, as a legal entity, has done during the reporting period. The King Code on Governance

for South Africa 2009 (IoDSA, 2009) requires companies to report not only on financial performance, but also on social and environmental contribution.

This “triple bottom line” approach can, of course, create ethical dilemmas in its own right – many companies battle to find a balance between the multiple responsibilities (Painter-Morland, 2006). He argues that the ethical code of conduct should be at the heart of the activities and that it runs a “*network of veins*” to connect all the sites of stakeholder engagement and business activity. Failing to articulate and measure the conformance to such a code will lead to discontinuities between the espoused and enacted values of an organisation.

Research has also shown that stakeholder involvement is a significant driver of ethical behaviour. Felo (2007) has found that for companies where the board is directly involved in defining and implementing codes of ethical conduct, the companies disclose more information in their reports and have greater disclosure transparency. Moreover, companies with high levels of reporting transparency, e.g. prominently disclosing their own codes of ethics, experience higher levels of public trust (Bernardi & LaCross, 2005).

The attitudes of individual managers within an organisation will therefore see their attitudes towards business ethics develop in line with the espoused values and the rigour with which they are applied in the organisation.

2.5. Previous Assessments of Business Ethics

2.5.1. The ATBEQ Assessment Tool

Preble and Reichel (1988) conducted initial studies which lead to a series of similar assessments across four additional countries over the past two decades. In all six cases the same assessment tool – the “Attitudes Towards Business Ethics Questionnaire”, or ATBEQ for short, which was developed by Neumann and Reichel (Preble & Reichel, 1988) in 1987. These studies were:

Table 3: Previous ATBEQ-based Assessments

Reference	Country	Sample Size
(Preble & Reichel, 1988)	USA	129
(Preble & Reichel, 1988)	Israel	150
(Moore & Radloff, 1996)	South Africa	379
(Small, 1992)	Australia	179
(Sims & Gegez, 2004)	Turkey	125
(Gbadamosi & Joubert, 2005)	Swaziland	83

These studies found statistically significant differences in varying numbers of questions between different countries with the main differentiating factor being culture (Sims & Gegez, 2004) with South Africa, USA and Australia being similar and Israel and Turkey dissimilar. Although the statistical treatment of the assessments was similar, the results were interpreted according to different frameworks.

2.5.2. The Moore and Radloff Study at Rhodes University

Moore and Radloff (1996) administered the ATBEQ to the final year Bachelor of Commerce students at Rhodes University for three consecutive years, 1989 to 1991. They compared the results from their sample with the results published by Preble and Reichel (1998) and Small (1992) and found that there was a significant difference in attitudes only between their and the Israeli results. They also performed a factor analysis that identified eleven factors, seven of which they could theoretically label. This study follows a similar analysis methodology in order to maintain validity and comparability.

2.5.3. Other National Assessments

There are a number of other general assessments of attitudes towards business ethics in the literature:

Table 4: Other National Assessments

Reference	Country	Sample Size
(Alam, 1993)	New Zealand	99
(Alam, 1995)	Malaysia	76
(Argandoña, 1999)	Spain	N/A
(Christie, Kwon, Stoeberl, & Baumhart, 2003)	India, Korea and US	345

These studies typically assess the state of business ethics within specified country by measuring the general compliance with reporting practices, the ethical conduct of companies and the existence or implementation of codes of ethical conduct.

2.5.4. Concerns on Previous Assessments

The published results (Gbadamosi & Joubert, 2005; Moore & Radloff, 1996; Sims & Gegez, 2004; Small, 1992) have all used parametric tests on the results of their respective surveys. These parametric tests assume that the variables are nominal and normally distributed. In reality, these values are categorical and will only provide ordinal data when coded as numerical values (Zikmund, 2003). The results should therefore be treated with caution.

2.6. Academic Interest in this Research

There are a number of reasons why an assessment of attitudes towards business ethics is of academic interest. Firstly, it will inform course content on business ethics by highlighting the current trends and attitudes which managers should be aware of and be able to address in their own organisations. Secondly, this research will assist in forming a baseline for sustainability management and assessment in South Africa, where academia should be actively involved in developing frameworks. Thirdly, it will inform improvement strategies for business governance on issues of policy development, codes of conduct and diversity management and, lastly, it will identify areas for future research.

3. Research Questions

3.1. Objective 1

Have attitudes towards business ethics in South Africa changed since the early 1990s?

For the parametric tests the hypotheses are:

H_0 : There is no significant difference in the performance on the questionnaire between the Moore and Radloff (1996) samples and the current sample of GIBS alumni.

H_{1A} : There is a significant difference in the performance on the questionnaire between the Moore and Radloff (1996) samples and the current sample of GIBS alumni.

The Moore and Radloff (1996) evaluation criteria were applied in order to maintain consistency of method and evaluation. H_1 is evaluated by a statistically significant difference in the mean of each question for at least half of the questions. In other words, the null hypothesis can only be rejected if 16 or more questions show a statistically significant difference in the mean at a 0.05 α -level as either an increase or decrease.

For examining the changes in rank of the variables through a non-parametric test the hypotheses are:

H_0 : There is no significant difference in the ranks of the variable means of the Moore and Radloff (1996) samples and the current sample of GIBS alumni.

H_{1B} : There is a significant difference in the ranks of the variable means of the Moore and Radloff (1996) samples and the current sample of GIBS alumni.

The null hypothesis can only be rejected if a statistically significant difference is found at a 0.05 α -level on a two-tailed test.

3.2. Objective 2

How have the attitudes towards business ethics changed? Have they become more or less extreme?

H_0 : There is no significant difference in the attitudes measured in the questionnaire between the Moore and Radloff (1996) samples and the current sample of GIBS alumni.

H_2 : Attitudes of the GIBS sample are significantly more extreme than the Moore and Radloff (1996) samples.

The null hypothesis can only be rejected if 16 or more of the variables show a statistically significant change in the mean between the GIBS and Rhodes samples at a 0.05 α -level.

4. Research Methodology and Design

This research was quantitative and descriptive in nature. The study was conducted as a “*cohort study*” (Zikmund, 2003, p. 187) as the same instrument was administered to two separate but similar samples over an interval of more than sixteen years. The methodology and design replicated previous studies conducted with the ATBEQ.

4.1. Unit of Analysis

The unit of analysis was the individual alumnus.

4.2. Population

The population for this study was the 778 past management students who completed their Masters in Business Administration (MBA) studies between 2006 and 2010 at the Gordon Institute of Business Science (GIBS).

4.3. Sampling

The sampling frame was all the GIBS alumni for whom a valid email address was available. This sample was similar to the sample from the Moore and Radloff (1996) study where their sample consisted of students completing a Bachelor of Commerce (B.Com.) degree at Rhodes University. Not only would the two samples have a similar level of education, but would also be of similar age. The GIBS sample would, however, have a significantly greater age range and have more business experience than their Rhodes counterparts.

4.4. Research Instrument

The research instrument will consist of two parts. The first part will consist of a number of questions to determine cultural demographics. These will be completed by selecting pre-populated values in order to maintain scalability. A question on nationality will be included to exclude non-South Africans from the analysis.

The second part of the instrument will be the 30 question ATBEQ where each question is assessed using the same five point Likert scale. The ATBEQ will not be modified in order to maintain validity when comparing results with the previous study. Permission to use the ATBEQ will be obtained from the original authors.

The ATBEQ is based on the business theories of Social Darwinism, Machiavellianism, Objectivism, and Ethical Relativism (Preble & Reichel, 1988). Even though each question directly relates to one of these theories, the actual mapping was not provided. It is therefore necessary to identify the common factors from the results through factor analysis.

A draft questionnaire is available in *Appendix A*.

4.5. Data Gathering Process

The research instrument was deployed to SurveyMonkey.com, an Internet-based survey service, in order to conduct an anonymous survey of the sample. The instrument was deployed as three web pages containing ten questions each. It was also branded with the GIBS banner and given a research specific URL as <http://www.surveymonkey.com/s/GIBSEthics2010>.

The instrument was pre-tested on a sample of ten individuals in order to solicit feedback on the usability, structure and language of the test. Most of the recommendations regarding the layout of the questionnaire were incorporated. There were two comments on the interpretation of Question 24 in that it may be interpreted in multiple ways. It was decided to leave the question unchanged in order to maintain the comparability of results.

The alumni from the 2007, 2008 and 2009 classes were then invited to respond to the survey by email on a Thursday afternoon before a public holiday on the Friday. A self-selection bias may have been introduced by distributing the request just before a long weekend.

Both the email and the questionnaire emphasised the anonymity of the survey as well as the voluntary nature of participation. There was no incentive offered to any participant. This request resulted in 93 completed responses.

Following the initial round of the survey, the email request was sent to the alumni from the 2005 and 2006 classes in order to gather additional responses. The request and the questionnaire were left completely unaltered in order to prevent the introduction of any additional biases. The second round of the survey resulted in an additional 49 responses which brought the total sample size to 142.

4.6. Method of Analysis

4.6.1. Encoding of Responses

Each question in the questionnaire was treated as an independent statistical variable. The responses were then encoded by assigning a value to each response on each variable as:

1 = Strongly Disagree

2 = Disagree

3 = Neutral

4 = Agree

5 = Strongly Agree

It must be noted that this coding of responses was done for ease of analysis and to conform to the evaluation processes used in previous studies. No data transformations were applied.

The responses are ordinal data and by encoding are not converted into interval data. Where there may be confusion in the interpretation of results, the risk of misinterpretation has been highlighted.

4.6.2. Evaluation of Responses

The data was inspected to identify any responses which should be removed from the analysis. Five incomplete responses were eliminated as it may be assumed that for at least three of these responses the respondent completed the survey shortly after terminating the first attempt.

The reliability statistics for the sample was calculated before any further processing was done. An acceptance value of 6.0 was set for the Cronbach's Alpha statistic.

The data was then tested for any highly biased or unintended submissions by inspecting the mean and standard deviation of each record. An excessively high or low mean could indicate an extreme bias or that the respondent did not complete the survey accurately. A very low standard deviation would indicate that the respondent did not respond to the questions, but merely entered the same response on each question. Conversely, a very high standard deviation would have indicated an extremity bias (Zikmund, 2003, p182).

4.6.3. Descriptive Statistics

The first phase of the analysis was to draw the descriptive statistics to evaluate the data and determine the applicability of the proposed tests. The statistics used were the:

Counts: This was the number of responses in each category for each variable.

Mode: This was the answer most frequently given for a question.

Median: This indicates the measure of central tendency and was derived by ordering the data and then taking the value at position $\frac{(n+1)}{2}$ where n is the number of responses.

Mean: The mean was calculated by dividing the sum of the responses by the number of responses. This statistic could

only be interpreted as a measure of central tendency by providing an indication of a “centre of gravity” for the responses. As a quantitative statistic it is inherently meaningless due to the ordinal nature of the response data.

Standard Deviation (σ): The standard deviation was calculated for each question as input for the parametric tests. This statistic could only be interpreted a relative measure of variance in responses between questions. As a quantitative statistic it is inherently meaningless due to the ordinal nature of the response data.

4.6.4. Normality Tests

Likert scale data will very seldom follow a normal distribution as it is inherently ordered categorical data with only a “vague” sense of intervals being applicable. Furthermore, the distributions which Likert scale data follows are typically highly skewed to either end of the spectrum (Lubke & Muthen). It is therefore important to take care in assuming multivariate normality which is a base requirement for conducting parametric tests on stochastic data. Kolmogorov-Smirnov tests were therefore run against all the variables to test for normality.

4.6.5. Principal Component Analysis and Factor Analysis

A principal component analysis (PCA) was done to determine the number of potential uncorrelated underlying factors which may explain the observed behaviour of the respondents across all variables, thereby attempting to reduce the complexity of the model. It is important to determine the uncorrelated factors as there may be inherent correlations between the various variables.

The PCA was executed without robust covariance estimation and used the correlation matrix for the analysis. No factor rotation was applied and an Eigen-value of 1.0 was used as the cut-off for factor estimation. The number of components identified in the PCA was then used as input for the varimax factor analysis.

A rotated varimax factor analysis (Abdi, 2003) was applied to the data for the number of factors identified in the PCA in order to develop the strongest possible model with variables assigned to factors where they have the greatest contribution. A qualitative analysis was then performed on these factors to identify the underlying drivers of business ethics and was then compared to the results from Moore and Radloff (1996) which were obtained in a similar analysis.

A factor analysis aims to detect patterns in the relationships between variables. This is achieved by grouping the responses according to the correlation between the various answers rather than the framework according to which the questionnaire was drafted. This method of analysis is therefore capable of determining the underlying structures in the data which are the drivers of ethical behaviour. These drivers will be identified by examining the questions grouped by the factor analysis.

4.6.6. Hypotheses Testing

Hypothesis 1A:

t-Test

t-Tests for significant differences (Zikmund, 2003), at a 5% level of significance, between the means of the primary data collected on each question and the secondary data obtained from Moore and Radloff (Moore & Radloff, 1996) was conducted. These tests assume that historical data defines the population statistics. The t-statistic is calculated as:

$$T = \frac{\bar{x} - \mu_0}{s / \sqrt{n}}$$

Where, for each variable:

\bar{x} is the mean of the sample taken for this study

μ_0 is the population mean of the Moore and Radloff study

s is the standard deviation of the sample taken for this study

n is the sample size of this study

The resulting values were then tested against a critical value of $t_{(\alpha/2, n_1+n_2-2)}$

where the H_0 could be rejected if $T \geq t_{(\alpha/2, n_1+n_2-2)}$

The probability of a Type I error – the probability that H_0 will be rejected given H_1 is true – was calculated for each variable as the probability of the T value on the Student's T-Distribution. The number of variables for which the H_0 could be rejected was then counted and the cumulative reliability of the result calculated as the product of the reliabilities of the least reliable

variables for the minimum number of Type I errors which would invalidate the overall result.

The base H_0 could then be rejected if less than half of the variables did not have their respective H_0 rejected and the cumulative reliability was still within the 0.05 α -level.

Z-test

It cannot be assumed that the results from the Moore and Radloff (Moore & Radloff, 1996) study define the mean and variance of their whole population for each variable tested. It was therefore advisable to test for the difference between the means of both samples in order to test the hypothesis. This was done by the calculation of a test statistic Z for each variable:

$$Z = \frac{\bar{X}_1 - \bar{X}_2 - d}{\sqrt{\frac{\sigma_1^2}{n_1} + \frac{\sigma_2^2}{n_2}}}$$

Where, for each variable:

\bar{X}_1 is the mean of the Moore and Radloff sample

\bar{X}_2 is the mean of the sample taken for this study

d is the acceptable difference in sample means

σ_1^2 is the variance of the Moore and Radloff sample

σ_2^2 is the variance of the sample taken for this study

n_1 is the sample size of the Moore and Radloff study

n_2 is the sample size of the sample taken for this study

The resulting values were then tested against a critical value of $N_{(1-\alpha/2)}$

where the H_0 could be rejected if $Z \geq N_{(1-\alpha/2)}$

For the purposes of this study it will be assumed that any statistically significant difference in means is meaningful and therefore d is set to zero.

The Z-tests were only used to corroborate the results of the t-tests.

Hypothesis 1B:

Wilcoxon Signed Rank Test

Another method of assessing the H_0 was to determine whether there were statistically significant changes in the ranks of the means of the variables.

The Wilcoxon Signed Rank Test is appropriate:

$$T^+ = \sum Z_i r(|D_i|)$$

Where,

D_i is the difference in ranks for each variable i

$r(|D_i|)$ is the ranks of the absolute values of differences

$$Z_i = \begin{cases} 1 & \text{if } D_i > 0 \\ 0 & \text{if } D_i < 0 \end{cases}$$

The T^+ value was then tested against the critical value, $s_{n,\alpha/2}$, which was looked-up in a table. H_0 could be rejected if $T^+ \leq s_{n,\alpha/2}$ or if $T^+ \geq n(n+1)/2 -$

$s_{n,\alpha/2}$

Hypothesis 2:

Each variable was classified as either an “Agree” or “Disagree” response mode variable by assigning their modal response to the appropriate class.

Each variable was then tested to determine whether the observed change was towards the extreme or to neutrality. For the H_0 not to be rejected more than half of the variables had to exhibit a statistically significant shift in their

mean towards the extreme whilst maintaining reliability within the 0.05 α -level as per Hypothesis 1A.

4.7. Assumptions

It cannot be assumed that the Likert scale data will form a normal distribution and it will therefore be assumed that parametric tests will be valid because of the large sample size.

4.8. Research Limitations

Several previous studies have identified differences in attitudes towards business ethics between business students and business practitioners (McCabe & Trevino, 1996; Glenn & Van Loo, 1993). This variability will also be present in the differences measured in this study, but will be impossible to quantify.

As this study will be self-administered, the questions will be open to interpretation. There will not be any opportunity to gather qualitative data from the participants which could be a rich source of information.

The research may be subject to a non-response error and a self-selection bias. There may also be response biases, misrepresentation or deliberate falsification (Zikmund, 2003).

All the participants will have been educated by the same institution where they may have assumed specific attitudes towards business ethics. The result may therefore not be fully representative of all managers in the South Africa.

5. Results

5.1. Sample Analysis and Description

A total of 147 responses were obtained from 754 requests distributed. The response rate was therefore 19.5%. However, five responses were excluded as they were only partially completed. This left a total of 142 responses that were used in the analysis. The responses were obtained over a 26 day period during September and October 2010. The data was analysed using NCSS 2007 (Student Version) rel. 07.1.14 with subsequent processing and analysis on Microsoft Excel 2007.

A significance level (α) of 0.05 was consistently applied to all analysis. Parametric tests are two-tailed unless specifically stated as one-tailed.

The responses showed an acceptable level of internal consistency with a Cronbach's α value of 0.698 which is significantly greater than the acceptance level of 0.60.

5.2. Response Data

Each question in the survey was treated as a separate variable with a naming convention of Q1 to Q30 applied. The responses were encoded by assigning a value to each response as:

1 = Strongly Disagree

2 = Disagree

3 = Neutral

4 = Agree

5 = Strongly Agree

No data transformations were applied.

Wherever results are indicated as being from the Rhodes University samples, these are quoted directly from Moore and Radloff (1996).

5.2.1. Descriptive Statistics

The basic descriptive statistics are given in the table below. It must be emphasised that only the median and mode should be used in the interpretation of the statistics as the data is based on a Likert-type scale and therefore inherently ordinal. The results from the Rhodes sample are included for clarity and comparison.

Table 5: Sample Descriptive Statistics

Var.	Counts					GIBS				Rhodes	
	1	2	3	4	5	Mode	Median	Mean	σ	Mean	σ
Q1	54	66	9	7	6	2	2	1.91	1.01	2.31	1.29
Q2	98	41	1	2	0	1	1	1.35	0.57	1.68	0.66
Q3	15	42	18	41	26	2	3	3.15	1.32	2.97	1.21
Q4	28	80	13	19	2	2	2	2.20	0.96	2.09	0.74
Q5	15	52	45	27	3	2	3	2.65	0.98	3.08	0.58
Q6	15	73	13	34	7	2	2	2.61	1.11	3.09	1.14
Q7	85	48	3	4	2	1	1	1.52	0.80	1.76	0.63
Q8	29	74	20	18	1	2	2	2.21	0.94	2.73	0.98
Q9	68	68	1	3	2	1	2	1.61	0.74	1.99	0.78
Q10	36	64	12	23	7	2	2	2.30	1.16	1.98	1.05
Q11	35	63	8	32	4	2	2	2.35	1.16	2.26	1.01
Q12	6	33	15	61	27	4	4	3.49	1.17	3.60	1.32
Q13	53	61	12	13	3	2	2	1.96	1.01	3.31	1.37
Q14	125	13	3	0	1	1	1	1.16	0.51	1.60	0.93
Q15	80	51	6	5	0	1	1	1.55	0.74	2.15	0.96
Q16	110	29	2	1	0	1	1	1.25	0.51	2.12	1.05
Q17	16	32	17	49	28	4	4	3.29	1.32	2.70	1.38
Q18	2	12	6	75	47	4	4	4.08	0.92	3.95	0.96
Q19	5	49	20	52	16	4	3	3.18	1.13	3.17	1.00
Q20	28	82	8	21	3	2	2	2.22	1.00	2.55	1.33
Q21	69	53	9	7	4	1	2	1.76	0.97	2.07	1.16
Q22	49	67	8	16	2	2	2	1.98	0.99	2.48	1.08
Q23	7	27	16	66	26	4	4	3.54	1.14	3.85	1.09
Q24	18	47	16	52	9	4	3	2.91	1.21	3.44	1.14
Q25	11	45	26	47	13	4	3	3.04	1.15	3.12	1.18
Q26	6	24	43	50	19	4	3	3.37	1.05	3.24	1.18
Q27	25	49	37	26	5	2	2	2.56	1.09	2.99	1.07

Var.	Counts					GIBS				Rhodes	
	1	2	3	4	5	Mode	Median	Mean	σ	Mean	σ
Q28	27	78	26	10	1	2	2	2.15	0.84	2.36	0.85
Q29	10	36	16	65	15	4	4	3.27	1.16	3.29	1.27
Q30	0	28	28	63	23	4	4	3.57	0.98	2.98	1.32

n = 142 n = 379

5.2.2. Normality Tests

Likert-type data will very seldom follow a normal distribution. This was also true for the GIBS sample with the Kolmogorov-Smirnov tests indicating that none of the variables were normally distributed. This means that caution should be applied in using the data for parametric tests which requires normally distributed data for validity. In this case, reliance must therefore be placed on the relatively large sample size of 142.

Table 6: Kolmogorov-Smirnov Normality Test Results

Variable	Kolmogorov-Smirnov Test	
	Test Value	Result
Q1	0.309	Reject normality
Q2	0.417	Reject normality
Q3	0.210	Reject normality
Q4	0.345	Reject normality
Q5	0.221	Reject normality
Q6	0.329	Reject normality
Q7	0.342	Reject normality
Q8	0.315	Reject normality
Q9	0.274	Reject normality
Q10	0.307	Reject normality
Q11	0.307	Reject normality
Q12	0.281	Reject normality
Q13	0.286	Reject normality
Q14	0.504	Reject normality
Q15	0.335	Reject normality
Q16	0.465	Reject normality
Q17	0.240	Reject normality
Q18	0.318	Reject normality
Q19	0.239	Reject normality
Q20	0.361	Reject normality

Variable	Kolmogorov-Smirnov Test	
	Test Value	Result
Q21	0.268	Reject normality
Q22	0.308	Reject normality
Q23	0.297	Reject normality
Q24	0.239	Reject normality
Q25	0.212	Reject normality
Q26	0.206	Reject normality
Q27	0.216	Reject normality
Q28	0.313	Reject normality
Q29	0.290	Reject normality
Q30	0.267	Reject normality
α (0.05) Critical Value = 0.074		

5.2.3. Grouping of Variables into Factors

A principal component analysis aims to reduce the number of variables in the analysis by identifying new variables as aggregates of the original variables. These factors can then be rotated in order to optimise the groupings for best descriptive capability.

Table 7: Principal Component Analysis

Component	Eigen-value	Percentage Contribution	Cumulative Contribution	Significant
1	4.26	14.22	14.22	Yes
2	2.43	8.12	22.33	Yes
3	1.95	6.50	28.83	Yes
4	1.79	5.95	34.78	Yes
5	1.62	5.41	40.19	Yes
6	1.53	5.10	45.30	Yes
7	1.27	4.22	49.52	Yes
8	1.24	4.13	53.64	Yes
9	1.12	3.75	57.39	Yes
10	1.06	3.53	60.92	Yes
11	1.00	3.32	64.24	Yes
12	0.92	3.05	67.29	No
13	0.90	3.02	70.31	No
14	0.84	2.79	73.10	No
15	0.79	2.64	75.74	No
16	0.77	2.57	78.31	No
17	0.73	2.44	80.75	No
18	0.70	2.35	83.09	No
19	0.65	2.16	85.26	No
20	0.63	2.09	87.35	No

Component	Eigen-value	Percentage Contribution	Cumulative Contribution	Significant
21	0.51	1.72	89.07	No
22	0.50	1.67	90.74	No
23	0.46	1.52	92.26	No
24	0.43	1.43	93.69	No
25	0.42	1.40	95.09	No
26	0.39	1.31	96.40	No
27	0.31	1.05	97.45	No
28	0.31	1.03	98.48	No
29	0.26	0.86	99.34	No
30	0.20	0.66	100.00	No

The Principal Component Analysis indicated that there are eleven uncorrelated variables with an eigenvalue of 1.0 or greater, i.e. factors which show a clear ability to describe the attitudes. This is not ideal as the ATBEQ was developed around only five ethical philosophies and it would have lent credibility to the framework if those five factors were reflected in the results. Additionally, the eleven factors account for only 64% of the variation seen in the responses where a higher cumulative contribution would have been a stronger result.

These results echo the Rhodes study where there were also eleven components identified. The Varimax Factor Analysis was therefore conducted for eleven factors, as were the analysis of the Rhodes sample.

Table 8: Component Contributions after Varimax Factor Analysis

Component	Eigen-value	Percentage Contribution	Cumulative Contribution
1	1.82	13.78	13.78
2	1.86	14.13	27.91
3	1.45	10.96	38.87
4	1.40	10.60	49.48
5	1.00	7.57	57.04
6	1.02	7.73	64.78
7	0.95	7.21	71.98
8	0.82	6.21	78.19
9	0.82	6.21	84.40
10	0.86	6.55	90.95
11	1.21	9.21	100.16

Component	Eigen-value	Percentage Contribution	Cumulative Contribution
12	0.33	2.54	102.70
13	0.28	2.12	104.82
14	0.27	2.02	106.84
15	0.20	1.53	108.37
16	0.17	1.29	109.67
17	0.12	0.90	110.56
18	0.09	0.66	111.22
19	0.08	0.63	111.85
20	0.02	0.13	111.98
21	-0.02	-0.17	111.82
22	-0.05	-0.40	111.42
23	-0.06	-0.46	110.96
24	-0.11	-0.85	110.11
25	-0.13	-0.97	109.14
26	-0.15	-1.17	107.97
27	-0.20	-1.51	106.46
28	-0.23	-1.75	104.70
29	-0.27	-2.04	102.67
30	-0.35	-2.67	100.00

The Varimax factor analysis provided an improved model simplifying the interpretation by associating each variable strongly with one (or a few) factors and having each factor comprised of a small number of variables.

Table 9: Comparison of Identified Factors

GIBS			Rhodes		
Factor	Variable	Loadings	Factor	Variable	Loadings
1	Q7	0.745	1	Q7	0.726
	Q6	0.646		Q2	0.717
	Q9	0.412		Q9	0.680
2	Q15	0.782		Q1	0.568
	Q16	0.697		Q4	0.481
	Q14	0.509	2	Q16	0.770
	Q13	0.431		Q15	0.671
3	Q5	-0.548		Q14	0.664
	Q20	-0.503		Q13	0.475
	Q27	-0.485	3	Q23	0.710
4	Q23	0.860		Q24	0.700
	Q24	0.465	4	Q29	0.756
5	Q8	0.541		Q25	0.585
	6	Q28		0.607	Q28
Q18		-0.482	5	Q17	0.620
Q26		0.427		Q12	0.534

GIBS		
Factor	Variable	Loadings
7	Q19	-0.633
8	Q17	0.582
9	Q11	0.533
10	Q29	0.626
11	Q1	-0.630
	Q2	-0.577

Rhodes		
Factor	Variable	Loadings
6	Q21	0.466
	Q26	0.750
	Q27	0.723
7	Q5	0.678
	Q3	0.653
8	Q19	0.823
9	Q11	0.783
10	Q30	0.798
	Q18	0.500
11	Q8	0.771

The factor analysis was moderately successful with only 22 variables contributing meaningfully to the 11 factors. Five of the factors have only one variable and was therefore not able to reduce the complexity of the model.

There are a number of similarities (factors 2, 4, 5, 7 and 9 concur with factors identified in the Rhodes study), whereas the other factors show fairly little resemblance between the studies. There is no statistical test available to measure the degree or reliability of the variation between the factor analyses.

5.3. Objective 1: Changed Attitudes

The first objective of this research is to determine whether there has been a statistically significant change in the attitudes measured between the GIBS sample and the Rhodes sample as measured in the early 1990s. This was tested with a standard t-test which tested the current sample against the distribution measured in the past. Although this is a standard method of testing hypotheses, it does assume that the original sample closely defines the distribution of the population.

In order to test this assumption and verify the reliability of the results, the hypotheses were also tested using the Z-test where both samples of each variable are tested for being a sample from the same population distribution.

There is, however, the potential risk that, by combining the results of multiple t-tests, the significance of the overall finding may be invalidated due to an accumulation of errors in the findings. The statistical validity of the overall finding was therefore calculated by combining the actual confidence levels of each variable's t-test.

5.3.1. t-Test

A t-test of whether the GIBS sample might follow the same probability distribution as was measured by the Rhodes sample was conducted for each variable at an α -level of 0.05. These tests were conducted on a two-tail probability with a combined 519 degrees of freedom on the Student's T-distribution. However, these results should be treated with caution as the underlying data is ordinal and none of the variables followed a clear normal distribution.

Table 10: t-Test Results

Variable	t-Test		
	T value	P(T)	Result
Q1	4.71	< 0.005	Reject H_0
Q2	7.04	< 0.005	Reject H_0
Q3	1.63	0.104	Cannot reject H_0
Q4	1.44	0.152	Cannot reject H_0
Q5	5.16	< 0.005	Reject H_0
Q6	5.15	< 0.005	Reject H_0
Q7	3.56	< 0.005	Reject H_0
Q8	6.59	< 0.005	Reject H_0
Q9	6.04	< 0.005	Reject H_0

t-Test			
Variable	T value	P(T)	Result
Q10	3.33	< 0.005	Reject H ₀
Q11	0.89	0.372	Cannot reject H ₀
Q12	1.05	0.293	Cannot reject H ₀
Q13	15.91	< 0.005	Reject H ₀
Q14	10.24	< 0.005	Reject H ₀
Q15	9.66	< 0.005	Reject H ₀
Q16	20.24	< 0.005	Reject H ₀
Q17	5.30	< 0.005	Reject H ₀
Q18	1.70	0.090	Cannot reject H ₀
Q19	0.07	0.941	Cannot reject H ₀
Q20	3.96	< 0.005	Reject H ₀
Q21	3.76	< 0.005	Reject H ₀
Q22	6.06	< 0.005	Reject H ₀
Q23	3.26	< 0.005	Reject H ₀
Q24	5.24	< 0.005	Reject H ₀
Q25	0.76	0.447	Cannot reject H ₀
Q26	1.46	0.146	Cannot reject H ₀
Q27	4.79	< 0.005	Reject H ₀
Q28	2.88	< 0.005	Reject H ₀
Q29	0.20	0.843	Cannot reject H ₀
Q30	7.13	< 0.005	Reject H ₀
α (0.05)	$t_{(0.025,519)} = 2.249$		

H₀ can be rejected for 21 of the 30 variables. It may be noted that the results are unchanged at an α of 0.005.

The base hypothesis requires more than 15 variables to show significant changes in the mean of the variable. There is a very small (less than 0.01) probability of having a false positive result due to the highly significant results of the t-tests. For this to happen, more than six of the individual t-tests would have to have false positive results.

This means that the overall null hypothesis – that there has been no significant change in attitudes towards business ethics – can be rejected.

5.3.2. Z-Test

A Z-test of whether the GIBS and Rhodes samples might follow the same probability distribution was conducted for each variable at an α -level of 0.05. These tests were conducted on a two-tail probability on a normal distribution. However, these results should be treated with caution as the underlying data is ordinal and none of the variables followed a clear normal distribution.

Table 11: Z-Test Results

Variable	Z-Test	
	Test value	Result
Q1	3.72	Reject H_0
Q2	5.76	Reject H_0
Q3	1.42	Cannot reject H_0
Q4	1.30	Cannot reject H_0
Q5	4.84	Reject H_0
Q6	4.36	Reject H_0
Q7	3.21	Reject H_0
Q8	5.55	Reject H_0
Q9	5.09	Reject H_0
Q10	2.92	Reject H_0
Q11	0.79	Cannot reject H_0
Q12	0.87	Cannot reject H_0
Q13	12.24	Reject H_0
Q14	6.88	Reject H_0
Q15	7.56	Reject H_0
Q16	12.59	Reject H_0
Q17	4.46	Reject H_0
Q18	1.43	Cannot reject H_0
Q19	0.07	Cannot reject H_0
Q20	3.07	Reject H_0
Q21	3.04	Reject H_0
Q22	5.04	Reject H_0
Q23	2.81	Reject H_0
Q24	4.54	Reject H_0
Q25	0.65	Cannot reject H_0
Q26	1.20	Cannot reject H_0
Q27	4.10	Reject H_0
Q28	2.45	Reject H_0

Z-Test		
Variable	Test value	Result
Q29	0.17	Cannot reject H_0
Q30	5.51	Reject H_0
α (0.05)	$P_{(0.025)} = 1.96$	

H_0 can be rejected for 21 of the 30 variables. Additionally, it may be noted that only H_0 for Q28 cannot be rejected for an α of 0.01.

The base hypothesis requires more than 15 variables to show significant changes in the mean of the variable. This means that for the overall null hypothesis – that there has been no significant change in attitudes towards business ethics – can be rejected.

5.3.3. Changes in Ranks

Another view on the validity of the changes measured in the attitudes was gained by examining the rankings of the various variables and how they have changed. The Wilcoxon Signed Rank Test is appropriate for measuring whether the changes in the rankings of the means of the variables are statistically significant.

Table 12: Variable Rankings

Variable	GIBS Mean	Rhodes Mean	GIBS Rank	Rhodes Rank	Change in Rank	t-Test Significant?
Q1	1.908	2.308	23	20	-3.00	Yes
Q2	1.345	1.683	28	29	+1.00	Yes
Q3	3.148	2.968	9	14	+5.00	No
Q4	2.204	2.089	19	24	+5.00	No
Q5	2.655	3.077	12	11	-1.00	Yes
Q6	2.613	3.092	13	10	-3.00	Yes
Q7	1.521	1.759	27	28	+1.00	Yes
Q8	2.211	2.729	18	15	-3.00	Yes
Q9	1.613	1.989	25	26	+1.00	Yes
Q10	2.303	1.978	16	27	+11.00	Yes
Q11	2.345	2.258	15	21	+6.00	No
Q12	3.493	3.596	4	3	-1.00	No
Q13	1.958	3.306	22	5	-17.00	Yes

Q14	1.162	1.604	30	30	+0.00	Yes
Q15	1.549	2.149	26	22	-4.00	Yes
Q16	1.254	2.122	29	23	-6.00	Yes
Q17	3.289	2.702	6	16	+10.00	Yes
Q18	4.077	3.947	1	1	+0.00	No
Q19	3.176	3.169	8	8	+0.00	No
Q20	2.218	2.550	17	17	+0.00	Yes
Q21	1.761	2.068	24	25	+1.00	Yes
Q22	1.979	2.484	21	18	-3.00	Yes
Q23	3.542	3.854	3	2	-1.00	Yes
Q24	2.908	3.440	11	4	-7.00	Yes
Q25	3.042	3.116	10	9	-1.00	No
Q26	3.366	3.238	5	7	+2.00	No
Q27	2.556	2.994	14	12	-2.00	Yes
Q28	2.155	2.357	20	19	-1.00	Yes
Q29	3.275	3.294	7	6	-1.00	No
Q30	3.570	2.981	2	13	+11.00	Yes

$$T^+ = 345 \quad LCL = s_{30,0.025} = 137 \quad UCL = n(n+1)/2 - s_{30,0.025} =$$

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T^+ is greater than the upper control limit (UCL). The H_0 that there is no significant difference in the ranks could therefore be rejected at an α -level of 0.05 when testing on a two-tailed hypothesis.

There were generally relatively small changes in the rank of variables with only five variables which changed rank by more than five places and displaying a statistically significant change in the mean at an α -level of 0.05. These variables, which showed a significant change in rank, highlighted specific aspects of the attitudes towards business ethics that have shown marked changes between the GIBS and Rhodes samples.

5.3.4. Conclusion

Both the t-Tests and the Z-Tests showed identical results, confirming that 70% of the variables have changed. Furthermore, the Wilcoxon Signed Rank Test showed that the rankings of the variables have changed and that some attitudes have changed significantly. This can be taken as strong

evidence that there have been significant changes in the attitudes towards business ethics between the GIBS and Rhodes samples.

5.4. Objective 2: Extremity of Attitudes

The main goal of the second objective is to determine whether the GIBS respondents were expressing stronger opinions on ethical questions than their Rhodes counterparts. The process followed is consistent with the process of the first hypothesis where the majority of the variables must show a statistically significant change whilst controlling the risk of a false positive result on combining the results over multiple t-tests.

5.4.1. Measuring the Move to Extremities

The mode of each variable is determined by the most frequent response in the GIBS sample – an “Agree” or “Strongly Agree” was classified as “Agree” while a “Disagree” or “Strongly Disagree” was classified as “Disagree”.

The second step was to calculate the movement in the mean of responses for each variable across both samples. A positive value means that there has been a shift toward agreement whereas a negative value indicates a shift toward disagreement.

If the shift was found to be statistically significant at an α of 0.05 on a two-tailed test and the shift was in the direction of the mode then the shift is probably indicative of a strengthening of attitude, i.e. responses became stronger “Agree” or stronger “Disagree”. A general trend of attitudes becoming stronger over time would be indicated if the majority of variables exhibited a significant move to the extremes.

Table 13: Evaluation of Changes in Means

Variable	Mode	Δ -Mean	Significant	Extremity
Q1	Disagree	-0.40	Yes	Yes
Q2	Disagree	-0.34	Yes	Yes
Q3	Disagree	0.18	No	No
Q4	Disagree	0.12	No	No
Q5	Disagree	-0.42	Yes	Yes
Q6	Disagree	-0.48	Yes	Yes
Q7	Disagree	-0.24	Yes	Yes
Q8	Disagree	-0.52	Yes	Yes
Q9	Disagree	-0.38	Yes	Yes
Q10	Disagree	0.32	Yes	No
Q11	Disagree	0.09	No	No
Q12	Agree	-0.10	No	No
Q13	Disagree	-1.35	Yes	Yes
Q14	Disagree	-0.44	Yes	Yes
Q15	Disagree	-0.60	Yes	Yes
Q16	Disagree	-0.87	Yes	Yes
Q17	Agree	0.59	Yes	Yes
Q18	Agree	0.13	No	No
Q19	Agree	0.01	No	No
Q20	Disagree	-0.33	Yes	Yes
Q21	Disagree	-0.31	Yes	Yes
Q22	Disagree	-0.51	Yes	Yes
Q23	Agree	-0.31	Yes	No
Q24	Agree	-0.53	Yes	No
Q25	Agree	-0.07	No	No
Q26	Agree	0.13	No	No
Q27	Disagree	-0.44	Yes	Yes
Q28	Disagree	-0.20	Yes	Yes
Q29	Agree	-0.02	No	No
Q30	Agree	0.59	Yes	Yes

More Extreme	18
Less Extreme	3
Not significant	9

As 18 of the variables have shown a statistically significant move to the extremities where the H_0 can be rejected and a probable strengthening of opinion is indicated. This is in contrast with only three variables which have shown a significant move to neutrality. There were also nine variables for which a statistically significant conclusion could not be reached at an α of 0.05.

The overall reliability of the result is greater than 0.98 and therefore well within the α -level of 0.05.

5.4.2. Conclusion

The results indicate that there has been a significant shift in attitude towards stronger views on business ethical issues.

6. Discussion

6.1. General

The analysis of the data was able to provide conclusive results on both research objectives. The attitudes of GIBS MBA alumni are significantly different from attitudes measured by Moore and Radloff (Moore & Radloff, 1996) at Rhodes University during the early 1990s. The analysis has also shown that the factors to which the respondents were most sensitive have also changed over time and that they currently hold significantly stronger opinions on ethical issues than in the past.

The GIBS sample may be assumed to be representative of the current cohort of senior management and junior executives in corporate South Africa as this is where the overwhelming majority of the MBAs are employed. The GIBS selection process does not discriminate unfairly against any grouping and the MBA classes are therefore representative of all major South African ethnic, cultural and language groupings – echoing the diversity in the workplace. GIBS does, however, apply stringent admittance criteria to potential MBA candidates and the sample may, on these grounds, be above norm in terms of intellect, knowledge and management capability when compared to the average of their management cohort.

The Moore and Radloff (1996) sample, on the other hand, would not have been highly representative of the current South African management cohort. The Moore and Radloff (1996) study was conducted during the final years of the Apartheid regime and, even though Rhodes was seen a “liberal”

university, the sample was dominated by English speaking Anglo-Saxon students.

Another factor which should be considered in the interpretation of the results is that the GIBS sample would be, on average, at least ten years older than their Rhodes counterparts and has practical business management experience which the Rhodes students would have lacked. This difference in experience and age may account for some of the differences measured in the attitudes.

6.1.1. Changes in South Africa

South Africa has seen significant change and transformation since the first democratic elections in 1994. Some of the key points to consider in evaluating the results are that:

- The financial crisis and corporate governance scandals has had a profound impact on governance standards and practices with a significantly stronger legal and regulatory framework. Furthermore, international standards and enforcement of anti-corruption and counter-terrorist financing have been implemented.
- South Africa has implemented Black Economic Empowerment initiatives which have transformed the composition of company boards, shareholdings and management teams. The government has also implemented a series of economic development frameworks with varying degrees of success.
- Corporate South Africa has become much more socially aware and most major companies have well-funded Corporate Social

Responsibility initiatives to address issues such as HIV/AIDS, education and poverty in the communities where they operate.

- Environmental awareness has become commonplace and all South Africans are painfully aware of the impacts of electricity wastage through a season of power cuts in 2008 due to insufficient generating capacity and the negative environmental impact of developing new generating capacity.

6.1.2. Assessing and Interpreting the Results

This research conducted a quantitative analysis on Likert-type data and used parametric statistical tests to test certain hypotheses and compare samples between studies. However, it must be kept in mind that attitudes are fundamentally qualitative and a Likert-based survey captures qualitative data. The quantitative tests will therefore only be used to identify trends and patterns in the qualitative data and will not be taken as absolutes. The ultimate analysis resides in the qualitative interpretation of the results and not in the calculated probabilistic outcomes of statistical tests.

For example, suppose a question has ten respondents who agree with the statement and ten respondents whom disagree. Once coded and processes, the statistical mean would give an absolute answer that the average or typical response would be neutral. This is patently wrong and this and similar pitfalls pervade this analysis.

6.2. Objective 1: Have Attitudes Changed?

6.2.1. Significant Changes in Attitudes on Individual Questions

There were five questions where the “centre of gravity” of responses changed from a generally agree to generally disagree response. Of these, three were marginal responses from Moore and Radloff (1996), but the other two showed strong and significant shifts. The first was on statement 13 *“As a consumer when making an auto insurance claim, I try to get as much as possible regardless of the extent of the damage.”* And the other was on statement 17 *“Employee wages should be determined according to the laws of supply and demand.”* The responses on both these questions can be interpreted as being more utilitarian motivated and enforcing a teleological moral philosophy. This means that, for these questions, the attitudes have become more Universalist.

Another interesting result is that the rankings of the individual questions have changed significantly. Understandably, statements 13 and 17 changed rank significantly, but there were another three statements which showed a statistically significant change and moved rank by more than five places. These are statement 10 *“The business world today is not different from what it used to be in the past. There is nothing new under the sun”*, statement 24 *“The business world has its own rules”* and statement 30 *“You should not consume more than you produce.”* The change in response to statements 10 and 30 underscores the perception that there has been a significant change in the way that business is conducted and regulated and that there is a more Utilitarian focus in business. Statement 24 also shows a

move towards the utilitarian, but with the respondents being strongly divided between agreement and disagreement, it may be unwise to infer too much from the statement alone.

6.2.2. Changes in the Factors Identified

The PCA and Factor Analysis yielded mixed results – the model could only account for 22 of the questions as contributing significantly. Furthermore, five of the eleven factors identified were unable to reduce the underlying complexity of the model by each mapping to a single question.

Five of the factors, numbers 2, 4, 5, 7 and 9 are similar between the Moore and Radloff (1996) and GIBS studies with the other factors bearing little resemblance between the studies. Although there are similarities, the factor loadings are lower for the GIBS results, which indicate that the overall robustness of the model and its ability to explain the variability in the results. This can also be partially explained by the fact that the GIBS sample was less than half the size of the Moore and Radloff (1996) sample and the larger sample size would lend more robustness to the Moore and Radloff (1996) model.

The fact that there were eleven significant factors identified is another indication of the underlying complexity of the attitudes displayed by the respondents. As the questionnaire was developed according to only five philosophies, i.e., Machiavellianism, Objectivism, Social Darwinism, Universalism and Relativism, a good result would have been five to eight factors identified, with the principal factors correlating to the philosophies.

The complexity is also understandable from a business environmental perspective. There are numerous stakeholders involved in most major business decisions and with the current governance models requiring justification, oversight and disclosure, it is easy to see the complex balancing act that the business decisions become.

6.2.3. Combined Hypothesis Tests

21 of the 30 questions showed a statistically significant difference between the Moore and Radloff (1996) and GIBS samples. Even though the hypotheses tests were run at a 95% confidence, the result is unchanged at 99.5% confidence. The net result is that there is very strong evidence that there have been a change in attitudes towards business ethics between the Moore and Radloff (1996) sample in the early 1990s and the GIBS sample in 2010.

Belaying Arguments against the Results

Key arguments against the validity or strength of the result may be that the parametric statistical tests are not applicable or that the populations for which the samples were drawn are too diverse.

Much have been said and written about the validity of applying parametric statistical tests, specifically t-tests to Likert-type data. The basic argument is that Likert-type data is ordinal and only appears to be interval data once the responses have been coded and, furthermore, Likert-type data will very seldom be normally distributed. However, attitudinal surveys generally do not have extreme risks associated with them and the data may easily be treated as interval-type once it has been encoded. It has therefore become

a common practice apply parametric tests to Likert-type data as long as allowance is made for the lack of robustness of the underlying model. The level of significance in the results would also indicate that the result should hold true allowing for the weakness of the assumptions.

The other argument against the result is that South Africa is a diverse society and that the populations from which the two samples have been drawn are too dissimilar for comparison (Minnameier, 2009). This can be contested on the basis that both populations share a historical, if not cultural, background where both populations have lived through the same formative period of the 1980s. Even though there might be some age and experience differences, both populations are from the same generation and would share a similar educational background. The similarities and shared experiences would outweigh any differences that might exist, especially if the populations would be compared to some of the other countries where the ATBEQ was applied such as Turkey or Israel.

6.3. Objective 2: Extremity of Attitudes

The basic question, after establishing that attitudes towards business ethics have indeed changed, is how they have changed. Have they become more pragmatic or have they become more extreme?

6.3.1. Assessing the Results

The evaluation of the results showed that 18 of the 21 questions which showed a statistically significant change, showed a strengthening of attitude. I.e. respondents from the GIBS sample tended to agree more or disagree more with the questions than the Moore and Radloff (1996)

sample. This is a significant finding as it represents a large proportion of the results and the calculated reliability of the result is in excess of 98%.

6.3.2. Changes in Motives and Philosophies

The analysis of how the motives and moral philosophies have changed becomes a qualitative exercise and is inherently subjective. This exercise will therefore be discussed only superficially as a deeper analysis would make a suitable topic for future research.

A review of the motives behind the 18 questions which show a move to the strengthening of attitudes reveals that none exhibits a strengthening of egoism, but rather a move towards utilitarianism, where a clear distinction can be made. The same is true when assessing the base moral philosophy – none of the questions shows a move to the deontological philosophy, but rather a strong trend towards the teleological moral philosophy.

By combining these results it is clear that the GIBS sample shows a much stronger Universalist attitude towards the ethical questions posed. This will translate into a more compliance-oriented management style in business where prudence and risk aversion are the most valued traits. Although this may be a desired outcome for regulators and legislators, this may not bode well for the competitiveness of South African business in the globalised economy nor does it create an environment conducive to entrepreneurship and new venture creation.

6.4. Exploring the Probable Causes

Apart from the fact that a similar study has come to the conclusion (Emerson & Conroy, 2004) that there has been a significant move towards

a Utilitarian or compliance-focussed attitudes towards business ethics, there are a number of factors which may be cited as contributing to this swing.

Firstly, there have been a number of significant ethical failures on a global scale, e.g. Enron and WorldCom which have forced the international standards and oversight bodies to improve the standards on governance and reporting which led to the implementation of the International Financial Reporting Standards (IFRS) and laws such as the Sarbanes-Oxley Act in the United States. Further to this, the terrorist attacks on the US on 9 September 2001 initiated a series of improvement in the counter-terrorist financing and anti-money laundering standards and their enforcement by the Financial Action Task Force (FATF) of the Organisation for Economic Cooperation and Development (OECD). All countries wanting to participate in the global economy are required to abide by the FATF regulations and implement similar controls through their national regulators. This has forced the vast majority of companies to adopt a much more compliance-oriented attitude.

Secondly, there seems to be an unending fascination with large scale failures of moral judgement and these lapses are played out in the media in graphic detail. This increases the reputational risk to organisation that would influence the “tone at the top”. It may be possible that many companies decline lucrative business opportunities due to potential negative publicity.

The third factor which influences the ethical stance of companies is the socio-political environment in which the companies operate. This is of especially high relevance in South Africa where there are significant social

challenges and persistently high levels of inequality. Addressing social issues at the company's expense has become the norm to the point that social accountability has been codified into the King Code on Governance for South Africa 2009 (IoDSA, 2009) and the BBBEE transformation targets set by the Department of Trade and Industry as well as the various sector charters.

The final factor which will be discussed is the impact of environmental issues on companies. There is general agreement around the world that the existing patterns of consumption, pollution and natural resource exploitation is unsustainable in the long run (Newell, 2008). This is forcing many companies to adopt policies that are environmentally aware and have significant long-term financial impacts on them, but which they implement as the morally right thing to do.

In 1970, Milton Friedman (1970), as Nobel laureate for economics, argued that a company can achieve the most by focussing solely on generating profits. These profits will be taxed where the government of the day will best be able to allocate these taxes to worthy causes such as social development and environmental management. This system has been discredited through decades of exploitation and growing social inequalities and is, for better or worse, being replaced by a system of compliance (Lewis, 2010). The challenge of the future may well be to find the balance between stifling blind compliance and the judicious application and balancing of ethical dilemmas.

7. Conclusion

7.1. Findings

This study shows conclusively that the attitudes towards business ethics have changed significantly over the past twenty years – from the time when South Africa was in social and political turmoil to the current economic reality of stable, if moderate, growth but with its own set of realities and challenges. Furthermore, the espoused attitudes towards business ethics have also become stronger – managers today have stronger opinions on what is “wrong” and what is “right” business behaviour.

These findings bode well for the implementation of new business-oriented legislation and codes such as the new Companies Act, the Protection of Personal Information Act, the Consumer Protection Act, the Competition Act and the King Code on Corporate Governance. Fundamentally, all of these require that companies, as corporate citizens, commit to, and execute a socially acceptable code of ethics. It is then up to the new set of business leaders, such as recent business school graduates, to define these codes of ethics and oversee its implementation.

However, the results of this study cannot be seen as universally applicable to all business leaders in South Africa. Every month sees new cases of consumer abuse, fraud and corruption in the news – often from highly respected or economically vital sectors of the business community. This raises the question of how applicable the results of this study are to the South African Business community in general. Is there a disconnect

between the business schools and business reality or is it a case of a few bad apples that spoil the whole bunch?

7.2. Recommendations

7.2.1. Ethics in the Business School

The teaching of business ethics is a complex task where a balance must be found between imparting the theoretical knowledge and its practical applicability whilst inculcating a sense of understanding and a common morality.

The results of this study highlight a trend towards Universalism. This may be interpreted as that management more readily accept that any “legitimate” action is “right” and thereby confusing “legal” with “ethical”. It should therefore be advisable to incorporate case studies and other practical examples which confront the students with this dilemma.

Another aspect to address would be to assess the impact of ethics on the performance of the company. Students should be able to assess the risks, costs and profitability impacts of ethical conduct. Specific issues to include might be the influence of ethics on competitiveness, entrepreneurship, reputational risk and the cost of compliance. On the practical side, classes may focus on how to develop corporate policies, codes and standards that incorporates the ethical stance and values of a company and then testing those against case studies.

7.2.2. Ethics in the Boardroom

Business management should become more aware of the effect that the ethics of their business practices have on their companies as well as their stakeholders. By ensuring that a company has a clear code of ethics, which is clearly understood by all decision makers in the business, a company would be able to align its policies, standards and practices. This may have a significant impact on the profitability of the company as it may be able to reduce the cost of compliance whilst also reducing its compliance and reputational risks. The effectiveness of these initiatives should then also be controlled through effective oversight, measurement and reporting.

7.2.3. Ethics in National Policy

The current state and development of national policy by government falls outside the scope of this study. However, the results should be of interest to all economic policy makers in South Africa as developing national policy is always a complex balancing act. The key consideration is the costs and benefits of driving compliance-focussed regulatory environment. Having levels of compliance may serve to protect the rights of stakeholders, but may also increase the cost of doing business and thereby reduce the national competitiveness and economic growth. Furthermore, implementing numerous compliance controls is a costly exercise, many of which is funded by additional taxes, fees, levies or fines while simultaneously creating additional opportunities for corruption and extortion.

7.3. Revision of the ATBEQ

Questions 2, 7, 9, 14, 15, 16 and 21 had a modal answer of “Strongly Disagree”. Such strong responses would make it difficult to accurately measure differences of attitude in future. These questions may be revised to state the relevant questions as morally more challenging.

Questions 3, 17, 19, 24, 25 and 29 displayed very high variability in the answers provided and may benefit from re-statement as more specific terms as the excessive variability may indicate a difficulty of interpretation by the respondents rather than a natural variation in attitudes.

If the results of this study are compared with all the published results of previous studies, one should be able to identify the questions which do not indicate any differences in attitudes. These questions should be removed from the questionnaire in order to improve the efficiency of its application.

7.4. Areas for Future Research

This study exposes interesting results on how attitudes towards business ethics have changed over a twenty year period and raises a number of questions which should be researched, e.g.:

- Have other countries experienced a similar shift in attitudes towards business ethics?
- Exploring the factors which drive attitudes towards business ethics.
- Comparing the attitudes towards business ethics of managers with formal business training to those who have not.

- Comparing attitudes towards business ethics across various sectors or industries.
- Exploring the Relationships between cultural identity and business ethics.
- Identifying the differences between espoused and applied business ethics.
- Exploring or identifying the factors that are driving the changes in business ethics.
- Measuring the impact of business ethics on the competitiveness of South Africa.
- Exploring how business ethics and the political economy impact on each other.
- Examining how organisations resolve business ethical dilemmas and set policy.
- Exploring the impact of business ethics on Broad Based Black Economic Empowerment (BBBEE).

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Appendix A: ATBEQ Research Instrument

Attitudinal Survey Questions – Neumann and Reichel, 1987 as cited in Preble and Reichel (Preble & Reichel, 1988)	Likert Scale: 1 = Strongly Disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Strongly Agree
1. The only moral of business is making money.	1 – 2 – 3 – 4 – 5
2. A person who is doing well in business does not have to worry about moral problems.	1 – 2 – 3 – 4 – 5
3. Every business person acts according to moral principles, whether he/she is aware of it or not.	1 – 2 – 3 – 4 – 5
4. Act according to the law, and you can't go wrong morally.	1 – 2 – 3 – 4 – 5
5. Ethics in business is basically an adjustment between expectations and the way people behave.	1 – 2 – 3 – 4 – 5
6. Business decisions involve a realistic economic attitude and not a moral philosophy.	1 – 2 – 3 – 4 – 5
7. Moral values are irrelevant to the business world.	1 – 2 – 3 – 4 – 5
8. The lack of public confidence in the ethics of business people is not justified.	1 – 2 – 3 – 4 – 5
9. 'Business ethics' is a concept for public relations only.	1 – 2 – 3 – 4 – 5
10. The business world today is not different from what it used to be in the past. There is nothing new under the sun.	1 – 2 – 3 – 4 – 5
11. Competitiveness and profitability are independent values (exist on their own).	1 – 2 – 3 – 4 – 5
12. Conditions of a free economy will serve best the needs of society. Limiting competition can only hurt society and actually violates basic natural laws.	1 – 2 – 3 – 4 – 5
13. As a consumer when making an auto insurance claim, I try to get as much as possible regardless of the extent of the damage.	1 – 2 – 3 – 4 – 5
14. While shopping at the supermarket, it is appropriate to switch price tags or packages.	1 – 2 – 3 – 4 – 5
15. As an employee, I take office supplies home; it doesn't hurt anyone.	1 – 2 – 3 – 4 – 5

16. I view sick days as vacation days that I deserve.	1 – 2 – 3 – 4 – 5
17. Employee wages should be determined according to the laws of supply and demand.	1 – 2 – 3 – 4 – 5
18. The main interest of shareholders is maximum return on their investment.	1 – 2 – 3 – 4 – 5
19. George X 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.	1 – 2 – 3 – 4 – 5
20. For every decision in business the only question I ask is, "Will it be profitable?" If 'yes' I will act accordingly, if not, it is irrelevant and a waste of time.	1 – 2 – 3 – 4 – 5
21. "In my grocery store every week I raise the price of a certain product and mark it on sale." There is nothing wrong with doing this.	1 – 2 – 3 – 4 – 5
22. A business person can't afford to get hung up on ideals.	1 – 2 – 3 – 4 – 5
23. If you want a specific goal, you have got to take the necessary means to achieve it.	1 – 2 – 3 – 4 – 5
24. The business world has its own rules.	1 – 2 – 3 – 4 – 5
25. A good business person is a successful business person.	1 – 2 – 3 – 4 – 5
26. I would rather have truth and personal responsibility than unconditional love and belongingness.	1 – 2 – 3 – 4 – 5
27. True morality is first and foremost self-interested.	1 – 2 – 3 – 4 – 5
28. Self-sacrifice is immoral.	1 – 2 – 3 – 4 – 5
29. You can judge a person according to his work and his dedication.	1 – 2 – 3 – 4 – 5
30. You should not consume more than you produce.	1 – 2 – 3 – 4 – 5