

## **CHAPTER ONE: INTRODUCTION**

### **1.0 Introduction**

The construction industry is a multi-billion dollar industry. As such, it is a fertile breeding ground for economic crimes such as fraud, bid-rigging, bribery, corruption, collusion, coercion, misrepresentation of facts and extortion. Shakantu and Chiocha (2009) stated that corruption is perceived to be present to some degree in most of the major industries. However, in construction, there is a higher level of anecdotal perception of the prevalence of corruption than in other industries.

Bowen et al. (2007) stated that construction professionals are expected to behave with professional integrity, honesty and fairness. Ferrell et al. (2000) observed that failure to acknowledge ethical challenges is a great danger in any organisation, particularly if business is treated as a game in which ordinary rules of fairness do not apply. Vee and Skitmore (2003) stated that it is now commonly recognised that the general concepts of ethics are applicable in business. Business exists not solely for the benefit of certain persons, but because it serves society in general and in addition meets collective and individual needs. In the survey by Vee and Skitmore (2003), 55 per cent of the respondents considered 'good ethical practice' as critical to their organisational or business goals while 29 per cent classified it as a major factor. Martini (2002) also noted that since engineers have moved from exclusively providing technical expertise in design, into more management oriented responsibilities, tensions have arisen between business values and professional standards in which the two need to be reconciled.

### **1.1 Unethical practices in the construction industry – international perspective**

There is a growing consensus within and outside the construction industry that unethical practices are endemic. Doran (2004) gave an outlook of important companies and individuals in business that had collapsed. Enron, WorldCom and Tyco not a long time ago were symbols of economic growth and model companies setting pace for American business. These companies have now become synonymous with greed and corporate malfeasance, leading to tremendous losses in shareholder value, trust and a long list of legal battles.

Dubinsky and Richter (2009) stated that ethics and integrity refer to a commitment to moral thought and action in all aspects of how an organisation is governed and run. Ethics and integrity describe the 'oughts' and 'shoulds' of how the organisation relate to their stakeholders. Dubinsky and Richter (2009) further stated that a healthy, high performing and successful organisation must pay close attention to ethics and integrity. Fewings (2009) observed that the construction process has been criticised for poor ethical trading relationships and for corrupt practices. Fewings (2009) further stated that clients have felt that the construction product has not been up to the expected standards and that the service has fallen short of expectations. Various reports on the industry have dealt with matters such as customer de-satisfaction, delayed supplier payments by dominant players, substantial unrewarded tendering costs, poor client advice, sub-standard health and safety measures leading to unacceptable accident levels and wasted resources. Other complaints are that the industry lacks innovation and research to reduce overruns on costs and time with unacceptable levels of disruptive defects.

In the survey conducted in the construction industry in the United States by Doran (2004), it was established that 84 per cent of the respondents agreed that the industry was tainted with unethical practices. Doran (2004) further warned that this was a serious knock on the construction industry to take corrective action.

In Hong Kong, Linda and Paul (2005) stated that the Construction Industry Review Committee urged the industry in collaboration with tertiary institutions and the Independent Commission against Corruption to inculcate an ethical culture in ethics management in the construction industry so as to eradicate corruption and dishonest acts. This was after experiencing many malpractices and unethical conducts in the construction sector.

In 1980s, Hong Kong was hit by the 'salt water scandal' where contractors were using untreated salt water in production of concrete for buildings instead of treated water. This resulted in buildings to start crumbling within 15 years of construction. The cost for remedial works exceeded that of re-development (Linda and Paul, 2005).

In Pakistan, Ehsan et al. (2009) reported that 75 per cent of respondents to a questionnaire in that country agreed that there were unethical practices in the construction industry. All the respondents agreed that they had experienced some degree of unethical conduct in the form of undertaking work beyond their capability, bribery, favouritism and unfair conduct. Abdul-Rahman (2010) reported that 74 per cent of respondents to a questionnaire survey in Malaysia agreed that the construction industry was tainted by unethical practices. Under-bidding, bid-shopping and cutting, bribery and corruption, negligence, front-end loading, claims and payment games were among reported unethical practices prevalent in Malaysia. More than two thirds of respondents were not satisfied with the quality of construction industry products. Ninety per cent of respondents stated that unethical practices contributed to poor quality works. Abdul-Rahman (2010) further reported that a newly opened specialist hospital in Johor Bahru was closed due to fungi attack on the equipment and wall. It was established that many of the hospital's equipment such as the oxygen piping and the sewerage system were not built according to specifications. The contractor was given three months to rectify problems of the leaking pipes, broken ceiling and faulty air conditioning ducts. In his study, Zhou (2006) established that in China, corruption existed among all stakeholders and at every phase of project procurement from conception, design, tendering and construction, right through to commissioning and hand-over.

The construction industry has been criticised for many years for its inability to innovate or to adapt to modern management methods. Fewings (2009) stated that there was a tendency for best practice to be ignored because of the fragmented nature of the industry. Zhou (2006) was appalled by the effect of corruption in China, where newly built bridges and dams collapsed and just-completed highways showed signs of failure soon after completion. Vee and Skitmore (2003) also highlighted the problem of unethical practices in the construction industry in Australia. They highlighted conflict of interest, collusion, fraud, bribery and corruption as being endemic in the construction industry in that country.

## **1.2 Corruption as an unethical practice in the construction industry**

There are many documented unethical practices in the construction industry world over. Among these is corruption. Corruption is one of the main unethical practices in the

construction industry (Transparency International, 2005). Corruption in the world is endemic and pervasive and a significant contributor to the low economic growth, inhibition of the provision of public services and increase in inequality (World Bank, 2005). The World Bank (2004) identified corruption as the single greatest obstacle to economic and social development. Tackling corruption should be accorded highest priority. Transparency International (2005) has also shown that corruption can add up to 25 per cent to the cost of public contracting, generating waste of public resources, missed development opportunities, an unstable environment of business and therefore increasing levels of poverty in a country.

Transparency International (2005a) defined corruption as giving money or anything valuable in return for a favour. Corruption also involves abusing one's position for personal gain. The World Bank (2004) on the other hand defined corruption as behaviours on the part of officials in the public and private sectors in which they improperly and unlawfully enrich themselves and or those close to them or induce others to do so, by misusing the position in which they are placed.

Corruption in the construction industry is one "area which everybody in the industry knows about but nobody wants to go there" (Shakantu, 2006). Essentially, anyone who has taken the trouble to consider what goes on in the construction process from project inception to project handover knows that the process is prone to abuse. Shakantu (2006) stated that at one point or another, some form of corruption such as extortion, bribery, theft or fraud, takes place within the confines of the construction project. He further stated that corruption flourishes in virtually all phases of the construction process and that participants at every level engage in it. While technical abuse such as wrong specifications, construction details and front-end or back-end loading of estimates may be detected and corrected, corruption is more subtle and not easy to detect and correct. The issue is not whether it is secretive in nature and difficult to detect, but rather that stakeholders know how rampant it is but choose to keep silent.

The Asia Organisation of Supreme Audit Institutions (2007) identified types of fraud and corruption in contracts for goods, services and works as the following:

- *bribery and kickbacks* - money or any other form of reward or favour exchanged between a public functionary and a provider of goods and services in order to obtain some benefit for example acceptance of substandard goods, services, works or obtaining unauthorised information;
- *changes in original contracts* - changes are made in the original contract requiring flow of additional funds from the public body to the contractor, which may affect the basis on which the contract was awarded to the contractor in the first instance. This may also involve front-loading of the contract in the hope of increasing the price of the original contract through change orders or subsequent modifications to the contract;
- *duplicate payments* - the contractor claims and receives payment for the same service or work done or goods supplied under the same or different contracts;
- *collusive or cartel bidding* - contractors form cartels to fix artificially high prices for goods and services supplied by them;
- *conflict of interest* - contracts are awarded on the basis of vested interests of the decision makers;
- *defective pricing* - the contractor submits inflated invoices;
- *false invoices* - the contractor submits invoices for goods that have not been delivered or do not properly represent the quantity or quality of goods and services supplied or work done as per contracted specifications;
- *false representations* - the contractor falsifies the goods' specifications or his ability to provide certain services;
- *splitting of purchases* - the purchases of goods, services or works are split either to avoid open competition or having to seek the approval of higher authority;
- *phantom contractor* - purchases are made from a fake supplier or contractor;
- *pilferage of public assets* – public-funds are used to acquire goods for personal use or public-assets pilfered by officials; and
- *tailored specifications* - specifications and time limits are manipulated to favour a certain contractor or supplier.

Stansbury (2003) argued, in his report on construction in the United Kingdom (UK), that clear evidence was adduced from twenty three different acts of corruption which, if

investigated, could end up as criminal activity. These criminal activities included the following:

- submission of false claims and those which were reckless in accuracy;
- concealment of documentation such as inflating figures for sub-contractors;
- cover-pricing and collusion during tendering;
- provision of specification of a design that can only be supplied by one contractor; and
- obtaining a price only for the purpose of comparison where the intention is to go back to the favoured supplier and negotiate the price down.

Stansbury (2003) demonstrated that a power substation budgeted at one hundred million pounds ended up costing 55 per cent more as a result of corruption. Corruption may also be used to get clients to accept substandard work and product specifications which create wasteful failures in future.

The Danish Ministry of Foreign Affairs (2006) identified the common forms of corruption involved in the procurement process as: bid rigging; collusion by bidders; fraudulent bids in contract performance and audit enquiry; product substitution; defective pricing; falsification and misrepresentation of costs; bribery and acceptance of gratuities; misuse of government funds; and theft and embezzlement.

In her article, *World Bank blacklists firm*, Moore (2004) identified Acres International, a Canadian engineering company, of having been blacklisted from new contracts by the World Bank for three years. This was because the Bank had established that Acres International had been engaged in corrupt activities to influence the Highland Development Authority to award it contracts for the Lesotho Highland Water Project. Bribes of up to US \$2 million were allegedly paid.

Transparency International in its 2005 global report stated that corruption in large scale public projects is a daunting obstacle to sustainable development. Transparency International urged public contracting authorities to ensure that contracts are subject to open, competitive bidding. Transparent International (2005) listed the following as monuments of corruption:

- the Cologne Incinerator Project in Germany, where US \$13 million were allegedly paid in bribes during construction of the incinerator plant;
- the Bujali Dam in Uganda, where Veideke Limited admitted paying a bribe to a senior Ugandan civil servant. The Environmental Impact Assessment for the dam had never been submitted for assessment; and
- the World Bank had also debarred two Lithuanian companies, AB Hidrostroyba and AB Parvezzio Trestas for collusion in bidding for a US \$3.28 million contract for the expansion of water supply and waste water networks.

Transparency International (2005a) argued that corruption if allowed to persist undermines the quality and quantity of services. It corrodes economic development and jeopardises the provision of basic public goods and services especially in developing countries.

### **1.3 Unethical practices in the construction industry in Africa**

Unethical practices are prevalent in the construction industry in many countries. Unethical practices are prevalent both in developing and developed countries. Transparency International (2005) observed that corruption and other unethical practices in procurement especially of construction projects leave many developing countries saddled with sub-standard infrastructure and excessive debt.

Examples of unethical practices have been recorded in Africa. These reports include those by Oyewobi et al. (2011), Shakantu (2006), Shakantu and Chiocha (2009), Osei-Tutu et al. (2010), Bowen et al. (2007), Bowen et al. (2007a) and Mwiya et al. (2009). They reported prevalence of unethical practices in Nigeria, Malawi, Ghana, South Africa and Zambia respectively. Identified unethical practices included: collusion; price differentiation; bid rigging; tampering with claims and payment certificates; conflict of interest; bribery; embezzlement; kickbacks; tender manipulation; negligence; lack of integrity; and fraud. Shakantu (2009) stated that there are many ethical practices in the construction industry because of the nature of the industry. The construction industry is characterised by a large number of heterogeneous and fragmented firms engaged in intense competition. The industry

is project based with the majority of projects being designed and built for a price established through a competitive bidding or tendering system.

Shakantu and Chiocha (2009) established that the majority of the respondents to a survey to their study indicated that the Malawian construction industry was tainted with unethical practices which included collusion, kickbacks, price differentiation by supplier, bid rigging, contract work being charged but for work not done, over-valuation of completed work and falsifying test results for completed work.

Bowen et al. (2007) in their research in South Africa stated that the factors that make the construction sector to be prone to unethical behaviour include fierce competition for contracts; numerous levels of bureaucracy for obtaining official approvals and permits; uniqueness of the many projects rendering it difficult to compare pricing; the opportunities for delays and overruns; and the fact that the quality of work is rapidly concealed by concrete plaster and cladding.

Ameh and Odisami (2010) stated that professional ethical lapses in Nigeria led to project abandonment, capital flight and huge economic loss in the form of additional costs to a project.

#### **1.4 Unethical practices in the construction industry in Zambia**

Transparency International Zambia (TIZ) has been in the forefront to encourage integrity in the construction industry. It has been recognised the world over, that construction projects are a vehicle for development. It is therefore important that professionals engaged in the construction industry work in an ethical manner.

The Auditor General's reports, almost every year, highlight some anomalies in the procurement and execution of construction projects in Zambia. The reports indicate poor workmanship, uncompleted and abandoned works. Some of the deficiencies reported in the Auditor General's reports for the years from 2000 to 2011 include those outlined below.

The Auditor General's special report on the Road Development Agency (RDA) of 2009 revealed that the Agency over-procured projects by K1,015,817,097,718. They further identified the following inadequacies:

- (a) *inadequate provisions for the contracts* – adequate funds were not provided for the execution and completion of work;
- (b) *lack of drawings and condition surveys* – drawings for the contracts were in most cases either delayed or not prepared and conditional surveys were not conducted leading to inadequate interventions and unnecessary variations;
- (c) *engineers estimates* – contrary to common practice, the Engineer's estimate were not used when carrying out evaluations leading to over-commitments;
- (d) *late engagement of supervising consultants* – consultants to supervise the works were mostly engaged later than the starting of the works contract;
- (e) *poor quality contract documents* – contracts for unpaved roads would have drawings for a paved road;
- (f) *poor contract administration* – there were considerable delays in decision making relating to the execution of the contract;
- (g) *non-submission of performance bonds* – this clause was not respected resulting in failure to penalise the contractors in case of non-performance;
- (h) *irregular payments* – some payments were made for works not done;
- (i) *delayed works* – there were very few projects that were completed in time;
- (j) *variations* – decisions on variations were in some cases not justified by the contractor and therefore unreasonable; and
- (k) *poor quality works* – poor quality works were observed on most of the contracts.

As a result of this audit, four senior officers at RDA had their contracts terminated.

The Ministry of Local Government and Housing provided K500 million for renovations to Chalimbana Training School. A contract was awarded for K484,116,272.00 for a duration of fourteen weeks on 13<sup>th</sup> December, 2004. An inspection of the site in October, 2005 indicated that despite the contractor being paid K464,368,054.00 leaving a balance of K19,748,218.00, work worth K82,175,800.00 had not been done.

The Zambia Army had contracted Base Chemicals in October 2001 to construct 30 pre-fabricated houses at Luena Barracks in Kaoma at a cost of K4.9 billion for contract duration of 24 months. The contractor was paid an advance payment of K2.3billion. On scrutiny, the records showed that:

- there were no tender procedures followed for the selection of the contractor and no tender authority was given for the project;
- there was no signed contract and the terms of the agreement could not be established;
- the contractor was not qualified to undertake the construction works as they were only registered with the Ministry of Works and Supply in the general maintenance category;
- a site visit to Luena barracks in 2003 revealed that the quality of the construction works was poor as the structures had already developed cracks. It was recommended that affected houses be demolished; and
- it was clear that the contractor did not have the necessary expertise and capacity to undertake the project.

In November 2001, Zambia Air Force (ZAF) entered into an agreement with a local contractor for the rehabilitation of substations at its Mumbwa Base at a contract price of K387,148,063. The works included, among others, realigning four transformers and replacing 19 street poles. In this regard amounts totalling K125,897,987 were paid to the contractor between 2002 and 2003. An inspection of the works conducted in March 2005 revealed that the contractor had replaced the nineteen street poles but had only re-aligned one transformer leaving three still tilting.

An examination of records showed that Livingstone City Council was paid K60 million in October, 2004 for the rehabilitation of Mukuni, Kaunda and Loop roads from Central Police to the market and repair of a grader. A site inspection of roads carried out in November, 2005 revealed that no works had been done. Neither was the grader repaired.

In 2005, a contract was awarded to MK Engineering Limited to rehabilitate the roof at Livingstone Police Station at a contract price of K98,380,000. The works were completed in June 2006 and the contractor was paid in full. However, although the works were certified as

completed, a physical inspection carried out in July 2008 revealed that the roof was still leaking.

On 25<sup>th</sup> March, 2007, the Ministry of Science, Technology and Vocational Training engaged J.K. Contractors to rehabilitate eight workshops and the administration block at Lukashya Trades Training Institute at a contract sum of K1,614,729,866.00 for a period of sixteen weeks commencing 25<sup>th</sup> May, 2007 and ending 24<sup>th</sup> August, 2007. As of March 2008, twenty-eight weeks after the expiry of the contract period, the contractor had been paid K1,056,327,169.00. A site inspection carried out in March, 2008 revealed that only the administration block had been done whose estimated cost was K443,893,265 and the eight workshops had not been done. It was therefore not clear why the contractor was paid K1,056,327,169 when the actual works were estimated at K449,893,265.

In 2007, the Ministry of Defence disbursed an amount of K97,016,148 to the Provincial Administration for the rehabilitation of the Warrant Officers' and Sergeants' Mess and an ablution block out of which a total amount of K93,153,900 was spent leaving a balance of K3,862,248. A site inspection of the project carried out in August, 2009 revealed that the works had not been completed and the works had been abandoned.

The final cost of completed projects in most cases is more than the initial estimate or contract price. An example in Zambia is the construction of the Mongu-Kalabo road. Consolidated Contractors Company (CCC) of Kuwait was awarded a contract of K13,646,112,006.00 by the Ministry of Works and Supply for the construction of the Mongu-Kalabo road. The contract sum later rose to K135,646,111,582.00 from K13,646,112,006.00 due to variations, down time costs and interest on delayed payments. As at May, 2004 a total of K77,736,200,006.00 of the contract price had been paid to the contractor leaving a balance of K57,909,911,576. In August, 2004 the government had paid the contractor K50,364,553,137 of the K57,909,911,576 outstanding. However, the contractor decided to terminate the contract and abandoned the works due to delays by government to settle the outstanding amount of K7,545,358,439.00. The outstanding amount was later settled by government in late August, 2004. However, it was observed that instead of settling K7,545,358,439, the

Ministry of Works and Supply paid K7,684,439,851 resulting in an overpayment of K139,081,412. Other examples of projects exceeding their initial contract sums are as shown the Table 1.1.

**Table 1.1:** Overrun of selected projects at the Ministry of Works and Supply, Zambia

Name of Project	Original contractsum (Kwacha)	Revised Contract sum (Kwacha)	Variance (Kwacha)	Contract Duration
Construction of Freight Terminal - Chirundu	13,422,476,130	14,491,079,063	+1,068,602,933	46 weeks
Construction of Water Treatment Plant - Chirundu	871,471,082	1,686,157,170	+814,686,088	26 weeks
Rehabilitation of Kanyala –Nakonde road	1,232,493,154	1,248,113,169	+15,620,015	40 weeks
Reconstruction and Realignment of Kasama - Luwingu	110,400,347,386	125,398,521,054	+14,998,173,668	24 months

**Source:** Auditor General’s report, 2005

In 2005, the Auditor General generated a special report on the administration of selected contracts in the Ministry of Works and Supply. It was observed out of the sample of contracts examined, that management and administration of the said contracts was poor in that budgetary allocation and releases towards these works were often inadequate to meet contractual obligations during the period of project implementation. Consequently, contracts which could have been discharged at lower costs ended up being discharged at higher costs due to variations and fluctuations in labour and material costs and other contractors’ claims such as interest on delayed payments, fluctuations in plant, foreign cost adjustments and suspension of entitlements, among others. The variations and fluctuations resulted in additional commitments to government totalling K110, 678,772,372 for the thirteen projects audited. Unethical practices such as payments for work not done, work not carried out to required specifications, failure to complete projects and inadequate funding to projects on the part of government were also highlighted in the 2005 special report.

In 2010, Canada suspended US \$14.5million aid programme to Zambia’s Health Ministry after discovering that millions of dollars from foreign donors were embezzled (York, 2010). This corruption scandal was discovered after a whistle blower revealed that Zambian officials had embezzled aid money. The Global Fund, the biggest donor for HIV/AIDS, also suspended more than US \$100million in aid to Zambia because of fraud and irregularities at the ministry. Investigations by the Anti-Corruption Commission (ACC) revealed that about

US \$5.8million was embezzled. Twenty three government officials were detained. Part of the funds from the said donor agencies were intended for infrastructure development of clinics and hospitals.

From the above, it is clear that unethical practices are prevalent in the construction industry in Zambia. They include bid shopping, over payments, non-completion of projects, collusion, unfair conduct, bid cutting, conflict of interest, lack of confidentiality in the tendering process, fraud, negligence, dishonesty, bribery and corruption. Governance Secretariat (2010) observed that 59.9 per cent of the population in Zambia thought that government performed fairly badly in construction of infrastructure as a result of corruption and other unethical practices.

Transparency International (2004) reported that former State House Press Secretary in the Second President's reign was convicted and sentenced to three years imprisonment for flouting tender procedures when he awarded a building contract to a Zimbabwean construction company.

### **1.5 Contribution of the construction sector to national economies**

The construction industry plays a substantial role in any country's economy, irrespective of the levels of economic development (Moylean, 2008). In many countries, the construction sector employed up to 10 per cent of the nation's work force. The industry employed six per cent of the total labour force in the formal sector in 2008 in Zambia (CSO, 2008). In South Africa, up to eight per cent of formal jobs were in construction in 2010 (Statistics South Africa, 2011). Construction contributes significantly to the Gross Domestic Product (GDP) of each country. In the United States of America (USA), construction contributed five per cent of the GDP in 2009 (Economy Watch, 2010). This was comparable to the United Kingdom where the industry contributed 6.8 per cent GDP in 2009 (House of Commons, 2012). The Bank of Zambia (2010) reported that the construction industry in Zambia contributed 7.5 per cent to GDP in 2009. The cost of putting up public sector infrastructure in Zambia was US\$3.3billion in 2010, increasing to US\$4.33billion in 2011 (Bank of Zambia, 2011). If harnessed properly, construction can make a significant

contribution to the economic well-being of citizens through employment creation via forward and backward linkages that go with infrastructure development (Doran, 2004).

## **1.6 Justification for the research**

The Auditor General's reports have in the past highlighted various unethical practices almost on a yearly basis. The reports by the Auditor General record poor quality works; uncompleted projects; over payments; and abandoned works among other reasons. Non-Governmental organisations, such as Transparency International Zambia have also expressed concern in the manner public projects have been procured. The construction industry has been perceived as being slow to innovate and has lagged behind many manufacturing industries in the implementation of management and technology innovations (Veshosky, 1998). Egan (1998) also lamented the lack of innovation in construction organisations.

The motivation for undertaking this study arose from the forgoing, with the recognition that good ethical practice can result in projects being procured and executed in a timely, fair, cost effective manner and with good quality.

## **1.7 Main aim and specific objectives of the study**

The main aim and specific objectives for this study are outlined below.

### **1.7.1 Main aim of study**

The main aim of the study was to develop a framework for measuring the presence of integrity systems in construction organisations.

### **1.7.2 Specific objectives of study**

To achieve the main aim, the following were the specific objectives:

- identify unethical practices prevalent in the construction industry in Zambia ;
- assess the extent to which unethical practices affect different phases of construction projects; and
- establish the factors that enhance integrity in construction organisations.

## **1.8 Research methodology**

Several considerations were made in the determination of the best method of undertaking the study. Two research philosophies were considered. These were the positivist and phenomenological philosophies. In this study, both philosophies were adopted.

Deductive and induction thinking are the main research designs considered. Saunders et al. (2003) identified two approaches to research design as deductive and inductive. The inductive approach was used in this study.

Research strategy is a general plan of how a researcher goes about answering the research questions. It contains clear objectives, specific sources of data and considers the constraints. Saunders et al. (2003) identified eight research strategies, namely: experiment, survey, case study, grounded theory, ethnography, action research, cross-sectional and longitudinal studies and exploratory, descriptive and explanatory studies. In this study a survey approach and case studies were determined as the best research strategies for this study.

Interviews were undertaken with professionals who had many years of experience in the construction sector. The interviewees were from the public sector, quasi-government organisations, private companies, donor agencies and interest groups such as the Transparency International Zambia, the Anti-Corruption Commission and the Zambia Public Procurement Authority.

A questionnaire survey with 74 respondents from construction organisations was also undertaken. The respondents were from the public sector, quasi-government organisations, consulting firms, private procuring companies, and contractors.

A survey of integrity metrics in 48 construction organisations was also conducted. The respondents were from the public sector, quasi-government organisations, public organisations involved in procurement of works and services, consulting firms and contractors.

Three case studies to validate the information provided by the 48 responding construction companies were also undertaken.

### **1.9 Summary of research achievements**

The study produced a number of outcomes from interviews, questionnaire surveys and case studies. Fifteen professionals with 10 to 35 years of experience were interviewed. The results of the interview were used to develop a questionnaire survey. Seventy four professionals from construction organisations responded to the initial questionnaire survey. The second questionnaire survey was aimed at determining industry metrics in construction organisations. Forty eight construction organisations responded to the questionnaire. Three case studies from the list of construction organisations that responded to the questionnaire for determining industry integrity metrics were also considered. The achievements of the study were:

- various unethical practices prevalent at different phases of construction projects were identified;
- factors that affect individuals and employees to act ethically were determined;
- the role of the National Council for Construction in the industry to enhance integrity was identified;
- strategies and solutions for combating unethical practices were proposed; and
- a framework for assessing the presence of integrity systems in construction organisations was developed. The framework could be used to rapidly assess integrity compliance.

### **1.10 Organisation of the thesis**

The thesis is organised into nine chapters. The summaries of the various chapters are provided below.

Chapter one serves as an introduction to the study. The statement to the problem, the aim and objectives, the methodology and summary of achievements are discussed.

In Chapter two, the literature relevant to unethical practices is reviewed. Various unethical practices prevalent in the construction industry are discussed.

In Chapter three, the various methods of measuring integrity in organisations are discussed. The discussion focussed on various frameworks in prevention of unethical practices in various countries.

Chapter four discusses the research methodology. The research philosophies, design and strategy are discussed in this chapter.

Chapters five and six reports on the results of the interview and questionnaire survey respectively. Both qualitative and quantitative data generated by the interview and questionnaire survey are discussed.

In Chapter seven, the framework for assessing presence of integrity systems in construction organisations is developed and validated.

In Chapter eight, the integrity metrics in construction organisations in Zambia and three case studies are discussed.

The conclusions and recommendations are presented in Chapter nine. The Appendices consist of additional information to the study.

## **1.11 Summary**

The introduction to the study was discussed in this chapter. The basis under which the study was undertaken is set out in this chapter. The main aim and specific objectives, methodology and research achievements have also been presented in this chapter.

The next chapter presents literature review on unethical practices in the construction industry.

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1 Introduction**

The previous chapter dealt with the introduction to the study. It outlined the different unethical practices encountered in construction projects. Examples of unethical practices in the construction industry in Zambia and world over were highlighted. The significance, aim and objectives of the study were also outlined. The literature relevant to the ethical issues in the construction industry is reviewed in this chapter.

### **2.2 Ethical issues in the construction industry**

According to the World Bank, more than US 1 trillion dollars is paid in bribes every year (World Bank, 2004). Research by Doran (2004) also indicated that US\$5000-50,000 for every million spent on a project is lost or unaccounted for in some sort of unethical transaction. The CIOB (2006) also reported that an estimate of US\$4.5 billion was the cost of corruption every year in the United Kingdom. The American Society of Civil Engineers claimed that corruption cost was estimated at US\$ 340 billion of worldwide construction every year (Osei-Tutu et al., 2010). A global survey on corruption suggests that the volume of bribes exchanging hands through public procurement was estimated at between US\$390 and 400billion every year (Legwiler and Wolfstetter, 2006). Mawenya (2008) estimated that corruption in Sub-Saharan Africa was almost up to 70 per cent of public procurement contracts. In such cases, bribes and other unethical practices inflate the project costs by about 20-30 per cent. The World Bank (2003) also estimated the cost of corruption in Africa at US\$148 billion. Corruption is not only prevalent in developing countries, but also in developed countries. However, Mawenya (2008) stated that corruption was more pervasive in Africa because of weak institutional infrastructures and lack of effective monitoring and control mechanisms.

In an online survey of 335 professionals on the scale of corruption in the construction sector, the CIOB (2006) reported that 41 per cent thought it was widespread, 37 per cent that it was occasional, 18 per cent stated that it was rare while only four per cent stated that it was non-existent. Fighting corruption is a global challenge.

The construction industry, according to Barker (2005), is a 3 trillion dollar a year industry and that it is the most corrupt segment of the world economy. Big construction projects such as office complexes, shopping centres, roads works, conceal thousands of opportunities for bribery and kick backs. Most construction projects are one off and unique. That means there is no way to detect when costs have been artificially inflated so that people either siphon money off for themselves or pay bribes. The contracts are often so large and lucrative that companies themselves are under strong pressure to get them. The projects do not come that often and so the pressure to get them at any cost, including bribery takes centre stage. Furthermore, the government is a major player in the construction industry. Both public and private projects require government approval. They need to obtain numerous permits and there are insufficient controls on how government officials behave.

Vee and Skitmore (2003) stated that the general poor behaviour in the construction industry is said to originate from an influx of new construction companies with new personnel to the industry that lack building construction ethics. Linda and Paul (2005) also stated that in most countries including Hong Kong, barriers of entry for construction companies are low. Transparent International (2005) stated that the factors that make the construction sector prone to unethical behaviour include fierce competition, the numerous levels of bureaucracy for obtaining official approvals and permits, the uniqueness of many projects rendering it difficult to compare pricing, the opportunities for delays and overruns during execution and the fact that the quality of much of the work is rapidly concealed by concrete, plaster and cladding. The issue of concealment especially on large building projects is rampant. For example, foundations or the substructure which costs between 10-15 per cent of the total building cost is concealed beneath the ground, the structural steel works are concealed within the concrete, electrical and mechanical fittings are concealed beneath the wall. Fewings (2009) stated that these are difficult to investigate because tracks are covered or obstacles are put in the way of low level enquiries. This makes it costly or difficult to verify bad workmanship or inferior materials after work is completed. Building projects also involve large number of participants in a complex contractual nature. These include the architects and engineers who set the technical parameters of the building projects, the quantity surveyors who prepare preliminary cost advice and estimate, the builders or main

contractor who may sub-contract key parts of the project to specialist sub-contractors. Others are suppliers who provide the equipment and materials and the skilled and unskilled artisans involved in the production of the building. Zhou (2006) stated that globally, the construction industry has been criticised for many years for its inability neither to innovate nor to adapt to modern management methods.

Fewings (2009) however stated that there is less certainty of what constitutes unacceptable behaviour and this probably revolves around the belief as to whether corruption is viewed as ‘grease’ or ‘grit’. He further stated that if corruption unlocked bureaucratic deadlock or whether it was economically harmful and further slows the process and takes value and affordability out of the transaction. In their research in Tanzania, Transparency International (2005) concluded that corrupt payments take value out of the system and make services harder to obtain in the long run.

A survey undertaken by the CIOB (2006) indicated that 51 per cent of members who responded to a study thought that corruption was fairly or extremely common in the United Kingdom construction industry. Eighty one per cent of these members were senior or middle managers. Table 2.2 show the results of the perception of different activities of the construction industry in the UK. It is clear from the Table 2.2 that cover pricing and bribery to obtain planning permission are the most common forms of corruption in the UK.

Table 2.1: CIOB survey on corruption perception of different activities (UK)

<b>Misdemeanour</b>	<b>Very corrupt (%)</b>	<b>Moderately corrupt (%)</b>	<b>Not Very Corrupt (%)</b>	<b>Not at all corrupt (%)</b>	<b>Total percentage of respondents</b>
Cover pricing	18	45	32	5	100
Bribery to obtain planning permission	56	32	13	2	100
Concealment of bribes	57	22	17	4	100
Collusion between bidders	41	35	22	2	100
Bribery to obtain contract	57	18	21	4	100
Leaking information to preferred bidder	39	40	19	2	100
Production of fraudulent invoices	54	22	20	4	100
False or exaggeration of claim	44	35	18	3	100
Inclusion of false extra cost to claim	42	39	17	2	100
Bribes from contractors to win contracts	53	19	23	5	100

The fierce competition experienced in the construction industry is as a result of low entry barriers to the industry. A company will normally require low level of capital investment to establish business in construction. This has resulted in new and sometimes unscrupulous players entering the industry. Speculation, profiteering and bribery has become an accepted norm for doing business in construction. Zhou (2006) stated that to overcome this problem, some governments have developed and implemented procedural guidelines on procurement of services, goods and works to ensure the contracting of government funded services and works are transparent and fair, in order to achieve value for money and to prevent corruption risks from happening. In Zambia, the Zambia Public Procurement Authority (ZPPA), established by the Public Procurement Act No. 12 of 2008 provides guidelines for public procurement. The aim of the Act was to revise the Law relating to public procurement so as to ensure transparency and accountability. ZPPA also regulates and controls the practices in order to promote the integrity, fairness and public confidence in the procurement process.

### **2.3 Legislation to counter unethical practices**

The Government of the Republic of Zambia has enacted the National Construction Council Act of 2003. This Act empowers the National Council for Construction (NCC) to register and regulate all contractors in the Zambian construction industry. The National Construction Council rates contractors according to their capacity and specialisation. The Act provides that any contractor who carries out or attempts to carry out any construction works or portion of such works under a public sector contract; and who is not a registered contractor commits an offence and shall be liable, on conviction, to a fine or imprisonment or both. The Act also requires foreign firms to register with NCC before they could be allowed to undertake any works. The NCC has powers to recommend to the Minister of Works and Supply the conditions under which a foreign firm or foreign company may be registered to participate in construction projects in Zambia. The Act also provide for the affiliation of professional bodies for architects, engineers and surveyors. The affiliated professional bodies provide the list of their registered members to the NCC.

Other countries have legislated against bribery and corruption. In the United Kingdom, BSI (2011) developed a specification for an Anti-bribery Management System (ABMS) called BS

10500:2011. This was developed in response to the United Kingdom Bribery Act of 2010. BS 10500 aims to put controls in place to identify risks early and take appropriate action.

The Zambian government established the Anti Corruption Commission Act No. 42 of 1996 to combat corruption.

#### 2.4 Corruption as a main unethical issue in construction

Corruption in any country is indicated by the Corruption Perception Index (CPI). The CPI is the degree to which corruption is perceived to exist among public officials and politicians. Transparency International uses the CPI to rank countries according to the perceived levels of corruption. It uses the scale of one to ten. One is for highly perceived corrupt countries and ten for those with low incidences of corruption. CPI uses acceptance of bribes and misuse of positions by elite politicians and government officials to gain personal benefits as a yardstick to determine the rank of the country. Broadly speaking, the surveys and assessments used to compile the CPI include questions relating to bribery of public officials, kickbacks in public procurement, embezzlement of public funds and questions that probe the strength and effectiveness of public sector anti-corruption efforts. The CPI is an aggregate indicator that combines different sources of information about corruption, making it possible to compare countries. The corruption perception indices for the past five years for ten selected countries are shown in Table 2.1.

**Table 2.2:** Corruption perception indices for ten selected countries according to Transparency International (2008-2012)

	2007	2008	2009	2010	2011
New Zealand	9.4	9.3	9.4	9.3	9.5
Denmark	9.4	9.3	9.3	9.3	9.4
Botswana	5.4	5.8	5.8	5.8	6.1
South Africa	5.1	4.9	4.7	4.5	4.1
Lesotho	3.3	3.2	3.3	3.5	3.5
Zambia	2.6	2.8	3.0	3.0	3.2
Tanzania	3.2	3.0	2.6	2.7	3.0
Malawi	2.7	2.8	3.3	3.4	3.0
Zimbabwe	2.1	1.8	2.2	2.4	2.2
Somalia	1.4	1.0	1.1	1.1	1.0

From Table 2.1 above, New Zealand and Denmark are the least perceived corrupt countries while Somalia is perceived to be a very corrupt country. The corruption indices for Zambia were 2.6, 2.8, 3.0, 3.0 and 3.2 for the years 2007, 2008, 2009, 2010 and 2011 respectively. Although the perception indices for Zambia were improving, the level of corruption in the country was still high according to the Transparency International (2008 – 2012). Ameh and Odusami (2005) stated that empirical research has shown a strong relationship between pervasiveness of corruption and poor development performance in developing countries. A low corruption index has a significant negative impact on investment and growth.

According to the Anti Corruption Commission Act No. 42 of 1996, corruption is defined as the soliciting, accepting, obtaining, giving or offering of gratification by way of a bribe or personal temptation or inducement or the misuse or abuse of public office for private advantage or benefit. Shakantu (2006) on the other hand defined corruption as a behaviour which deviates from norms, rules and duties governing the exercise of a privileged role or office for the purpose of private gain. Persons perpetuating corruption ignore prohibitions against certain acts, or by fulfilling obligations to act or by exercising legitimate discretion to act, as long as it does so for private advantage or private regarding motives. Shakantu further stated that to describe a person as corrupt could mean that a person is dishonest.

The World Bank (2004) defined corruption as offering, giving, receiving or soliciting of anything of value to influence the action of public official in the procurement process or in contract execution. The Bank does not engage consultants or contractors who have previously engaged in corrupt or fraudulent practices when competing for contracts. Fraudulent acts are a misrepresentation of facts in order to influence a procurement process or execution of the contract.

Shakantu (2009) identified two actions to be satisfied for a conduct to be termed corrupt:

- (a) the recipient of the corrupting object or device must consciously be disposed predictably to favour the interests of the benefactor; and
- (b) the corrupting object or devise must be substantial enough to warrant reasonable worry that the recipient will favour the interest of the benefactor even when all else is equal.

Shakantu and Chiocha (2009) identified the following as forms of corruption in the construction industry:

- connivance between officials or client and contractors;
- negligence by some consultants;
- proprietary information infringements and concealing of other people's ideas during design stage;
- collusive bidding during the tendering stage;
- cash inducements for overvaluing work performed during the site operations stage;
- negligence in the form of the provision of poor quality documents during production documentation stage; and
- fraudulent conduct such as covering-up poor workmanship during site operations.

Dion (2010) stated that corruption has a lot of consequences. Corruption:

- negatively affected the allocation of resources to needy areas in the economy;
- reduced the pace and extent of economic activities; and
- had negative effects on the level of trust between people so that in the long term it endangered the stability of social and political institutions.

Henriot (2007) observed that corruption affected the future of Zambia as a country in many ways. For example:

- it blocked economic development, discouraged investments, dissuaded possibilities for foreign aid and assistance from cooperating partners, lessened chances for continued debt relief, side tracked funds for infrastructure development;
- it undermined social development, diverted, distracted, drained scarce and needed resources, unravelled essential cooperative efforts at the local level; and
- it prevented local development, built a culture of dishonesty that hindered ordinary trust relationships, offered role models for youth that were destructive of community solidarity, depleted the moral capital that was so necessary to move the country out of poverty.

Shakantu and Chiocha (2009) stated that collusion and corruption impacted negatively on the country's capacity to address development imperatives. It impacts on the economy as a whole and on the well being of the industry. Corruption altered the character of institutional performance in the context of administrative efficiency. It undermined managerial efficiency. The redirection of resources from global policies to individual interests created serious problems of management. Shakantu and Chiocha (2009) summarised corruption as having a corrosive impact on market opportunities and general business climate. It deterred investment, curbed economical growth and sustainable development, distorted prices and undermined legal and judicial systems.

Some classic implications of corruption are that it dramatically increased the cost of construction by undermining competition (Goldstock, 1990). Corruption on residential projects meant less middle and low income housing. Corruption on industrial and commercial projects meant higher commercial rents and therefore higher costs of goods and services. Ultimately the high cost of construction made investment in infrastructure development unattractive. Corruption affected health and welfare when it touched the quality of construction, for example, when buildings failed to meet safety requirements and specifications due to fraud in building materials and workmanship.

Shakantu and Chiocha (2009) stated that in effect, corruption led to:

- projects, which were unnecessary , unsuitable, uneconomical or dangerous;
- specification of components, which were over-priced or expensive to operate and maintain;
- increased projects costs;
- the supply of defective equipment, materials or services; and
- payment for equipment, materials or services which were not supplied.

Rodriguez et al. (2005) highlighted the devastating impact of corruption in construction such as wasted tender expenses, tendering uncertainty, increased project cost, economic damage, blackmail, criminal prosecutions, fines, blacklisting, brand damage, and reputational risk among others.

Rose-Ackerman (2008) argued that kickbacks changing hands amongst parties to the contract were easy to hide in construction contracts. The competitive nature of bidding processes encouraged firms to try to outwit kickbacks through payoffs. Once the contract was awarded, officials tend to extract payoffs from the increased profits.

Frynas (2005) submitted that corruption affects the general public by influencing investment and deterred public access to services such as good education, efficient health care deliveries, and good roads among other services.

Evidence from across the globe confirms that corruption and other unethical practices hinders economic development, reduces social services, diverts investments in infrastructure and social services and impacts the poor disproportionately (Osei-Tutu et al., 2010). The World Bank (2003) has identified corruption as a single greatest obstacle to economic and social development.

Corruption is one of the main ethical issues in the construction industry world over. Moylan (2008) observed that ethics in construction mirror the tenets of values-based leadership, stressing the need for shared values, integrity in the building and contracting processes, common understanding of professional practice, partnering, balancing of risks with financial rewards and building long-term trusting relationships.

Ameh and Odusami (2010) stated that the quantification of corruption at a country level could be objective or subjective. Objective quantifications are based on verifiable information such as the number of corruption charges which depends on efficiency of the judiciary in a given year, or the number of internet search engine hits on corruption, which reflects the media attention given to particular scandalous instances of corruption in a particular country. Subjective measures are based on surveys or polls in which individuals are asked to assess the level of corruption. Survey respondents are typically a panel of country or regional experts, a random sample of locals or business people. Subjective measures can be classified according to whether they gauge the respondents' perceptions or experience.

## **2.5 Definitions of ethics**

Many definitions of ethics have evolved overtime. Richard et al. (2007) defined ethics as the moral principles or system of a particular leader or school of thought, the principles by which any particular person is guided, the rules of conduct recognised in a particular profession or area of human life. Ethics are both collective and individual constructs which can be adopted or imposed. Svensson and Wood (2003) observed that, eventually, ethics are about what is perceived as acceptable or unacceptable at a specific time and in a particular cultural setting. Bullock and Stalybrass (1980) on the other hand defined ethics as a branch of philosophy that investigates morality and the varieties of thinking by which human conduct is guided and may be appraised. Ethics comprises a study of thought, language, reasoning, processes and judgement that informs the choices people make in their daily lives that affect their own well-being and that of others.

Fisher and Lovewell (2006) defined ethics in business as a conflict between public duty and self interest. This happens at both an individual and corporate level. At corporate level the ethical questions that are asked are; should profit seeking be the main thrust of business? Should the self-benefits derived from a business transaction, at an individual level, be the main drive to undertake such transactions? There are sensible arguments that can be used to suggest that corporate bad behaviour can be bad for business. Normally, such businesses would lose the esteem and respect of its clients. Bowen et al. (2007) stated that it is now commonly recognised that the general concepts of ethics are applicable in business on the grounds that businesses exist not solely for the benefit of certain individuals, but because business serves society in general and in addition meets collective and individual needs. Decision making is a fundamental component of most business management processes, entailing a process of stating the problem, analysing the issues, identifying possible courses of action, deciding on the best alternative, and then implementing the chosen solution. Many decisions facing management turn out to be ethical. These have consequences with mixed outcomes or multiple alternatives, uncertain consequences and personal implications.

Fewings (2009) stated that business ethics is divided between a stockholder view which argues that ethics and economics primarily intersect at market level and the wider

stakeholder view where it is argued that ethics and economics also intersect at the organisational and individual levels. The stockholder view is that the manager's prime ethical duty is to increase profits. The improved profits were used to increase stockholder value.

Ferrell et al. (2000) defined ethical issues as problems, situations, or opportunities requiring an individual or organisation to choose among several actions that must be evaluated as right or wrong, ethical or unethical. Professional engineering ethics therefore is the generation and application of rules of conduct designed to control engineers' relationships among themselves; between themselves and their employers or clients; and between themselves and the public. As early as 1932, Alger et al. (1965) reported that an Engineers Council for Professional Development (ECPD) was formed in the United States of America (USA). The ECPD developed canons for engineers. The engineer, to uphold and advance the honour and dignity of the engineering profession and keeping with high standards of ethical conduct will:

- be honest, impartial and will serve with devotion his or her employer, his clients and the public;
- strive to increase the competence and prestige of the engineering profession; and
- use his or her knowledge and skill for the advancement of human welfare.

The Engineering Institution of Zambia (EIZ) has also established canons for engineers in Zambia. Every member of the EIZ shall:

- (a) hold paramount the safety, health, environmental and welfare of the public in the performance of his professional duties;
- (b) perform services only in the areas of his professional competence;
- (c) issue public statements only in an objective and truthful manner;
- (d) act in professional matters for each employer or client as a faithful agent or trustee, and shall avoid conflict of interest;
- (e) build his professional reputation on the merits of his services and shall not compete unfairly with other engineers;
- (f) associate professionally only with reputable persons in other organisations;

- (g) continue his professional development throughout his career and shall provide opportunities for the professional development of those engineers placed under his supervision; and
- (h) promote individual integrity and of other engineers and raise awareness on prevention of corruption.

Wasserman (2000) observed that ethics is not just about recognising an objective good. It also comprises a study of thought, language, reasoning, processes and judgement that informs the choices people make in their daily lives that affect their own well-being and that of others. It is a discipline or area of study, rules or principles that govern what an individual and groups agree in their duty and what is good or bad (Doran, 2004). Morality on the other hand is a set of accepted standards or rules about what is right or wrong conduct. Acting unethically therefore means actions that are inconsistent with agreed upon moral conduct.

## **2.6 Ethical Models**

Bowen et al. (2007) stated that if an organisation wanted to promote ethical behaviour, it needs to focus on those factors that can be controlled. However, organisations have limited control over individual employees' natural inclinations.

Decision making is a fundamental component of most business management processes, entailing a process of stating the problem, analysing the issues, identifying possible courses of action, deciding on the best alternative and then implementing the chosen solution.

Ho and Ng (2003) asserted that a person's judgement is in essence a reflection of their true beliefs and values. The image of an organisation on the other hand is in reality a reflection of the value systems portrayed by individual organisational members.

### **2.6.1 Kohlberg 's stages of moral reasoning**

Kohlberg (1959) carried out research into the development of moral thinking and came up with a theory that there are three levels of moral reasoning and six stages of development. Table 2.3 indicates Kohlberg's stages of moral reasoning. Pre-conventional is a level where

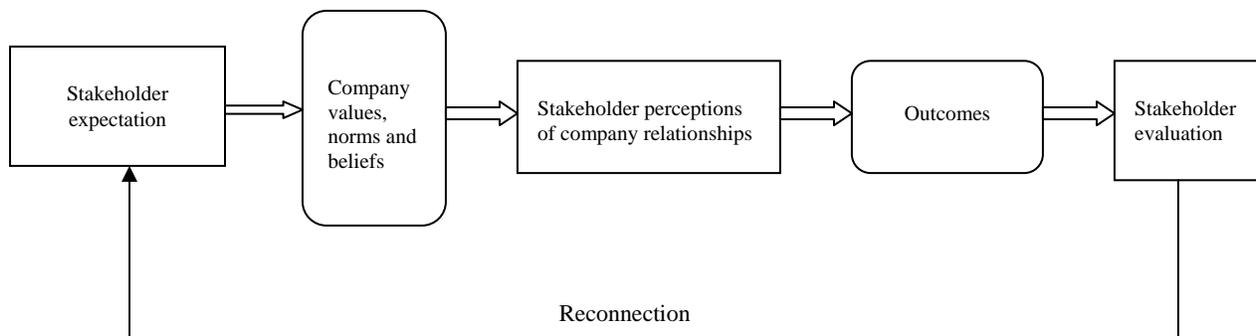
there is self interest by minimisation of personal harm and maximisation of personal gain. Rules are obeyed for the purpose of minimising punishment. Conventional morality level recognises the consideration of living within the acceptable norms of the community and the recognition of developing relationships as a strategy. Individual needs are subordinate to that of a group. A value is put on being seen as good people by that group and acts as a deterrent to unethical behaviour and dishonesty. A moral adopted by the majority of the community attracts fierce loyalty. Post-conventional morality level distils the essence of just laws and treatment to improve a moral situation. An individual at this level would support a moral principle which had gained consensus.

**Table 2.3:** Kohlberg’s stages of moral reasoning

Level	Focus	Stage	Orientation
Pre-conventional morality	Self interest	1	Avoiding punishment or harm
		2	Self-interest and individualism
Conventional morality	Community interest	3	Community norm and relationships
		4	Maintaining social order
Post-conventional morality	Universal justice	5	Just rules and consensus
		6	Universal principles - autonomous

### 2.6.2 Business ethic model

Svenson and Wood (2007) developed a business ethic model (Figure 2.1) based upon the expectations and perceptions of society which then makes an evaluation of the company outcomes resulting from the codes and cultures that they have implemented. The evaluation of individual company performances makes a reconnection to the expectation of corporate behaviour in general.

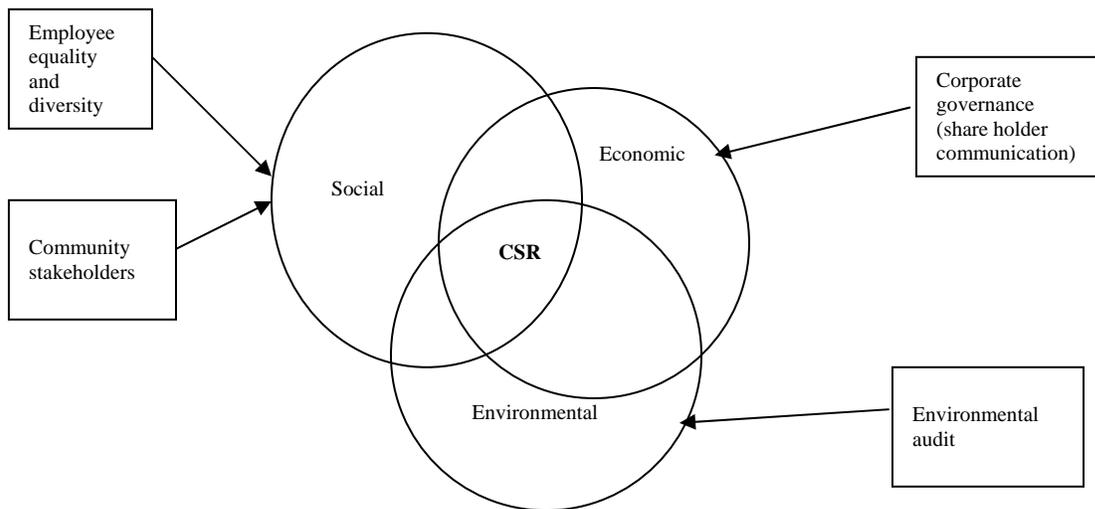


**Figure 2.1:** A business ethic model

*(After Svenson and Wood, 2007)*

### 2.6.3 CSR stakeholder model

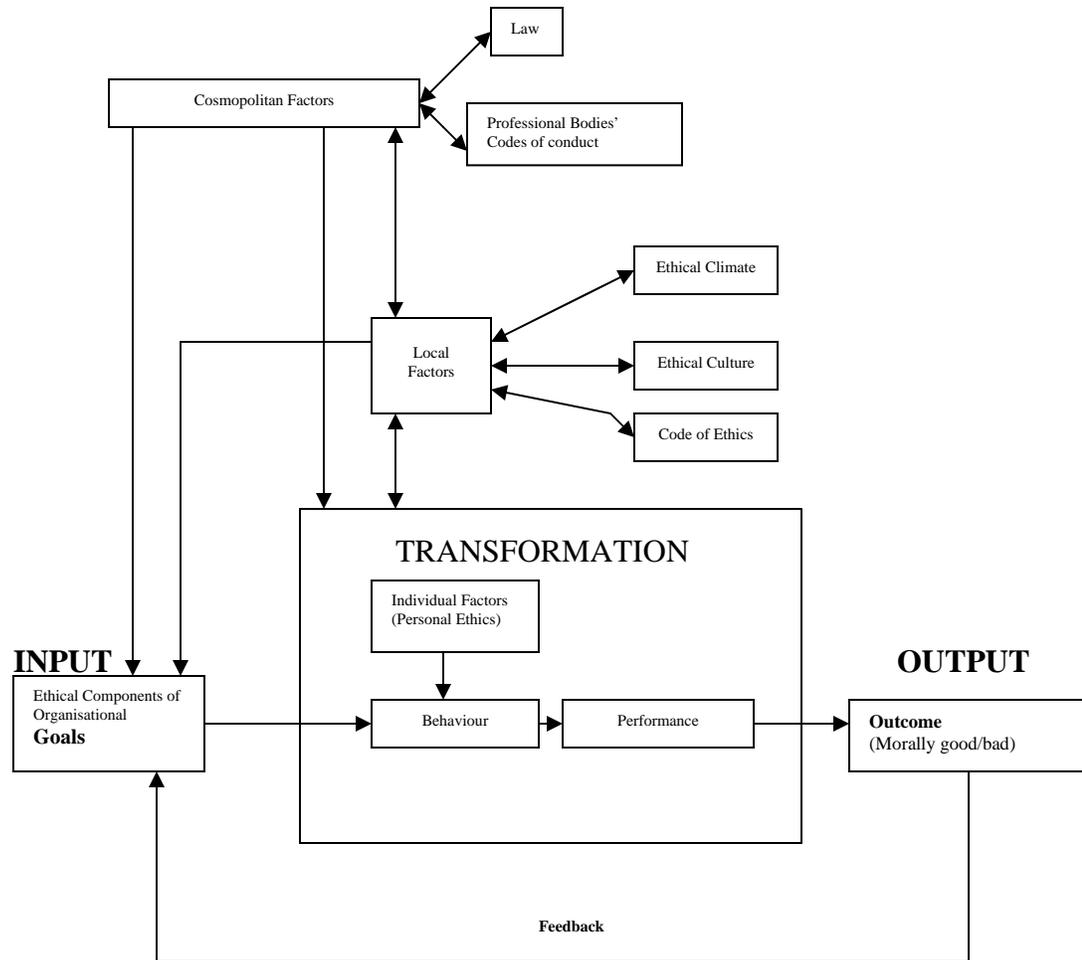
Fewings (2009) also developed an ethical model (Figure 2.2) of how Corporate Social Responsibility (CSR) could be supported by structures which are transparent. The principle of CSR provides for a balance sheet with triple bottom line covering social and environmental as well as economic profit. In construction, this will refer to reducing nuisance, compensating for environmental degradation and ‘putting something back’ into the community.



**Figure 2.2:** The CSR stakeholder model  
(After Fewing, 2009)

### 2.6.4 Model of organisational ethics

In their study, Liu et al. (2004) postulated that ethical behaviour in organisations is influenced by organisational culture as shown in Figure 2.3. Individual factors also pose major influences on behaviours especially when the individual begins to question actions without reliance on guidance or constraints set by laws and codes. Bribery cases for example, manifest the weakness in human nature, the apparent defeat in the face of interaction of personal values and the environmental contingencies.



**Figure 2.3:** Model of organisational ethics

*(After Liu et al., 2004)*

### 2.6.5 Contingency model for ethical decision making

Green and Walker (2009) developed a contingency model for ethical decision making. This model, Figure 2.4, was primarily developed for educational leaders. It consists of five steps:

- acknowledgement of ethical dilemma;
- assess values and beliefs of everyone involved, assess organisational, social and cultural norms that are pertinent, identify rules, policies, and laws that are pertinent;
- analyse the conflict;
- make the decision; and
- state the ethical claim for the decision by stating what makes the decision ethical.

Pearl et al. (2005) asserted that ethics involves both personal and business decision making. A person's judgment is in essence a reflection of their true beliefs and values. The image of the organisation is in reality a reflection of the value systems by individual members. If an organisation wants to promote ethical behaviour, it needs to focus on those factors that can be controlled.

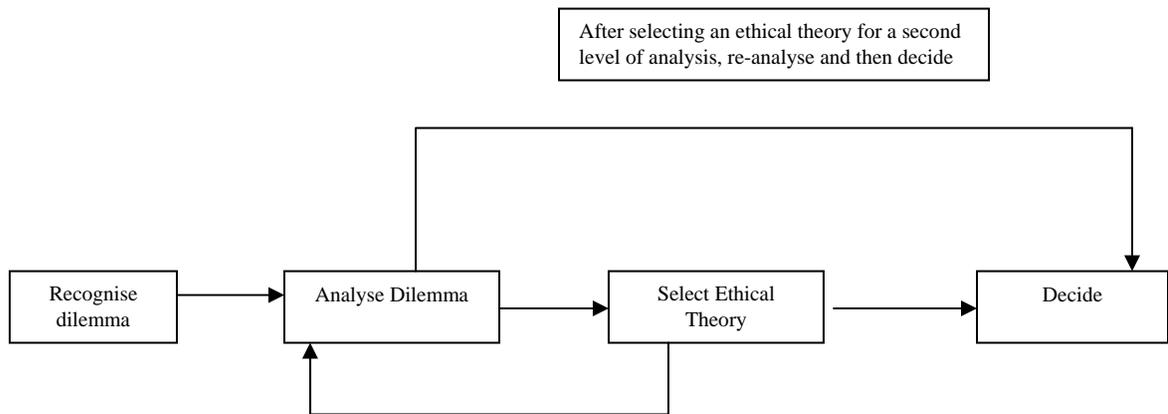
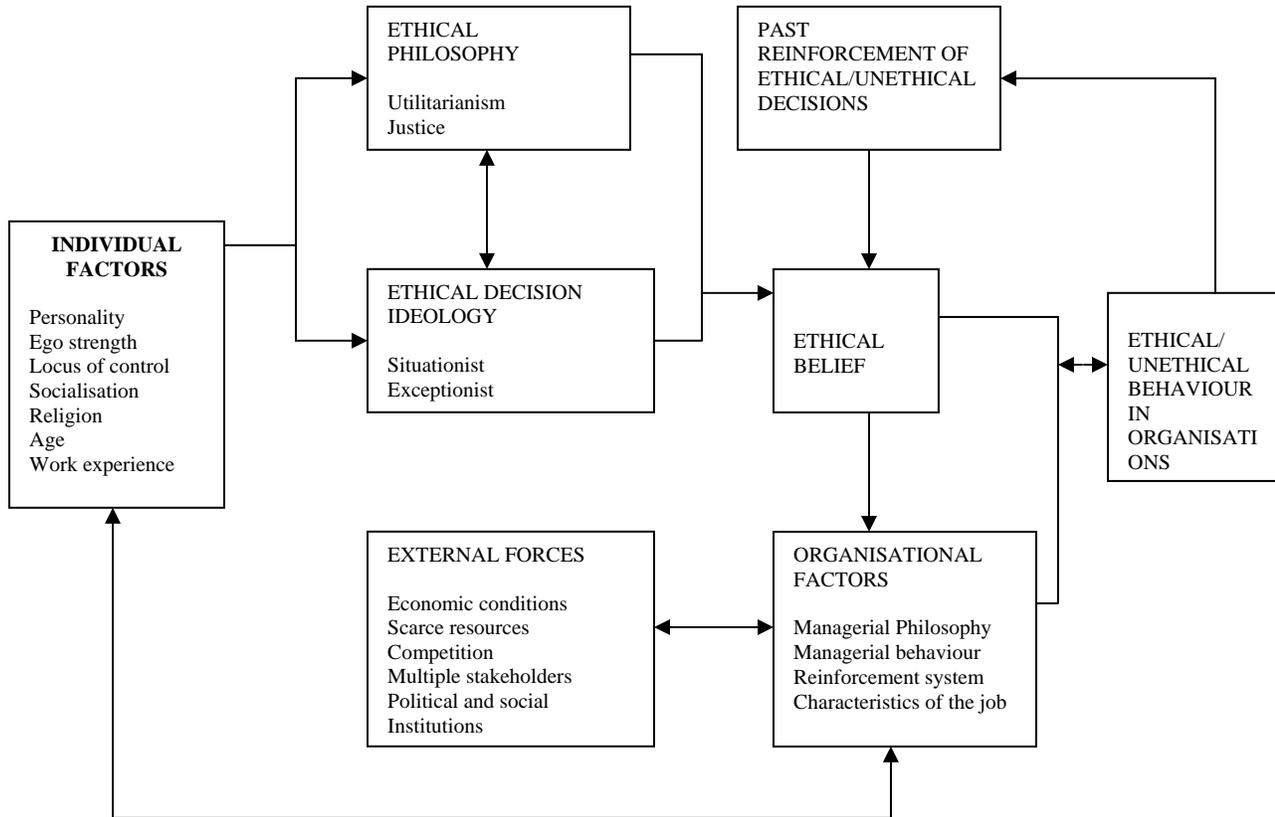


Figure 2.4: Contingency model for ethical decision making  
(After Green and Walker, 2009)

### 2.6.6 An integrative model for understanding ethical behaviour in business organisations

Stead et al. (1990) cited a model for understanding ethical behaviour. It provides an understanding of ethical behaviour in commercial enterprises. When analysing the individual factors depicted by the model, one can see that there is limited control over individual employees' natural inclinations. The model, depicted in Figure 2.5, has two important identifiable phases. The first phase reflects the relationship between the individual factors and the development of person's ethical philosophy and decision making ideology. Essentially this linkage demonstrates that the ethical beliefs one holds and how these beliefs are applied, are strongly influenced by personality and background. The second phase entails organisational factors which are affected by external forces that influence the person's ethical belief system. These interactions eventually lead either to ethical or unethical behaviour occurring in organisations.

The cause of ethical failure in organisations can often be traced to their organisational culture (Bowen et. al, 2007). Stead et al. 1990 also stated that the failure on the part of leadership to actively promote ethical practices also resulted in ethical failure.

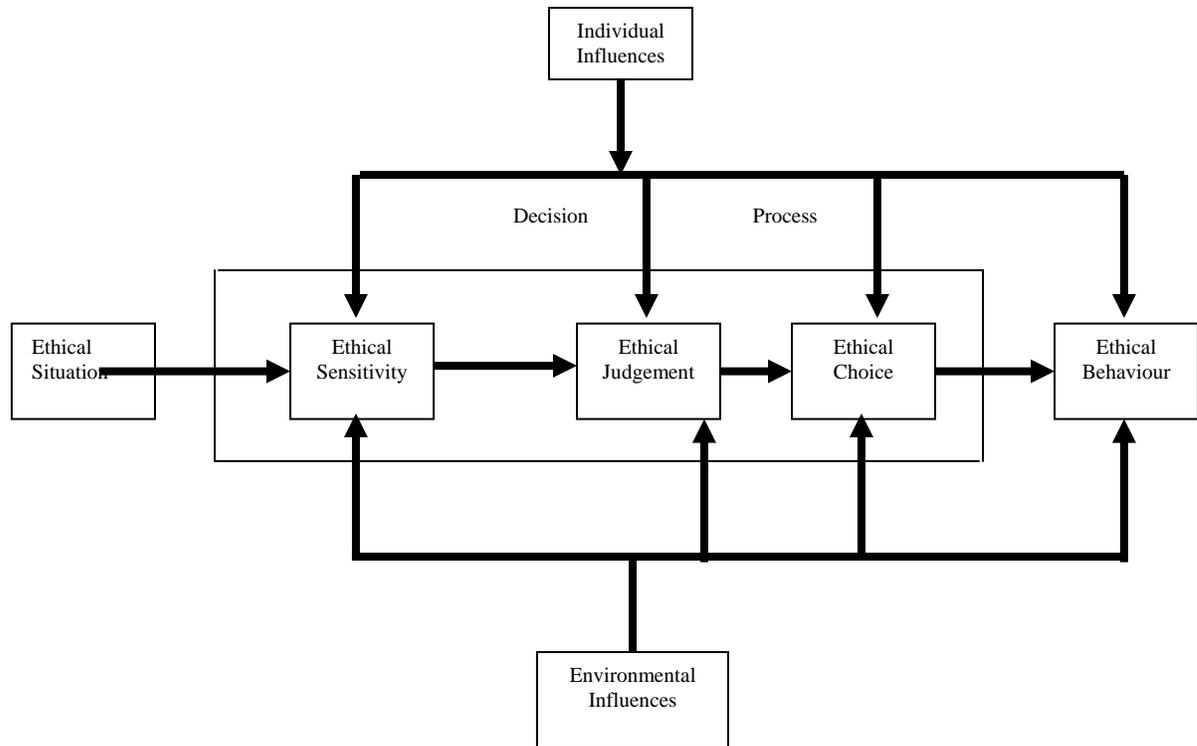


**Figure 2.5:** An integrative model for understanding ethical behaviour in business organisations  
(After Stead et al., 1990)

### 2.6.7 General behavioural model for ethical decision making

Wittmer (2002) also presented a general model for resolving moral or ethical decisions. Figure 2.6 is the general behavioural model for ethical decision making. The model presents a process that begins with awareness, perception or sensitivity to the moral issue.

The decision-maker proceeds through judgement to establish what is reasoned to be an ethically justified course of action. The justified course of action ends with the actual behaviour. Both individual and environmental variables, internal and external to an organisation are taken into consideration in this model.



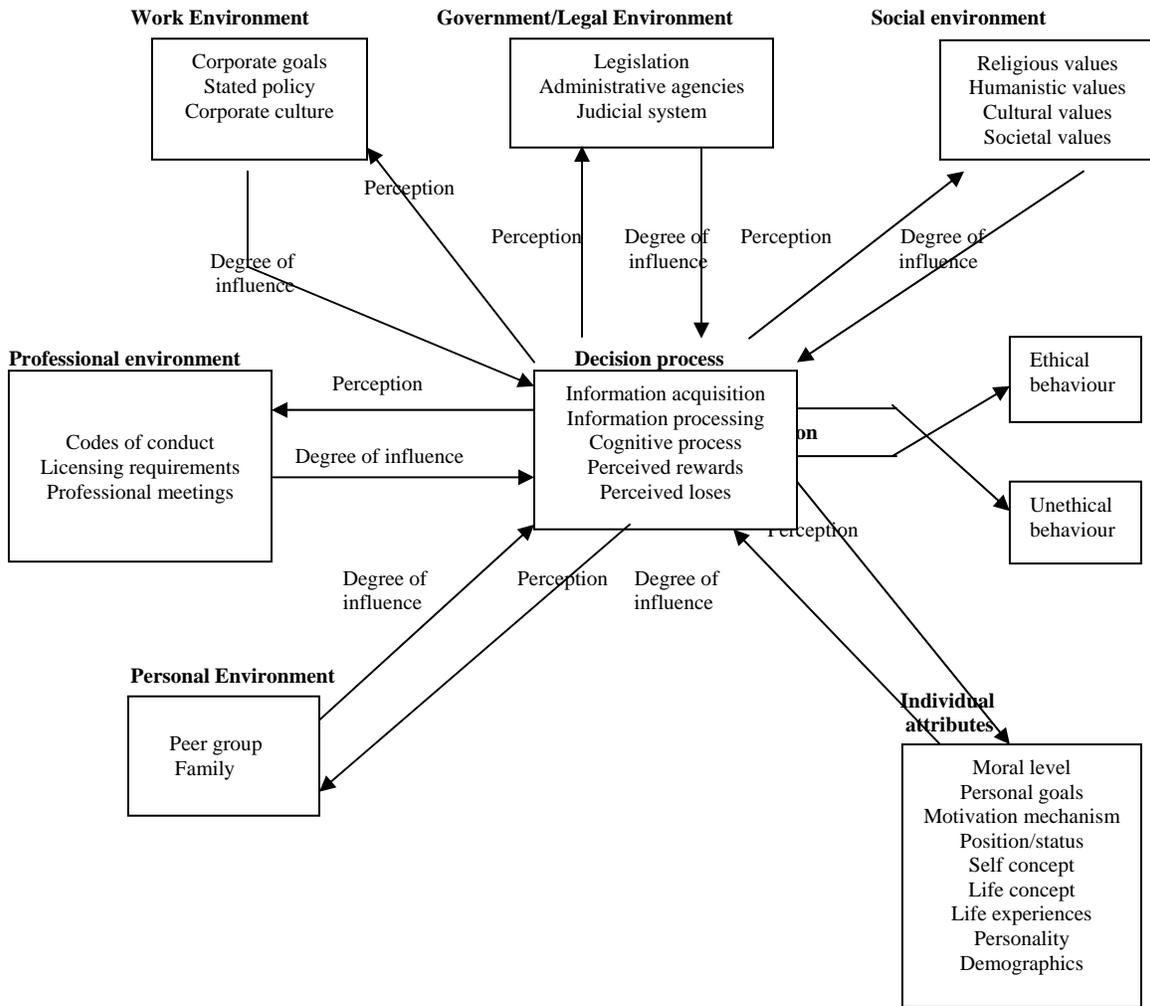
**Figure 2.6:** General behavioural model for ethical decision making  
*(After Wittmer, 2002)*

### 2.6.8 A behavioural model of ethical or unethical decision making

Bommer et al. (1987) developed a model which identifies and describes various factors which affect ethical and unethical behaviour in organisations. Figure 2.7 is the schematic diagram of the model. This model groups under several categories a wide range of factors. The categories include a decision-maker’s social environment, government and legal environment, professional environment, work environment, personal environment and individual attributes.

#### (i) Social environment

The social environment of an employee is the set of humanistic, religious, cultural and social values generally shared by members of society and the sub-groups to which he or she belongs. Values affect behaviour. Evidence seems to indicate that with respect to ethical or unethical behaviour on the job, employees will not adhere to general social values unless these are also incorporated within their professional and work environment.



**Figure 2.7:** A behavioural model of ethical or unethical decision making  
*(After Bommer et al., 1987)*

**(ii) Government and legal environment**

Laws are values and mores of society that have the force of its formal authority. Most individuals feel compelled to refrain from an action which is specifically prohibited by law. This effect of legal considerations on employee’s ethical decisions is due to, not just legal consequences which follow from breaking the law, but also to the strong social stigma associated with the label “illegal” as well as the desire to comply with the moral force behind the law.

**(iii) Professional environment**

The professional environment of an employee is the institutionalised professional context within which he or she practices. Fields of activity are properly designated professions only if they are characterised by:

- (i) professional associations;
- (ii) established licensing procedures; or
- (iii) both.

Professional associations such as the Engineering Institution of Zambia (EIZ) typically demand ethical behaviour through formal Codes of Ethics.

**(iv) Work environment**

Several factors in the work environment strongly influence the employee's decisions on whether to act ethically or unethically. These are corporate goals, stated policy and corporate culture. Many business entities have formal policies that prohibit unethical conduct and prescribe punishment for it. Statements of these are typically found in operating and policy manuals and in supervisor's workplace statements and they are disseminated in training programmes and posters in the workplace.

Organisations have their own cultures just as societies do. The culture is reflected in the attitudes, values, management styles and problem solving behaviour of its staff. The conduct of the Board of Directors, Chief Executive Officer and other senior management can signal subordinate managers as to which behaviours are acceptable.

**(v) Personal environment**

The variables in this segment of the model are family and peer groups, relate to the individual's personal life outside of the organisation. An individual's home environment also seems to guide moral development.

**(vi) Individual attributes**

The individual component of the model comprises moral level, personal goals, motivation mechanisms, position or status, self concept, life experiences, personality and demographic variables. Fear of punishment is the main reason rules are followed by people in this category.

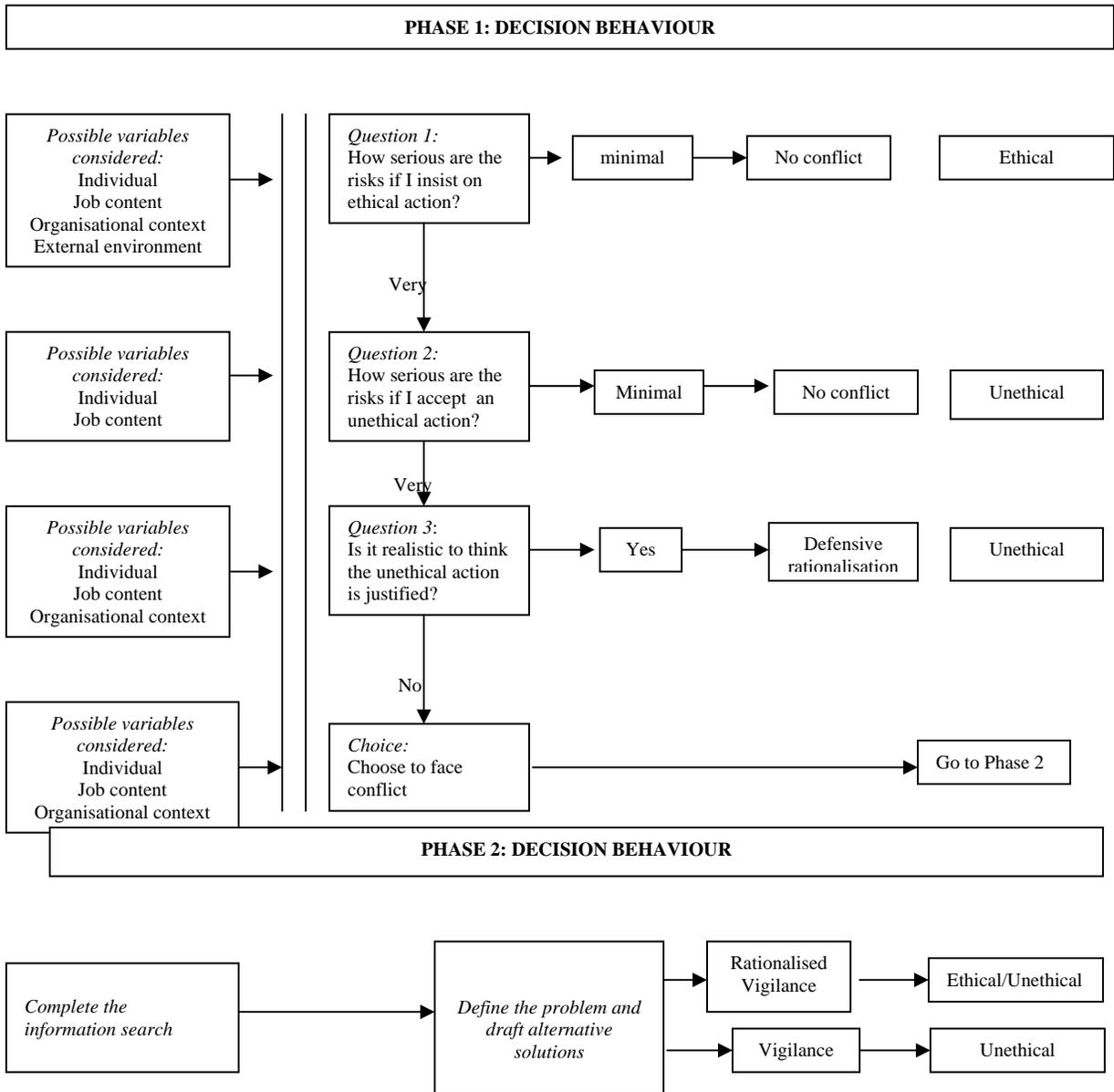
**2.6.9 A model of ethical decision making: the integration of process and content**

McDevitt et al. (2007) developed an integrated model that aids in understanding the complexity of the decision process used by individuals facing ethical dilemmas. Figure 2.8 is the flowchart of the model showing the progressive steps and variables in ethical decision making. The model includes the individual, situational, organisational and environmental variables.

Individual variables are those that influence the ethical decision making process. They include age, religious beliefs and gender. The level of an individual's moral maturity has also been identified as an important variable in the ethical decision process. Strong decision makers will be confident in following their judgement and those who are weaker are more likely to rely on team members or those in authority for action confirmation.

The situation the individual is facing is also important to the decision making process. The job context may bring about peer pressure and management expectations that can influence an individual's judgement. Competition for scarce resources among employees can also be considered as a potential influence in ethical decision making. The organisation context in which an individual work can also influence his or her decision making process. Organisations have a culture that include values, Code of Ethics, non-codified expectations of behaviour, obedience to authority and responsibility consequences, the reward system and sanctions created by the organisation to motivate employee behaviour.

Start: Ethical Dilemma



**Figure 2.8:** A model of ethical decision making: the integration of process and content  
(After McDevitt, 2007)

Among the external variables that affect ethical decision making are:

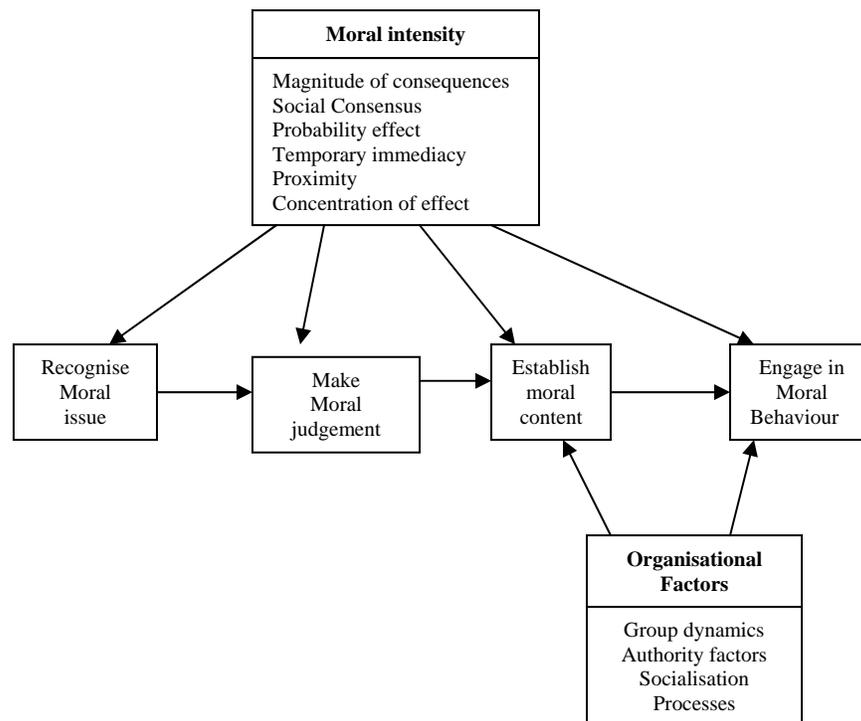
- societal norms that create group of external environmental factors;
- legal and political system;
- industry norms;

- competitive economic factors;
- professional codes of conduct; and
- family obligations.

The flow of the model suggest that the more complex the ethical dilemma, the more vigilant the information search should be to reach the best decision and to minimise post decision regret in the event of a mistake.

### 2.6.10 An issue-contingent model of ethical decision making in organisations

Jones (1991) developed an issue-contingent model of ethical decision making in organisations depicted in Figure 2.9. Jones (1991) postulated that every ethical issue can be represented in terms of its moral intensity, a construct that includes six components: magnitude of consequences, social consensus, probability of effect, temporary immediacy, proximity and concentration of effect. It is a simplified view of single-event moral decision-making.



**Figure 2.9:** An issue-contingent model of ethical decision making in organisations

*(After Jones, 1991)*

**(i) Magnitude of consequences**

The magnitude of consequences of moral issue is defined as the sum of the harms or benefits done to victims or beneficiaries of the moral act in question. When moral dilemmas are faced, serious consequences are more likely to prompt ethical behaviour than are modest consequences.

**(ii) Social consensus**

The social consensus of the moral issue is defined as the degree of social agreement that a proposed act is evil or good. In order for individuals to respond appropriately to a given situation, agreement must exist as to whether or not the behaviour is appropriate.

**(iii) Probability of effect**

The probability of effect of the moral act is a joint function of the probability that the act in question will actually take place; and that the act in question will actually cause the harm or benefit predicted.

**(iv) Temporary immediacy**

The temporary immediacy of the moral issue is the length of time between the present and the onset of consequences of the moral act in question. Shorter length of time implies greater immediacy.

**(v) Proximity**

The proximity of the moral issue is the feeling of nearness socially, culturally, psychologically, or physically, that the moral agent has for the victims or beneficiaries of the evil or beneficial act in question. Intuitively, people care more about other people who are close to them socially, culturally, psychologically, or physically than they do for people who are distant.

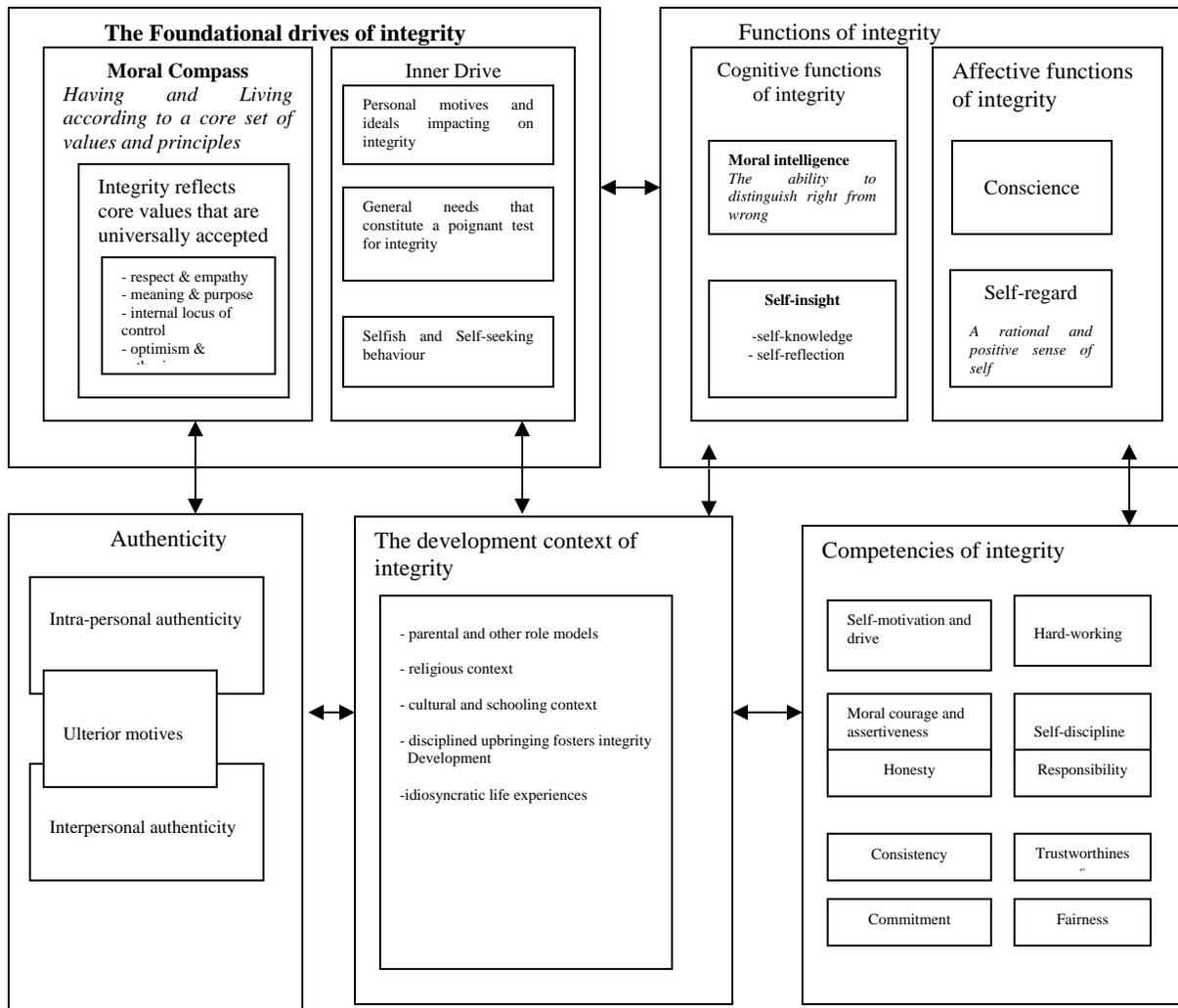
**(vi) Concentration of effect**

The concentration of effect of the moral act is an inverse function of the number of people affected by an act of given magnitude. Concentration of effect has been included in the moral

intensity construct mainly for intuitive reasons. People who have a sense of the paramount importance of justice for individuals will abhor immoral acts that result in highly concentrated effects.

### 2.6.11 Conceptual framework of integrity and its development

Banard et al. (2008) developed a framework of integrity depicted in Figure 2.10. Banard et al. (2008) postulated that the competencies of integrity can be regarded as the behavioural consequences of living authentically in relation to one's moral compass and one's inner drive. Integrity entails an internalised set of values and principles that function as the norms and standards that one lives by and that direct all one's actions and decisions.



**Figure 2.10:** Conceptual framework of integrity and its development  
(After Barnard et al., 2008)

## **2.7 Examples of unethical issues in the construction industry**

There are various examples of unethical behaviours in the construction industry world-wide. Shakantu (2006) stated that cases identified in South Africa include the submission of fictitious and exorbitant invoices for materials and labour as well as bribes in return for work and even prompt payment. Some cases demonstrate connivance of officials and contractors and the negligence of duty by some consultants. Others include some form of extortion, bribery, theft, fraud, collusive bidding or bid rigging taking place within the confines of the construction project.

Other examples of unethical conduct by professionals in the construction industry are highlighted in the study by Bowen et al. (2007). Bowen et al. (2007) stated that the construction industry in South Africa is prone to unethical behaviour as a result of the competitive pressure placed on it, from the prevalence of the lowest cost of bidding strategies and the abolition of mandatory professional scales. These pressures have resulted in intense competition occurring in the delivery of professional and construction services. In the same study it was reported that the majority of the contractors who do engage in corrupt and other unethical practices tend to do so, not because they want to, but because they feel they are forced to by the way the industry and political environment operate.

Elsewhere in the world cases of corruption and unethical conduct are abound. Shakantu (2006) reported the following examples:

- in Manhattan, the District Attorney's Office announced in October, 1999 that 31 architects, real estate brokers and managers and 24 construction companies had pleaded guilty to bribery charges related to bid rigging on construction projects;
- in Guangzhou, China, 205 officials in the construction sector were charged with bribery between January and June 2002;
- in Thailand, massive corruption in the award of the new Nong Ngu Hao Air Port were reported in 2002; and
- in the United States, United Kingdom, Japan, Canada, Greece, Germany, Liechtenstein, China, South Korea, Spain, France and Turkey, serious levels of corruption have been recorded. This forced the World Economic Forum Governors for Engineering and

Construction to form a Multinational Task Force to work closely with Transparency International, an international independent anti-corruption organisation, to develop anti-corruption principles to guide companies that participate in engineering and construction procurement around the world.

## **2.8 Types of ethical issues in construction industry**

Mwiya (2009) stated that the construction industry in Zambia comprises five sectors, namely: design; assembly; manufacturing and supply; and clientele. For this study, the design sector is referred to as consultancy, while assembly sector include contractors and sub contractors. The clientele include project sponsors such as the government, private companies and donor agencies who fund construction projects. The manufacturing sector which includes producers of construction materials, plant and machinery were not considered in this study. Abdul-Rahman et al. (2010) stated that construction professionals exercise their own skills and judgement and they are accountable to the client and bound by their professional Code of Ethics. Contractors on the other hand are keen to make a profit and their actions are inclined towards business ethics.

Ethical issues in the construction industry can mainly be identified at three levels:

- (a) project conception and tendering process;
- (b) construction and supervision of the construction projects; and
- (c) project hand-over and commissioning.

Ehsan, et al. (2009) stated that the construction process involves conceptualising, designing, managing, organising and coordinating project requirements including time, money resources, technology, and methods. These must be integrated in the most efficient manner possible to complete construction projects on schedule, within the budget and according to the standards of quality and performance specified by the project owner or designer. This demands that engineers possess strong fundamental knowledge of engineering design and management principles, besides knowledge of business procedures, economics, and human behaviour. Engineers, architects, quantity surveyors and other construction personnel confront dozens of ethical issues. Many of these have substantial impact on their work as

professionals or the on organisation, as well as others involved in the project. Engineers, architects, quantity surveyors and other construction personnel must, therefore, be ready to act in an ethical manner because most projects affect many people.

Zhou (2006) in his study discovered that corruption existed with all stakeholders and in every stage of project procurement from concept and design stages to tendering and construction stages, right through commissioning and hand over stages. He further stated that as part of the solution to curb corruption, the responsibility of project procurement should not be vested in one individual alone.

Research in Australian by Vee and Skitmore (2003) showed that most of the unethical behaviour in the construction industry takes the form of unfair conduct, negligence, conflict of interest, collusive tendering, fraud and bribery. Doran (2004) observed that 63 per cent of the respondents to the survey in the USA agreed that, in general, the construction industry is tainted by prevalent acts that were considered unethical. The survey also indicated that unethical behaviour affected the public's perception of the industry. Unethical practices also affected the level of trust between clients and contractors, and between clients and design professionals.

At the tendering stage, the business of bidding for construction contracts has a large ethical component that is supported to some extent by law. However, Ray et al. (1999) stated that there are many ethical issues associated with tendering that are not supported by law. These include failing to disclose conflict of interest; equitable tendering practices; and rights of disclosure to the declaration of conflicts of interest. Osei-Tutu et al. (2010) also identified manipulation of laid down procedures, kick backs and politicians influencing the choice of contractors as some of the unethical practices at tendering stage.

At construction or execution stage, issues of unethical nature involve the bribery of client official to access favours during the supervision of the contract. Others include deliberate poor workmanship, over payments, payment for work that has not been done and abandonment of work for which payment has already been made. Osei-Tutu et al. (2010)

stated that during execution, in-house officials normally condone and connive with main contractors to take over subcontracting activities; delivery of inferior materials; lowering specifications for sub-quality standard of works; works inspectors and consultants conceal substandard works by contractors; payment of claims which actually cannot be accounted for; and payment of contingency sums without any tangible basis.

Supervision of works on large construction works is normally done by a set of consultants who include architects, engineers and quantity surveyors. At supervision level, some ethical practices that may arise include; collusion with the contractor to inflate quantities and certifying works which may not have been done or which was poorly done (Ehsan, et al., 2009).

Companies in the construction industry are involved in many activities that point to their corporate responsiveness. In 2005, the Auditor General in Zambia generated a special report on the administration of selected contracts in the Ministry of Works and Supply. Some of the ethical issues that the Auditor General identified are described below.

### **2.8.1 Overpayments on projects**

Nashinga/Emsworth Joint venture were awarded a tender in 2008 to construct border facilities at Katima Mulilo at a cost of K14, 561,051,235 VAT inclusive for a delivery period of 50 weeks. In January 2009 the contractor was paid K2,200,000,000. A site inspection carried out in May, 2005 revealed that only work worth K950,977,088 was done despite the huge advance payment that had been paid. Another site inspection conducted in February, 2006 revealed that only earth works had been done despite the contractor having been on site for more than 50 weeks.

On 16<sup>th</sup> December, 2003, the Ministry of Works and Supply awarded a tender to Supreme Construction Limited for the construction of 86km Mununga road at a contract sum of K674,943,500. The works involved re-shaping of the road, re-gravelling, vegetation control and drainage works. Although only 33km of the 86km was done, the interim certificate of

payments indicated that K625,461,461 out of K674,943,500 was paid. The K625,461,461 paid was equivalent to work done on 60km of road.

### 2.8.2 Inadequate funding of a project

The construction of the New Chirundu Bridge infrastructure was commissioned in 1999 in order to provide an efficient flow of traffic and enhance trade and other socio-economical cooperation between Zambia, Zimbabwe and other countries that would directly use the infrastructure. The construction of the border facilities was part of the agreement that was made between the governments of Zambia, Japan and Zimbabwe. Various packages under the bridge and border facilities infrastructure were awarded as shown in Table 2.3.

**Table 2.4:** Funding to Chirundu Border infrastructure project

	<b>Contract sum</b>	<b>Releases</b>	<b>Variance</b>
	<b>ZMK</b>	<b>ZMK</b>	<b>ZMK</b>
<b>2004</b>			
Construction of Freight Terminal	12,025,340,000	5,357,662,411	6,667,667,589
Construction of Passenger Control Building	4,527,440,000	4,273,735,082	253,704,918
Construction of Road works	11,017,800,000	8,573,435,353	2,444,364,647
Water Treatment Plant	780,440,000	227,994,832	552,445,168
Sewerage Disposal System	4,300,000,000	1,195,765,766	3,104,234,234
	<b><u>32,651,020,000</u></b>	<b><u>19,628,593,444</u></b>	<b><u>13,022,426,556</u></b>
<b>2005</b>			
Construction of Freight Terminal	6,469,974,500	6,669,011,067	(199,036,567)
Construction of Passenger Control Building	5,226,000,000	4,771,305,720	454,694,280
Construction of Road works	12,012,000,000	11,168,374,340	843,625,660
Water Treatment Plant	304,735,250	524,645,275	(219,910,025)
Sewerage Disposal System	3,347,280,548	3,506,833,557	(159,553,009)
	<b><u>27,359,990,298</u></b>	<b><u>26,640,169,959</u></b>	<b><u>719,820,339</u></b>

As can be seen from the table, there were shortfalls in funding of K13,022,426,556 in 2004 and K719,820,339 in 2005. Consequently, contractors under different packages made additional claims due to delays in effecting payment caused by inadequate funding.

On 8<sup>th</sup> December, 2003, the Zambia National Tender Board (ZNTB), then, now renamed Zambia Public Procurement Authority (ZPPA) awarded a contract to China Jianx Corporation for the construction of Freight Terminal in Chirundu at a contract sum of K13, 422,476,130 for a period of 46 weeks which was later revised to 62.5 weeks. The project was to start on 5<sup>th</sup> May, 2005. However, the project did not commence until the 6<sup>th</sup> June, 2006. This delay of seventeen weeks resulted in the contractor claiming K894, 118,717 as labour and material fluctuations.

On 22<sup>nd</sup> October, 2001, ZPPA awarded a tender to Apollo Enterprises Limited for the construction of roads, foot paths, cycle tracks and related civil works under the Chirundu infrastructure development at the contract sum of K10,564,580,588 for a delivery period of 45 weeks, commencing 12<sup>th</sup> December, 2001. It was observed that the completion of the project was delayed by four years, thereby causing the original contract price to be revised on four occasions as follows:

**Table 2.5 Fluctuation of tender for the construction of roads, foot paths and cycle tracks**

Year	Original Contract	Adjusted Contract
	ZMK	ZMK
2001	10,564,580,588	10,564,580,588
2002		12,134,173,220
2003		20,134,173,220
2004		31,151,973,220
2005		43,504,145,233

In four years, there was an increase of over 311% of the original contract price. The main reasons for the huge fluctuations were as follows:

- (a) fluctuations in Plant, 10,992,524,071;
- (b) fluctuations in labour, 3,476,583,496;
- (c) variation in scope of work, 2,173,088,592;
- (d) fluctuations in material, 1,333,961,166;
- (e) standby charges, 940,940,766;
- (f) interest on delayed payments, 534,526,309; and

(g) unexplained charges, 13,487,940,246

The failure by the Ministry of Works and Supply to provide adequate financial resources to the project resulted in wasteful expenditure arising from interest charges as well as fluctuations in prices of materials, labour, plant and standby charges. The unexplained charges accounted for 41 percent of the total fluctuation.

### **2.8.3 Works not professionally executed**

The Auditor General's report of 2007 reported that K86 million was provided for the construction of a 1x2 class room block at Nabuyuni Basic School. Enquiries and a site visit to the project in 2008 revealed that there were no Bills of Quantities for the project. Also there was no contract between the school and the contractor. Glass panes were cut to wrong specifications. The project had not been completed by 2008 but the contractor had already been paid the full amount of K86 million.

### **2.8.4 Failure to complete projects**

A provision was made for the construction of three office blocks in Nakonde, Mpulungu and Mungwi for the District Commissioners in 2007. In July 2008, the works were abandoned uncompleted.

Although the audits in the construction industry have been successful in bringing about audit queries on financial matters, they have been a failure on technical issues (Mwiya, 2009). This results in adoption of unethical means by the concerned firms. These unethical practices can be avoided if auditors undertook both technical and financial audits.

As stated above, unethical practices can be identified at project conception, tendering, supervision and execution stages of construction. Unethical practices affect the consultants, contractors and the clients or project sponsors.

## **2.9 Ethical issues at inception**

In a construction project, the architects, engineers and quantity surveyors form a team of consultants that advise the client from inception. Some unethical practices identified by Shakantu (2006) at inception include the falsification of cost, time and return on investment estimates and invalid request for proposals. Others include:

- (a) as architects prepare drawings, information is leaked to quantity surveyors about an upcoming project through the evaluation of initial cost estimates; and
- (b) quantity surveyors leak information to their colleagues in the construction sector who at bid or tender period will have advantage over those who did not know the probable value or contract sum of the upcoming project.

Consultants normally have an idea of what the clients are paying for and ought to be the first line of defence for clients against corrupt practices. This is not always the case as some consultants may have compromised their own positions through involvement in unethical conduct.

Other unethical practices include proprietary information infringements and stealing of other peoples' designs and drawings during the design stage. Zhou (2006) also indicated that administrative interference and disclosure of confidential project baseline price information prior to tendering are common at this stage of project procurement.

Zhou (2006) in a study on corruption in the construction industry in China agreed with Shakantu (2006) that the root causes of corrupt activities come from government officials and that it would be essential to ensure that these officials and clients understand their roles and responsibilities in order to be transparent and accountable to the public.

## **2.10 Ethical issues at tendering stage**

Among the most critical ethical issues faced by the construction industry is bias in tendering or unethical tendering practices (Ameh and Odusami, 2010). Moylan (2005) also observed that within the construction industry, the practices of bid shopping, bid rigging, related cost reduction practices pose a range of ethical challenges. The potential effect these bidding

practices can have on involved stakeholders such as the client, consultants, bidding contractors and ultimately the public can be considerable.

Transparency International (2006) stated that in order for the procurement process to check unethical practices, the competitive and bidding process should adhere to the following best practice principles: give public notification of bidding opportunities; documents should be clear; set out clear needs; describe the bidding process and contract terms and conditions; give criteria for choosing the winner; secretly sealed bids submitted should be opened in the presence of bidders, at a specified time and place; impartial evaluation and comparison of bids by competent evaluators without influence of or interference by bidders or parties; award of contract to bidder complying with all requirements and offering the best bid defined by the published selection criteria; requirement for sound independent audits of procurement processes; and requirement for third party monitoring of large procurements.

In the public sector, the competitive bidding process has been used to ensure a fair profit for the risks assumed by the competent general contractor. Some of the major ethical issues at tendering stage include; bid withdrawal; bid-cutting, cover pricing, compensation of tendering costs, conflict of interest and collusion. Others are listed below.

### **2.10.1 Uncompetitive tendering**

Zhou (2006) stated that the uncompetitive tendering practices include inappropriateness of tender evaluation criteria, preferential treatment of tenderers, disclosure of baseline price of project and other confidential information and integrity of members of tender evaluation committees.

### **2.10.2 Unfair conduct**

Zhou (2006) stated that at tendering stage, contractors sometimes offer bribes to the client or the tender evaluation committee members in order to win the project. In Zambia, the ZPPA has put in a measure where information relating to examination, evaluation, comparison and post qualification of bids shall not be disclosed to bidders or any other persons not officially concerned with such process until publication of the contract award. Bidders who attempt to

influence the evaluation committee in the examination, comparison and post qualification of the bids or contract award may result in the rejection of their bid. Bidders are further not allowed to contact the client from the time the bids are opened to the award of contract unless it is done so in writing.

Bowen et al. (2007) on the other hand stated that unfair conduct may occur in competition (unfair competition), in contracts (unfair contract terms) and in business practice (unfair business practice). In their survey, Vee and Skitmore (2003) combine unfairness with dishonesty. They stated that dishonesty constituted illegal behaviour and is thus more appropriately linked to fraud.

### **2.10.3 Bid withdrawal**

Under the ZPPA guidelines, bidders are allowed to withdraw a bid before the closing of the tenders and formal acceptance of the bid price. Bid withdrawal before closing of the tender is done to accommodate bidders who may discover that their tender has major miscalculation or due to loss of interest or due to lack of technical expertise. To stop bidders from withdrawing from a bid after tender opening, ZPPA provides that bidders should submit a bid security bond or sign a bid securing declaration. The bid security bond has got a specified period of validity. The bid security bond may be forfeited if:

- (a) a bidder withdraws its bid during the period of bid validity; or
- (b) the successful bidder fails to:
  - (i) sign the contract, or
  - (ii) furnish a performance security bond.

On the other hand, if a contractor signed a bid securing declaration and withdraws from the tender after opening had been done, the contractor can be suspended from further tendering for a specific period of time depending on the value of the tender.

In order to avoid possible over-commitment or when the bidder discovers that they under-priced, contractors may withdraw their bid before it is accepted. If this practice was widespread, the client could end up in a position of receiving no competitive tenders and thereby

delaying the start of the contract until further tenders have been solicited. This could cause major problems for the client in having to re-schedule the work, late completion and therefore loss of income in the form of proceeds from rent and profits from the new facility. If re-tendering is necessary, the additional costs of re-tendering will affect not only the client but also the new tenderers. On the other hand, other critics state that the bidder has a right to withdrawal his bid if he sees something wrong with it or if he becomes overcommitted.

#### **2.10.4 Bid cutting**

Reverse auction bidding is a process where the client or client representative sets the target price and post it on the internet. Bidders then post their priced proposals to a central web site. As a result of this practice, the competitive bidding arena suffers. This forces contractors to risk performing their work without just compensation for their direct cost, over head and profit potential. Ninety for per cent of the respondents to a survey by Doran (2004) stated that reverse auction bidding was unethical. Mason (2009) stated that the difficulty with practices such as reverse auctions and this overly contractual approach to relationships is that they might, themselves, encourage contractors to engage in unethical behaviour by restricting profit margins at a non-viable level and by inviting opportunistic behaviour.

#### **2.10.5 Conflict of interest**

Bowen et al. (2007) stated that conflict of interest is a situation in which someone in a position of trust, such as a lawyer, engineer, architect, a politician, or an executive or director of a corporation has competing professional or personal interests which could make it difficult to fulfil his or her duties impartially. Ferrell et al. (2000) stated that a conflict of interest exists when an individual must choose whether to advance his or her own interests, those of the organisation, or those of some other group. They further stated that to avoid conflict of interest, employees must be able to separate their private interests from their business dealings. Even if there is no evidence of improper action, a conflict of interest can create an appearance of impropriety that can undermine confidence in the ability of that person to act properly in his or her position. Conflict of interest involves a personal interpretation of whether or not certain behaviour is commonly acceptable, rather than if it is illegal. Under the ZPPA guidelines, conflict of interest may occur, for example, when the

person that designed the structure and prepared the Bills of Quantities is also involved in tendering either directly or through close associates.

To stop this vice, ZPPA requires a statement from all bidders that they were not associated directly or indirectly with the consultant or any entity that prepared the design, specifications and other documents for the project. A firm that has been engaged by the employer to provide consulting services for the preparation or supervision of the works and any of its affiliates is therefore not eligible to bid under the ZPPA guidelines. It is therefore unethical for example, for a project engineer to accept help from contractors in preparation of specifications and invite them to tender for the same works. Alger et al. (1965) advised that officers of any company owe a greater responsibility to their stockholders than they do to themselves. They further stated that the purpose of engineering ethics is to eliminate the opportunity of conflict of interest. Therefore, no officer or official whether paid or unpaid shall engage in any business or transaction or shall have a financial or other personal interest, direct or indirect, which is incompatible with the proper discharge of his official duties in the public interest.

Bowen et al. (2007) stated that even if there is no evidence of improper action, a conflict of interest can create appearance of impropriety that can undermine confidence in the ability of a person to act properly in his or her position. The onus, therefore, should clearly be placed upon individuals to declare all possible instances of potential negative interpretation before proceeding with projects.

#### **2.10.6 Collusion**

Danger and Capobianco (2007) defined collusion as when businesses that would otherwise be expected to compete, secretly conspire to raise prices or lower the quality of goods or services for purchasers who wish to acquire products or services through a tendering process. Public and private organisations often rely upon the competitive bidding process to achieve better value for money.

Bowen et al. (2007) stated that collusion is contrary to the principles of free competition. It benefits only the parties to the collusive agreement at the expense of those not privy to the arrangement. They further stated that collusion could lead to artificially increased prices, quality compromises, company failures through unfair competition, a negative industry image and decreased employee productivity through moral dissatisfaction. And from an economic perspective, collusion corrodes the basis and attacks the rationale of the competitive tendering system by restricting competition.

A study was undertaken to ascertain the incidence of unethical behaviour, in particular collusive tendering in Australia and South Africa, (Mason, 2009). The results were shocking but not untypical. The responses indicated that 100 per cent of the construction managers questioned had either witnessed or experienced collusive tendering. Eighty eight per cent of quantity surveyors also witnessed or experienced collusive tendering. Over fifty per cent of the architects questioned had also witnessed companies getting involved in collusion. Overall, this figure is equivalent to seventy nine per cent of total respondents being involved in collusive tendering.

Danger and Capobianco (2007) identified the following as major forms of collusive tendering:

- (a) *cover bidding*. Cover bidding also called complementary, courtesy, token, or symbolic bidding is the most frequent way in which bid-rigging schemes are implemented. It occurs when individuals or firms agree to submit bids that involve at least one of the following:
  - (i) a competitor agrees to submit a bid that is higher than the bid of the designated winner;
  - (ii) a competitor submits a bid that is known to be too high to be accepted; or
  - (iii) a competitor submits a bid that contains special terms that are known to be unacceptable to the purchaser. Cover bidding is designed to give the appearance of genuine competition;
- (b) *bid suppression*. Bid-suppression schemes involve agreements among competitors in which one or more companies agree to refrain from bidding or to withdraw a previously

submitted bid so that the designated winner's bid will be accepted. In essence, bid suppression means that a company does not submit a bid for final consideration;

- (c) *bid rotation*. In bid-rotation schemes, conspiring firms continue to bid, but they agree to take turns being the lowest qualifying bidder. The way in which bid-rotation agreements are implemented can vary. For example, conspirators might choose to allocate approximately equal monetary values from a certain group of contracts to each firm or to allocate volumes that correspond to the size of each company; and
- (d) *market allocation*. Competitors carve up the market and agree not to compete for certain customers or in certain geographic areas. Competing firms may, for example, allocate specific customers or types of customers to different firms, so that competitors will not bid, or will submit only cover bid, on contracts offered by a certain class of potential customers which are allocated to a specific firm. In return, that competitor will not competitively bid to a designated group of customers allocated to other firms in the agreement.

Shakantu (2006) also included predatory bidding as a form of collusion in which firms collusively agree to bid below prevailing market rates in order to drive out the competition and once this is accomplished, the firms typically inflate the prices.

Danger and Capobianco (2007) stated that in order for firms to implement a successful collusive agreement, they must agree on a common course of action for implementing the agreement, monitor whether other firms are abiding by the agreement, and establish a way to punish firms that cheat on the agreement.

Zarkada-Fraser and Skitmore (2000) in their study identified environmental and situational factors that influence the moral decision making process that leads to participate in collusive tendering agreements. The three most important factors were identified as: whether the action would be held legally liable for the action; whether the action could be perceived as illegal; and whether there is a legal issue involved. They concluded that professional decisions whether to become involved in collusion or not is determined primarily by the legal implications.

Bowen et al. (2007) also reported that unlike in the Australian survey by Vee and Skitmore (2003) where collusion occurs primarily between contractor and client, in South Africa 62 per cent of the respondents stated that collusion mainly occurred between two contractors.

### **2.10.7 Bid rigging**

Bid rigging is also a form of collusion. Moylan (2005) stated that the practices of bid rigging are considered unethical. The scheme of bid rigging by an unscrupulous group of conspiring contractors redirects funds that should be paid to stockholders as dividends, to finance inflated construction costs.

Although bid rigging can occur in any economic sector, there are some sectors in which it is more likely to occur due to particular features of the industry or of the product involved. Various industry or product characteristics have been found to help collusion. They need not all be present in order for companies to successfully rig bids. Some of the characteristics common in bid rigging schemes are:

- (a) *small number of companies*. Bid rigging is more likely to occur when a small number of companies supply the goods or services. The fewer the number of sellers, the easier it is for them to reach an agreement on how to rig bids;
- (b) *little or no entry*. When few businesses have recently entered or are likely to enter a market because it is costly, hard or slow to enter, firms in that market are protected from the competitive pressure of potential new entrants. The protective barrier helps support bid rigging efforts;
- (c) *market conditions*. Significant changes in demand or supply conditions tend to destabilise ongoing bid-rigging agreements. A constant, predictable flow of demand from the public sector tends to increase the risk of collusion. At the same time, during periods of economic upheaval or uncertainty, incentives for competitors to rig bids increase as they seek to replace lost business with collusive gains;
- (d) *industry associations*. Industry associations can be used as legitimate, pro-competitive mechanisms for members of a business or service sector to promote standards, innovation and competition. Conversely, when subverted to illegal, anti-competitive purposes, such

associations have been used by company officials to meet and conceal their discussions about ways and means to reach and implement bid rigging agreements;

- (e) *repetitive bidding*. Repetitive purchases increase the chances of collusion. The bidding frequency helps members of a bid-rigging agreement allocate contracts among themselves. In addition, the members of the cartel can punish a non-compliant company to the scheme by targeting the bids originally allocated to it. Thus, contracts for goods or services that are regular and recurring may require special tools and vigilance to discourage collusive tendering.
- (f) *identical or simple products or services*. When the products or services that individuals or companies sell are identical or very similar, it is easier for firms to reach an agreement on a common price structure;
- (g) *few if any substitutes*. When there are few, if any, good alternative products or services that can be substituted for the product or service that is being purchased, individuals or firms wishing to rig bids are more secure knowing that the purchaser has few, if any, good alternatives and thus their efforts to raise prices are more likely to be successful; and
- (h) *little or no technological change*. Little or no innovation in the product or service helps firms reach an agreement and maintain that agreement over time.

### **2.10.8 Bid shopping**

Bid shopping is a practice whereby the main contractor discloses competing sub-contractors' prices seeking further discount. In a study, Doran (2004) collected the thoughts on the ethical state of the USA construction industry from 270 architects, engineers, construction managers, general contractors and sub contractors. When asked if they had experienced, encountered or observed construction industry related acts on transactions that they would consider unethical in the past year, 84 per cent agreed and 43 per cent said they had experienced unethical acts many times. Sixty one per cent said that the construction industry was tainted by unethical acts. Amongst the top five most critical issues by respondents was bid shopping.

A bid shopping scheme destroys the integrity of competitive bidding system by unfairly sharing information on contractor's bid situation with unauthorised parties. The contractor's

proposal, which is their intellectual property, without just compensation for the efforts in developing the proposal, is not only destabilising to the contractor, but unethical. Conversely, bid shopping unfairly rewards one side of the stakeholder, the client, while unjustly compensating one bidder over another without paying for the development of the priced proposal.

Doran (2004) concluded that bid shopping may lead to a breakdown in trust and collaboration and is likely to cause a more contentious atmosphere between clients, contractors and subcontractors.

#### **2.10.9 Confidentiality in tendering process**

The ZPPA guidelines relating to processing of tenders are such that information relating to the examination, clarification, evaluation and comparison of bids and recommendations for the award of contract shall be treated with utmost confidentiality. Information shall not be disclosed to bidders or any other persons not officially concerned with such process until the award to the successful bidder has been announced. Any effort by the bidder to influence the employer's processing of bids or award decisions may result in the rejection of his bid.

#### **2.10.10 Contracts are one-sided**

Tenders for public procurement of works are normally drawn by the client. In drawing the tender document, conditions that may not be favourable to the bidders but are favourable to the client are put in the document. Unfavourable conditions such as payment to be done after sixty days of invoicing are not only unethical but rob the contractors of use of their resources. Doran (2004) also stated that many respondents to the survey indicated that too many contracts were unethical and one-sided and tended to favour the stronger party.

#### **2.11 Ethical issues during supervision**

As stated above, ethical practices are also prevalent during supervision of the project by consultants. These include negligence, fraud, bribery and dishonesty and unfairness.

### **2.11.1 Bribery**

Ameh and Odusami (2010) defined bribery as a form of corruption involving anything of value solicited, bestowed or offered to induce or influence the receiver's conduct in the discharge of public or legal duty. On the other hand, Vee and Skitmore (2003) defined bribery as the offering of some good or service or money to an appropriate person for the purpose of securing a privileged and favourable consideration of one's product or corporate project. They further stated that bribery occurs in many forms. These include cash inducements, gifts and favours and entertainment. This is usually provided by the contractor to either the client or the consultant. According to Liu et al. (2004), corrupt payments may take the following forms:

- (a) paying a person to do what they should do and to expedite matters;
- (b) paying a person to use their power or influence over others to get something done by others; and
- (c) compelling a person to pay on the basis of threats of what will occur if the payment is not made.

Bribery in relation to the award of the contract is the most visible form of corruption in procurement of building projects. Alger et al. (1965) stated that kick-backs or bribery is unethical. Alger et al. (1965) further stated that it was uncommon for politicians to receive contributions from construction projects. Alger et al. (1965) recommended that no reputable engineer who had any concern for his reputation or his own peace of mind could possibly accept work under kickback conditions. However, a distinction needs to be made between a bribe and a token gift. A token gift, such as a branded calendar or a pen, is a goodwill and friendly gesture that can lubricate and produce a smooth working organisation. Rejecting a token gift can cause insult and mistrust. However, Alger et al. (1965) suggested that when gifts begin to affect the exercise of free judgment by the engineer, the exercise may be regarded as a bribe. In extreme cases, this has led to extortion and fraud and other serious crimes.

Bowen et al. (2007) identified three difficulties associated with defining bribery, namely:

- (a) drawing the line between acceptable relationship building and corrupt practices;

- (b) a difference between extortion and facilitation payments; and
- (c) tolerance of practices in different cultures as an excuse for corrupt practices.

Amundsen (2000) identified the synonyms of bribery as kickbacks, gratuities, baksheesh, sweeteners, pay-offs, speed and grease money.

In a study in Pakistan by Ehsan et al. (2009), it was established that all persons associated with the construction industry had experienced some degree of unethical conduct. Unethical practices were in form of undertaking work beyond capability (15%), bribery (20%), favouritism (30%) unfair conduct (30%), strict rules (18%) and overriding of audit process over contracting process (35%).

Hamra (2000) observed that bribery inhibits economic development and distorts competition. In addition, it disrupts distribution channels, destroys incentives to compete in quality and prices, undermines market efficiency and predictability and ultimately denies many people the right to minimal standard of living.

### **2.11.2 Fraud**

Vee and Skitmore (2003) stated that fraud is witnessed or experienced in many instances in the construction industry. These include tampering of signed contract documents, altering of construction documents, covering up poor workmanship and material quality. Bowen et al. (2007) identified the common forms of corruption involved in the procurement process as bid rigging; collusion by bidders; fraudulent bids; fraud in contract performance; fraud in an audit enquiry; product substitution; defective pricing or parts; falsification or misrepresentation of costs; bribery and acceptance of gratuities; misuse of government funds; travel fraud; and theft and embezzlement. Fewings (2009) also stated that fraud may include wrongful approval of work which is substandard or other deception to add false value or payments through the accounts that do not comply with the facts.

Amundsen (2000) regarded fraud as an economic crime that involves some kind of trickery, swindle or deceit and has a broader legal and popular term that covers more than bribery and embezzlement.

### **2.11.3 Negligence**

Bowen et al. (2007) defined negligence as lack of proper care and attention or carelessness. Vee and Skitmore (2003) on the other hand defined negligence as a failure to exercise that degree of care which, in the circumstances, the law requires for the protection of those interests of other persons which may be injuriously affected by the want of such care.

Professionally, this would be the failure to exercise the degree of care considered reasonably warranted by the circumstances, resulting in an unintended injury to another party. To be negligent, the professional must have had the ability to be competent, but has disregarded the crucial importance of exercising this ability. The negligent professional disregards the course of action which is in the client's best interests. The main sources of negligence according to Vee and Skitmore (2003) are design negligence; design defect; production defect; inadequate safety standards or a combination of these factors. Other forms include poor quality documents; poor workmanship; poor material quality; poor supervision; and inadequate safety standards on site.

Bowen et al. (2007) reported that professional competence comprises efficiency in doing tasks economically, sufficiency in providing a full service to the client and capacity which is the ability or capability to undertake the commission. In contrast, negligence is the lack of proper care and also the omission of such duty care for the interest of others as the law may require. The negligent professional disregards the course of action which is in the client's best interest.

### **2.11.4 Honesty and fairness**

Honesty refers to truthfulness, integrity and trustworthiness. Fairness is quality of being just, equitable and impartial. Ferrell et al. (2000) stated that honesty and fairness relate to the general moral attributes of decision makers. The construction industry has a poor record and

reputation of honesty. Examples of dishonesty behaviours are bribery, fraud, collusive tendering, kickbacks and the preparation of forged documents to support claims.

Bowen et al. (2007) observed in their study that instances of dishonesty and unfairness were identified by respondents and the circumstances in which they were committed. Architects believed that contractors were not always honest in abiding by contractual obligations and that they commonly used cheaper, inferior alternatives. Contractors and engineering consultants on the other hand believed that the tender adjudication process was unfair and that professionals acted with bias when pressured by clients. Quantity surveyors always believed that contractors repeatedly over-claimed and that clients pressurised consultants to make savings on projects or cut their fees.

Among the highlights of dishonesty and unfair practices witnessed in South Africa, according to Bowen et al. (2007), were in terms of :

- materials – the contractor lies about materials used or uses inferior materials and loss of materials on site;
- professional dishonesty – poor practices by consultants; inexperience; blaming contractors for incompetence; deliberately increasing contractor cash flow through unmerited payment awards, and recommending friends for tender awards;
- documentation – poor and incomplete documentation, over-onerous tender conditions;
- poor workmanship by contractors;
- contractors' dishonesty – price fixing, maltreatment of subcontractors by main contractors for example, price squeezing; main contractor failing to pay the full amount owing to subcontractors; and failing to pay subcontractors;
- client dishonesty – pressurising the consultants to make decisions in the client's favour; forcing consultants to cut fee; withholding payment certificates; and poor procurement policies;
- government dishonesty – misuse of state affirmative action programmes, government officials fronting to get contracts, unfair choice of consultants, awarding contracts based on race, unfair allocation of work, and contracts repeatedly awarded to the same set of known contractors;

- payment – failure to pay agreed fees, alteration of invoices, unfairness in the adjudication of claims, over invoicing of claims and variation orders, quantity surveyors not recommending payments that are due to contractors and clients withholding payments from contractors; and
- tendering – bargain hunting after tender has been received, unfair processes of tender adjudication, secrecy of contract negotiations, tender disclosure to competitors, lowest tender not selected in selective tendering.

### **2.11.5 Fair reward**

Mason (2009) stated that it is important to avoid acts which are likely to result in another party being deprived of a fair reward for their work. The complexity of the industry's payment provisions and their ready facility for price alteration provides a major obstacle to achieving fair reward. Practices such as interim payments, the valuation of variations and the incomplete and undefined scope of works and quantities open the way for unethical conduct before, during and after the work has been performed. Specific examples of unethical conduct in this regard include devising tenders with inadequate definitions of work scope and risk allocation.

### **2.11.6 Integrity**

Integrity is having regard for the interests of the public, particularly people who will make use of or obtain an interest in the project in the future. The overall objective of construction is to produce safe, reliable, usable and affordable buildings and structures. This is only achievable if professionals concerned can look beyond their own or their client's narrow agendas. Vee and Skitmore (2003) observed that being honest and realistic is said to be a fundamental aspect of professional integrity.

## **2.12 Ethical issues during construction**

Construction of works is usually undertaken by contractor and subcontractors. These are supervised by consultants appointed by the client. Some unethical practices at construction stage are highlighted below.

### **2.12.1 Overbilling**

Overbilling is the process where the contractor bills the client even for work not yet completed. Parson (2005) stated that advocates of overbilling cited the problem of withholding funds due to contractors, especially subcontractors. This was cited as the reason a contractor must overbill. Such advocates also promote front-loading of contracts. The idea is to be paid most of the money in the early stages of works, to finance the later stages. In a survey by Doran (2004), 86 per cent of the respondents in the construction industry agreed that overbilling was unethical.

### **2.12.2 Poor quality of works**

Shakantu (2006) identified negligence in the form of poor quality works and also covering up poor workmanship during site operation as some of the unethical practices at construction stage.

### **2.12.3 Public safety as an ethical issue**

All contractors are required to ensure provision of safety management on site. In Zambia, the main Act for regulation of safety of contractors is factories Act, Cap 441. The Zambian Government through the Ministry in charge of Labour has established this legislation that encourages protection of workers in their places of work. Although each sector has its own safety and health procedure, the Factories Act contains general rules and regulations that every employer in Zambia has to abide by. These include:

- a clean working environment;
- safety clothing, head gear and footwear;
- availability of adequate ventilation;
- prevention of over-crowding;
- availability of First Aid facilities;
- availability of lighting;
- availability of sanitary facilities;
- basic training on safety and health; and
- availability of fire extinguishers and hydrants.

These are some of the many basic requirements that every employer in Zambia is supposed to provide to its employees. Employers in mining, construction, transport, hospitality and manufacturing are allowed by law to provide “special” or tailor-made health and safety facilities to their employees.

In the United Kingdom, Singh (2005) stated that compliance of Laws and Regulations in respect of safety is given high-level of importance. It is a requirement that a senior person who sits on the Board is appointed to deal with safety matters.

### **2.13 Ethics at closing phase of the project**

Shakantu (2006) stated that compromising final accounts, employee re-assignment, covering up project failure are some of the ethical issues at the closure of a project.

### **2.14 Other forms of ethical issues in construction industry**

Other forms of ethical issues reported by Vee and Skitmore (2003) are the following:

- impropriety in government tendering practices;
- the practice of under-bidding to gain work;
- unethical use of variations; and
- the influence of politics in the construction industry.

Olatunji (2007) noted that professional misconduct in the construction industry has not just affected public confidence and respect for the pride of the professional competencies. Professional bodies know that there had been unwarranted concern on the state of professionalism in the construction industry. Olatunji (2007) further stated that professional misconduct among quantity surveyors include:

- exaggeration of services rendered or to be rendered to deceive the client to pay more than is necessary;
- falsifying reports frequently to favour selfish interest without considering professional implications and employer’s ambition;
- concealing systematic errors to justify negligence;
- doctoring of professional opinions and standards; and

- saving other consultants' neck whose roles are vivid and tantamount to causing failure.

Chimpunde and Shakantu (2010) also noted conflict of interest, unfair conduct, political interference and bribery as some of the unethical practices among the small, medium and micro enterprise contractors in Malawi.

## **2.15 Leadership**

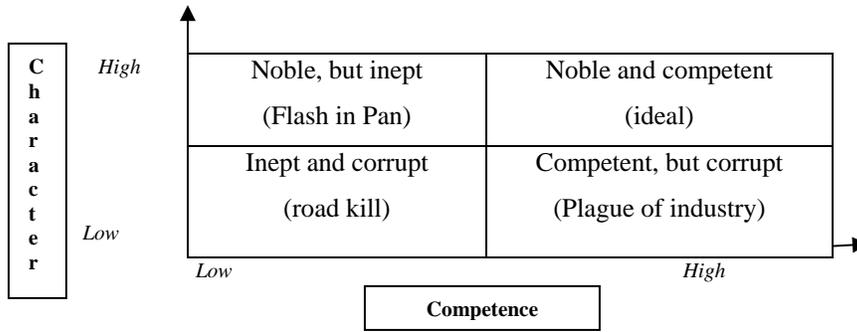
Kaptein and Scott (2005) stated that developing codes and putting compliance programmes in place to implement the code is not enough. To restore trust in business, ethical leadership is very important. Dubinsky and Richter (2009) stated that leadership covers the responsibilities of shaping, guiding and supporting the organisational ethics and integrity. Leadership must serve as a role model and guide in an organization (Doran, 2004). Good leadership practices reflect on the whole company. Leadership provides the character of the company. Competent leaders with noble characters will always act ethically. Ethics, therefore, should start at the top with a clear vision articulated by senior management. Policies should be aligned with the vision as well as rewards for accepting the vision.

Kaptein and Scott (2005) further stated that two major requirements that have to be met to improve the ethics of business are:

- increasing management awareness of irregularities within the organisation; and
- increasing management sensitivity regarding the extent to which the organisational structure and culture stimulates unethical conduct.

It is therefore crucial that management creates an organisational culture of openness and transparency in which unethical conduct will become visible and where employees and managers can call each other to account.

Doran (2004) observed that companies needed to distinguish between compliance and ethical behaviour. Doran (2004) suggested Figure 2.11 to assess ethical leadership in an organisation.



**Figure 2.11:** Character and competence of leadership  
(After Doran, 2004)

Character of leadership was described as pursuing noble ends with noble means. Noble was defined as integrity, courage, sacrifice and humility (Doran, 2004). The constant tension between the upper and lower right-hand quadrants define the task of all business leaders to not only scrupulously guard against ethical shortcuts, but also to filter them and their organisational conduct through a screen that tests whether the business practice enhances or erodes the firm's reputation.

### 2.16 Solutions to ethical issues in the construction industry

Confronting corruption in a sustained manner would require comprehensive and integrative approaches that combine preventive, education and punitive elements (Osei-Tutu et al., 2010). Osei-Tutu et al. (2010) also stated that although corruption cannot be completely eliminated from procurement processes, it can be managed to a larger extent. Political commitment is also a necessary condition for procurement reforms and curbing corruption. Philip (2002) observed that without political will and commitment by the leadership of the country, grand corruption is perpetuated at an alarming rate whilst petty corruption becomes endemic and more difficult to stop.

Doran (2004) also stated that, in order to minimise the chances of unethical or illegal behaviour in the construction industry, the following should be put in place:

- (a) stiffer penalties for those caught in unethical or illegal acts;
- (b) an industry wide Code of Ethics;
- (c) more emphasis placed on social responsibility in contract award criteria;
- (d) more training; and

- (e) provision of leadership on ethical issues.

Ehsan et al. (2009) suggested some short, medium and long term measures to deal with ethical issues in the construction industry in Pakistan. Among the short term measures, they advocate for the punishment and cancellation of practicing licences for repeated violations. In the medium term, they advocated for indigenous quality assurance group for every project, internship for young engineers should be obligatory for six months and media's role in promoting ethical society. In the longterm, they proposed that the role of an independent Judiciary was cardinal in the fight against corruption.

Shakantu (2006) noted that certain forms or levels of corruption are strongly associated with particular projects, types of procurement system, degrees of inequality, method of tender or specific time periods. Shakantu (2006) further provided the following as possible solutions.

- (a) **Implementation of ethical guidelines and policies**

A survey in South Africa revealed that although the majority of organisations have their own ethical codes of conduct and their employees belonged to professional associations that promoted good ethics, implementation was often difficult.

- (b) **Adoption of the World Economic Forum Anti-Corruption principles**

In 2005, the Anti-Corruption Task Force developed anti-corruption principles to guide companies that participate in engineering and construction procurements around the world. The principles are a framework for good business practices and risk management strategies for countering bribery, improving business standards of integrity, transparency and accountability and elimination of corruption in general.

- (c) **Benchmarking of best practice**

By promotion of benchmarking of best practice in the industry, it is hoped that improved industry and client performance with appropriate human resources development would help to reduce corruption. Benchmarking sets out minimum standards that clients expect. Benchmarking is used in a number of ways which include, to:

- set and expand organisational standards useful to employees, management and board members because they help define excellence. Use the benchmarks to set standards for achieving ethics and integrity in an organisation as part of strategy and planning process. Also used to expand existing standards;
- engage employees and promote accountability for progress;
- determine and evaluate organisation progress towards short and long term programme goals;
- engage in continuous improvement of the organisation's ethics and integrity systems and processes;
- educate senior leaders and governance authorities on expectations, goals and structures for effective ethics and integrity programmes within an organisation;
- compare the organisation to others in the industry, sector or geographical area. These standards provide a common framework and vocabulary for organisations to describe their efforts in promoting an ethical workplace;
- include a focus in business decision-making that goes beyond financial cost-benefit considerations; and
- access ethical risks. These standards provide a tool to help organisations identify, describe and assess enterprise-wide reputation risk.

**(d) Adoption of performance specifications**

Performance specifications, for example, promotion of competition among service providers would assist clients to control the construction budget, actual costs incurred and change orders.

**(e) Punish offenders**

As the World Bank does, it would help if those found guilty were punished with ineligibility to compete in projects for a certain period of time.

**(f) Indictments and convictions**

Corruption is a felony and so offenders should be indicted and those found guilty should be convicted.

Zhou (2006) stated that the Chinese government has established a number of anti-corruption legislations. The government's commitment also includes effectively promoting the capability of supervisory department officials who are responsible for supervision of the construction industry according to the laws on supervision, construction and tendering. In Zambia, the Anti Corruption Commission (Act No. 42 of 1996) is the Agency that is mandated to spearhead the fight against corruption in Zambia. The Commission, other than convicting people found guilty of corruption is also mandated to confiscate and forfeit proceeds from corruption to the state. In 2008, a High court Judge upheld the conviction to five years imprisonment with hard labour of a former Permanent Secretary in the Ministry of Health in Zambia. The judge also upheld the seizure of assets of the former Permanent Secretary.

In 2009 the ACC investigated a number of cases. Arrests were affected and cases brought before the courts of law where sufficient evidence was established. Between 60 and 70 per cent of reported complaints were against government officials, while about 20 per cent were against officials in the private sector. These were from all sectors of the economy, including construction.

In the United States, CIECI (2008) reports that the Construction Industry Ethics and Compliance Initiative, a non-profit association was formed in 2008. The purpose of forming this association was to promote integrity and ethical conduct in the construction industry. The association is voluntary and is aimed at advancement of organisational culture that encourages and support ethical behaviour and compliance. The association promotes adherence of companies to Codes of Ethics, training in ethics and attainment of best practice in the construction industry.

Transparent International (2006) advocated for the following instruments in fighting corruption in the pharmaceutical industry and these could be well adapted for the construction industry:

- transparency;
- Code of Ethics;

- civil society participation and oversight;
- whistleblower protection;
- reducing incentives for corruption;
- conflict of interest rules;
- integrity pacts and debarment and rigorous prosecution.

Transparency International (2006) further suggested the following as a way of curbing corruption in the building construction: contracting opportunities to be widely publicised; award to be made to those who meet the contractual requirement and make best offers; the rules should be clear and fair; the process should be transparent with predictable results; and public officials should be accountable.

Zhou (2006) also stated that the measures to combat corruption and other unethical practices in construction can be divided into three groups.

(a) **Law and regulation enforcement issues**

Developing regulations and laws such as the ACC Act of 1996, to punish parties where corruption is identified may deter would be offenders. There is also a requirement to take preventive measures as a first line of defence.

(b) **Work process issues**

Strengthening the management and supervision of the tendering process and making the process more transparent by requiring all projects to go through the tendering process and have a strict control over project variations. Zhou (2006) advised clients to make payments strictly according to the contract and proportion of the work done.

(c) **People related issues**

Supervision of officials involved in the project procurement to ensure work is done in accordance to the laws and regulations. Officials involved in project procurement should also be provided with education in ethics. Osei-Tutu et al. (2010) advocated for periodic loyalty

testing of employees combined with demonstrative disclosure and punishment of perpetrators.

Zhou (2006) observed that anti-corruption laws and regulations may not be adequate to fight corruption. They advised that the following need to be attended to:

- corruption is from those in power and authority. Therefore, the main task for uprooting corruption is to eliminate the unnecessary power and authorities, optimise the administration, approval process and let the market make adjustments;
- try to establish and prevent corruption through a complete supervising system; and
- establish a complete and detailed procedure to allow the supervising officials work proactively, positively, continually and independently, and to avoid administrative interference and at the same time protect the innocent public.

Zhou also recommended the need to strengthen the tracking, examining and dealing with problems in the construction sector in time.

There are many efforts made to increase ethical standards and integrity among professionals in the construction industry world-wide. According to Pearl et al. (2005), the regulatory professional acts relating to the built environment professional sector in South Africa were totally overhauled in the 1990s and a new suite of professional acts were promulgated in 2000 to enhance professionalism. In America, the Construction Management Association of America had updated its Code of Ethics to include a wider range of professional services among construction players (CMAA, 2006).

### **2.17 Strategies for prevention of unethical issues in the construction industry**

As stated above, corruption is the major ethical issue in the construction industry. To prevent corruption, Zhou (2006) identified three strategies. They are (a) development of honest and ethical construction culture, (b) institution of random and regular checks, and (c) supervision of processes and work over project life cycle.

(a) **Development of honest and ethical construction culture**

Regardless of regulations and laws, people are the key to make sure the construction operation is honest, ethical, healthy and clean. Organisations may inculcate the statements, visions, customs, slogans, values, role models and such social rituals to set the moral tone to resist corrupt practice.

(b) **Institution of regular and random checks**

It is important to review the conduct of the officials involved in the construction industry through regular and random checks. Regular checks include detailed review of the entire procurement process on selected projects. Where corrupt conduct or maladministration by individuals is identified, all projects with which that particular official has been associated with should be targeted for detailed review in order to identify the extent of the official's corrupt conduct. In order to carry out regular and random checks effectively a checklist should be developed.

(c) **Supervision of process and work during the project life cycle**

The supervisory officials have a role and responsibility in respect to the conduct of public officials involved in the construction industry. It is not sufficient to rely on reports and documents prepared. Identification and recognising areas in the construction processes where corruption has potential to occur is cardinal.

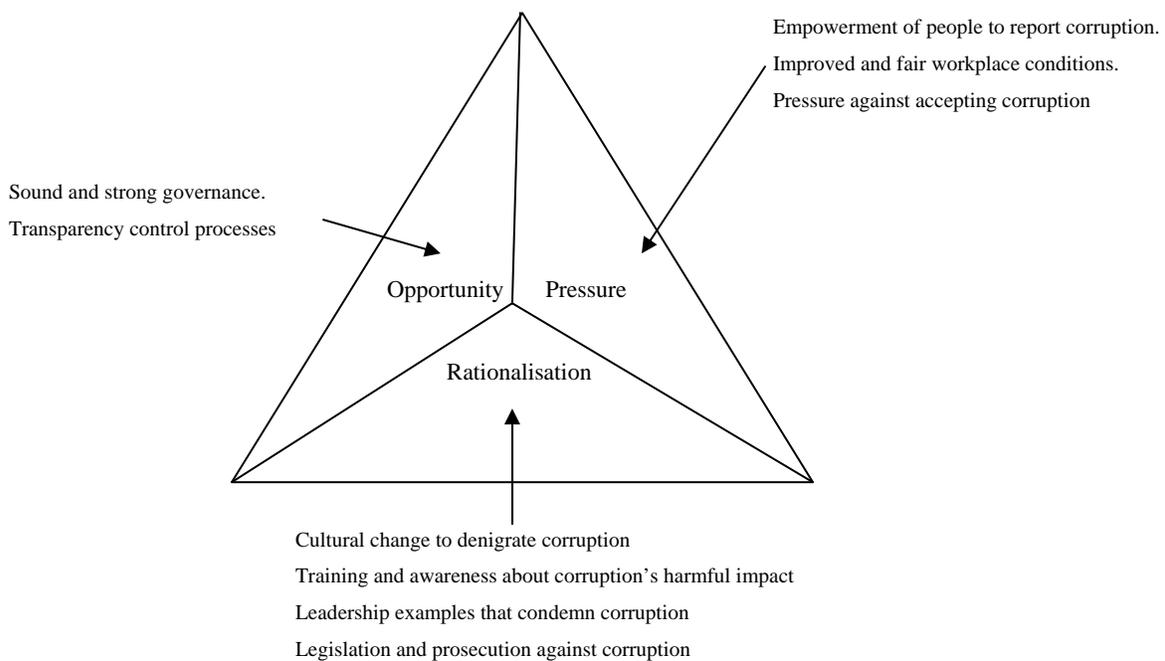
The strategy of corruption prevention should be comprehensive, consisting of precaution, relief and warning and combine sanctions and education, together with a constant reminder to officials of their duties and reputations and the penalties for breaches of the laws and reputations, (Zhou, 2006).

Shakantu and Chiocha (2009) on the other hand proposed the following as preventive measures:

- contracting opportunities should be widely publicised;
- awards should be made to those who meet the contractual requirement and make best offers;

- the rules should be clear, unambiguous and fair;
- the process of procurement of works should be transparent with predictable results; and
- public officials should be accountable for the procurement process.

Cressey (1971) proposed a model, depicted in Figure 2.12, for the prevention of corruption and other unethical practices.



**Figure 2:12.** Prevention of corruption  
(After Cassey, 1971)

### 2.18 Government intervention in Zambia

Governments world over play a pivotal role in combating corruption. As stated by the World Bank (2003), corruption and other unethical practice could result in economic stagnation. Various pieces of legislations have been enacted to ensure transparency and accountability in the procurement processes and in combating unethical practices.

In Zambia, government legislated the established the Anti-Corruption Commission through an Act of Parliament No. 42 of 1996. The Anti-Corruption Commission is the main body tasked to combat corruption in Zambia. It is mandated to perform the following functions:-

- prevent and take necessary and effective measures for the prevention of corruption in public and private bodies;
- receive and investigate complaints of alleged or suspected corrupt practices, and subject to the directions of the Director of Public Prosecutions, prosecute those suspected of involvement in corruption;
- investigate any conduct of any public officer which in the opinion of the Commission may be connected with or conducive to corrupt practices; and
- disseminate information on the socio-economic effects of corrupt practices and enlist and foster public support against corrupt practices.

In order to effectively and efficiently perform these functions, the Commission has established five main departments namely: Investigations; Legal and Prosecutions; Corruption Prevention; Community Education, and; Finance and Administration. There is however no unit specifically looking at the construction sector. The ACC has also been spearheading the creation of integrity committees in public organisations. These help to put in place methods of detecting and deterring corruption in these organisations. Integrity Committees have been established, for example, at RDA, ZRA and ZPPA.

To consolidate the efforts of the Anti-Corruption Commission, government enacted the Public Interest Disclosure, Protection of Whistleblowers Bill of 2010. The objectives of the Bill are to: to provide for the disclosure of conduct adverse to the public interest in the public and private sectors; to provide for a framework within which public interest disclosure shall be independently and rigorously dealt with; to provide for procedures in terms of which employees in both private and public sectors may disclose information regarding unlawful or irregular conduct by their employers or other employees; safeguard the rights, including employment rights of persons who make public interest disclosures; and provide a framework within which persons who make public interest disclosure shall be protected.

The government also established the Public Procurement Authority Act of 2008 to ensure transparency and accountability in public procurement; and regulate and control practices relating to public procurement in order to promote the integrity of fairness and public confidence in, the procurement processes. The functions of the ZPPA are to:

- regulate the procurement of goods, works and services by procuring entities and ensure transparency and accountability in public procurement;
- monitor compliance with the Public Procurement Act and the procurement performance of the procuring entities and make recommendations to the government on the performance and functioning of the public procurement system;
- issue standard bidding documents and other standard procurement documents for use by procuring entities;
- advise the government and procuring entities on procurement policy and other matters relating to public procurement;
- consider applications for deviations to public procurement processes, methods and rules and for the accreditation of alternative procurement systems;
- commission and undertake investigations in public procurement matters and institute procurement audits;
- promote economy, efficiency and maximum competition to ensure value for money in the use of public funds;
- promote private sector participation through fair non-discriminatory treatment of bidders;
- formulate preference and reservation schemes to promote the economic development of citizen bidder and suppliers in collaboration with appropriate government institutions;
- maintain a register of bidders and suppliers who are suspended or debarred from participating in public procurement;
- coordinate and promote capacity building and professional development in the public procurement system;
- monitor the execution of contracts entered into by procuring entities; and
- organise and maintain systems for the management of procurement data, statistics and information and for the publication of data on public procurement opportunities, contract awards and other information of public interests.

In addition the Authority may:

- access information, documents, records and reports of a procuring entity in respect of any public procurement process;

- access, at any reasonable time, the premises of any procuring entity whose procurement is being monitored and request for any relevant information from any person responsible for the financial administration of the procuring entity; and
- suspend or debar any bidder or supplier from participating in public procurement in accordance with the provisions of the Public Procurement Act.

To regulate contractors, government created the National Council for Construction (NCC) through an Act of Parliament, the *NCC Act No. 13 of 2003*. The aim of the NCC is to promote and build the capacity of the *Zambian construction industry*.

The Penal Code Act, CAP 87 is the principal legislation prescribing crimes and their penalties criminalising certain practices relating to procurement of infrastructure. This Act contains a number of provisions dealing with corruption, abuse of office and exercise of public authority.

The Competition and Fair Trading Act, CAP 417 of the Laws of Zambia was enacted to encourage competition in the economy in Zambia by prohibiting anti-competitive trade practices; regulate monopolies and concentrations of economic power; protect consumer welfare, strengthen efficiency of production and distribution of goods and services, and expand the base of entrepreneur.

The Auditor General's office is the only supreme audit institution in Zambia. It is mandated to audit all government institutions, quasi-government organisations, statutory boards, donor funded agencies and any other entity in which public resources have been invested. The Office is a public institution whose role is to scrutinise the public sector to see to it that there has not been any wastage of taxpayers' money and that government deliver services in an equitable, efficient and effective manner for the benefit of all the citizenry. The office is responsible for carrying out a number of audits among them financial audits of the government's financial statements; public accounts; perform special examinations and annual financial audits of public corporations; and perform special audits and reports.

Other agencies established by government include:

- the Commission of Investigations focuses on abuse of office, unnecessary delays, erroneous decisions, misapplication and misinterpretation of laws and regulations; and
- the Director of Public Prosecutions' office which undertakes criminal proceedings from investigations initiated by the police and other investigate agencies.

### **2.19 Codes of Ethics**

Sinha et al. (2004) observed that engineering is an important and learned profession. As members of this profession, engineers are expected to exhibit the highest standards of honesty and integrity. Engineering has a direct and vital impact on the quality of life for all people. Mason (2009) stated that engineers, architects, surveyors, lawyers and construction managers directing and implementing each stage of the construction process have their own ethical codes. Ethical codes are written guidelines issued by an organisation to its workers and management, to help them conduct their actions in accordance with its primary values and ethical standards. Professional codes of practice are contracts entered into by members of the professional institution, which form legally enforceable requirements for the behaviour of members (Liu et al., 2004). These codes consist of simple rules intended to give guidance in the solution of ethical questions which must be answered from day to day by the members (Alger et al., 1965). It is these rules and their applications that define scope of professional engineering ethics. However, such codes do not teach morality, ethics or values, they just lay down rules for conduct. Shakantu (2006) supported this by stating that codes are not seen as an essential means of guaranteeing ethical standards and values. For some people, personal values are rated so high that a compromise is out of question or at least highly offending.

Doran (2004) indicated that associations of engineers, architects and surveyors should take a lead in crafting and enforcing codes of conduct. Many American engineering professional societies for example have prepared Codes of Ethics; some go back to the early decades of the twentieth century. These have been incorporated to a greater or lesser degree into the regulatory laws of various countries. The Institution of Civil Engineers (ICE) in the UK has a Code of Ethics incorporated into its standards of conduct. The Canadian societies of professional engineers likewise have such codes of conduct. In Pakistan, the code of conduct is called the Pakistan Engineering Council Code of Conduct. These Codes of Ethics share

many similarities. Engineering, however, does not have a single uniform system or standard of ethical conduct across the entire professional fields.

The Construction Industry Development Board (CIDB) of Malaysia issued a Code of Ethics on 1<sup>st</sup> March, 2008. The objective was to instil a culture of ethics in the construction industry especially for contractors who were the implementers in the industry. It consists of six principles:

- honesty in carrying out responsibilities;
- compliance with the laws and regulations;
- respect to individuals and community;
- importance of quality, skills and standards;
- importance of safety and health; and
- importance of environmental preservation.

On the other hand, the American Sub-contractors Association (ASA) produced a model Code of Ethics for its members. The acceptable values and behaviours were:

- competing fairly for contracts;
- adhering to accepted standards of practice;
- avoiding conflict of interest;
- assuring the safety of employees and others on the job site and the general public;
- interacting with suppliers in an equitable manner and using honesty and integrity in dealing with customers;
- complying with the laws;
- making truthful public statements and disclosures;
- complying with other laws and industry standards; and
- upholding the image and standards of the construction industry.

Bowen et al. (2007) stated that the conduct and practices of professionals engaged in the South African construction industry are largely governed by guidelines provided by respective professional bodies and the South African Council for the Built Environment.

In Zambia, the Engineering Institution of Zambia, in 2010, produced the guidelines for engineers. The guidelines are meant to guide engineers in Zambia in the matter of safety, health and welfare of employees and public; design and construction of safe infrastructure; promoting professional ethics; avoiding conflict of interest; avoiding corruption and other related unethical practices; conduct of engineers as professionals; avoiding unfair competition; and development of engineering as a professional career.

The engineering construction industry in Zambia, however, does not have a single uniform system or standard of ethical conduct across all professional fields. For example, architects, engineers and quantity surveyors have their own codes of conduct. In South Africa, the basic principles of ethical behaviour are reflected in the code of conduct for persons in positions of responsibility (South Africa, 2005). Bowen et al. (2007) stated that this is a voluntary code of behaviour that encourages persons in positions of responsibility to act with integrity, promote democracy and justice, to be incorruptible, to act impartially, with transparency and accountable. However given the pace of change in the construction industry coupled with greater demands for professional responsibility from clients, more stringent ethical challenges are placed on the parties involved.

In a study conducted by Ehsan et al. (2009) in Pakistan, it was observed that although all engineers, constructors and consultants were members of the Engineering Profession body, the Pakistan Engineering Council, 65 per cent of the respondents did not know about the existence of the Code of Ethics and conduct. Out of those who knew about the Code of Ethics, 50 per cent had never read these Codes.

Codes of Ethics alone are insufficient to ensure ethical conduct. They need to be complemented with assignment of functional responsibility, such as an ethics officer, and employer training (Vee and Skitmore, 2003). Codes of Ethics have been criticised by Collier (2003) who stated that findings in many surveys tend to support the assertion that professional and organisational codes are toothless tigers, even risible, without the active adoption by individual members.

### **2.19.1 Training in Codes of Ethics**

Doran (2004) stated that to help ensure ethical conduct throughout the industry, there should be more ethics training available. However, before training is implemented, Doran (2004) suggested that associations or companies must adopt the Code of Ethics. When this happens, training will be more goal-oriented and become part of the overall corporate strategy.

Sinha et al. (2004) stated that training for engineering and construction students in ethics must be able to satisfy the ability to:

- offer and defend a definition of engineering ethics;
- recall the essential elements of a professional engineering code of conduct;
- explain multiple reasons for being ethical in the practice of engineering;
- identify and critically analyse common ethical dilemmas and consequences in the practice of engineering;
- analyse ethical arguments to discover which one has the best reasons to believe and act upon;
- recognise actions that expose oneself to legal liability;
- use risk assessment techniques in decision making; and
- recognise the regional and global consequences of engineering decisions.

A word of caution is that just sending people out to get training in ethics will not improve the industry's ethical profile. Ehsan et al. (2009) had also observed that ethics as a subject is not taught in elementary, undergraduate or graduate studies in many institutions in spite of the importance of the subject for the engineering profession.

### **2.20 Corporate Governance issues in construction**

The construction industry in Zambia comprises of a group of heterogeneous and fragmented firms. No other industry has similar characteristics. Typically, a large construction company may be engaged in activities ranging from general building, road construction and property development, in some cases. Ameh and Odusami (2010) reported that the following characteristics distinguish the construction industry from other industries:

- (a) *the industry is project based.* Firms undertake a range of discrete projects characterised by relatively long duration and difficult ground conditions. Construction work are carried out in the open and subject to interference from the weather, the plan of work on each construction site varies and changes from day to day and sites are often situated many miles from the head office or regional centre of organisation;
- (b) *labour force in the industry is considered nomadic in nature.* Operatives who are predominantly young male and employed on casual basis do not only move from site to site but from one employer to the other. Construction also involves high level of specialist work and several professionals could be involved in a single construction project;
- (c) *the separation of design functions from production.* Traditionally, design is carried out by the design team of architects and engineers while the production is carried out by a separate team, comprising of builders or construction managers and the quantity surveyors who carry out the cost management; and
- (d) *ease of entry to the industry.* While the professionals involved in design and production have an effective form of registration and control over members, there are few constraints to setting up a building contracting business. The system of paying mobilisation fees, interim payments during construction phase, coupled with extensive credit concessions for material purchasing and plant hiring has encouraged an influx of entrepreneurs. Sadly, this has resulted in many unethical practices leading to shoddy jobs, structural failures and project abandonment among others.

As a way of promoting good governance, the construction industry is segmented into three groups, namely, the client, the consultants and the contractor. The clients, who may also be a project promoters, provide the funding and an in-house project team. The consultants, usually a team comprising architects, engineers and quantity surveyors, are involved from inception. They design the infrastructure, prepare the bills of quantities and cost estimates and assist the client in tendering for works. They may also be engaged in supervision of the project during construction. The contractors together with a group of sub-contractors undertake the actual execution of the project.

Civil Societies are also involved in information dissemination on public projects. Bowen et al. (2007) stated that the role of civil society is in promoting and entrenching ethical, social and business values. In Zambia, civil societies such as the Transparent International Zambia is one such non-governmental organisation which is a leading anti-corruption crusader contributing to the development of a Zambian society based on a culture of transparency and accountability through the promotion of good governance and zero tolerance to corruption.

Therefore in the governance of a project, Shakantu (2006) stated that there is need for separation of design from construction of the project. This governance ensures accountability at each and every stage. The in-house project team at the clients' organisation provides checks and balances on the consultants. The consultants supervise the contractor and sub contractors in the construction of the project.

## **2.21 Summary**

The literature on ethical issues in the construction industry was reviewed in this chapter. It was established from literature that unethical practices are prevalent at each and every stage of the procurement of projects in the construction sector in Zambia. Some of the unethical practices reported in the Auditor General's reports in Zambia include overpayments to contractors, inadequate funding of projects, works not professionally executed and failure to complete projects on time.

Unethical practices during inception and tendering stage include uncompetitive tendering, unfair conduct, bid withdraw, bid cutting, conflict of interest, collusion, bid shopping and lack of confidentiality in the tendering process.

During supervision and construction, unethical practices observed included bribery, fraud, negligence, lack of integrity, over-billing, poor quality works, dishonesty and unfairness. At project closure, the unethical practices of compromising final accounts and covering up project failure among others were identified.

Various professions, namely engineers, quantity surveyors and architects have established their own Code of Ethics. The Engineering Institution of Zambia has developed a Code of Ethics for engineers in Zambia.

In the next chapter, literature on measuring integrity in organisations is discussed.

## **CHAPTER THREE: MEASURING OF INTEGRITY IN ORGANISATIONS**

### **3.1 Introduction**

In the previous chapter, literature on various ethical issues in the construction industry was reviewed. In this chapter literature on measuring integrity in the organisations is discussed.

Dubinsky and Richter (2009) defined ethics and integrity as a commitment to moral thought and actions in all aspects of how an organisation is governed and run. It is the moral choices that individuals and organisations alike may make. A focus on ethics and integrity supports organisations and its employees when operating in an area where the law is not clear. Barnard et al. (2008) stated that integrity as a psychological construct impacting on workplace behaviour is receiving considerable attention in various industrial and organisational domains such as in leadership, organisational dynamics, employee wellness and selection. Barnard et al. (2008) further stated that integrity had been found to be the central trait of effective leaders and a principal determinant of trust in organisations. This was considered an essential component of productive work relationships and wellness.

Barnard et al. (2008) observed that strong correlations between integrity and consciousness had been observed. Integrity had further been linked to positive personality constructs such as courage, care, authenticity and honesty. Integrity, has therefore, been defined as the ability to judge and evaluate oneself against universal values and principles such as respect and empathy and an internal locus of control. Self reflection is therefore a natural consequence of having integrity and ensures the alignment of one's behaviour with standards within the moral compass. Fewings (2009) also stated that ethical and moral outcomes emerge from personal values and experience of the decision makers and their integrity, transparency, fairness and their ability to work with others.

It is very important to detect unethical conduct within an organisation. Kaptein and Avelino (2005) stated that the board and management of a company are often in the dark about the scale of misconduct in their organisations until it is too late. Usually there are signs within an organisation or people within the organisation would have tried to bring

the unethical issues to the attention of management. But management often fails to pay attention or recognise the warning signals. Management therefore need to come up with measures to detect unethical dealings within a company.

Transparency International (2008a) observed that in order to deal effectively with corruption and other unethical situations, companies must have reporting and advisory system in place. Individuals and companies must be aware of the legal and corporate framework in which they are operating.

Kaptein and Avelino (2005) stated that it is advisable to measure corporate integrity not only at corporate level, but also at departmental and section levels so that it can form a part of the regular planning and control cycle of each unit within the corporation. The framework for measuring integrity should provide construction executives with the means for measuring the extent to which ethical issues take place in their corporate establishments. Kululanga (1999) stated that the framework formulated needs to be tested for functionality, usability and usefulness.

### **3.2 Auditing ethical processes**

An audit is a comprehensive, systematic and regular review of an organisation's activities and results compared against excellent business practices (Kululanga, 1999). The process allows an enterprise to discern clearly its strengths and weaknesses, which culminates in planned interventions in order to address effectively the challenges of the evolving business environment. The process also offers an organisation an opportunity of readiness for change. Egan (1998) advocated for the development of management measuring instruments that should help assessment of construction organisation's capability as one of the means towards modernising business processes of companies in the construction sector. Kululanga (1999) noted that such auditing can best be developed by understanding the characteristics of audits and the gap analysis. The characteristic of audit can be undertaken through an assessment conducted through the process and performance audits. A process audit focuses on such questions as whether the individual processes necessary for addressing improvement are in place and the degree to which the best practice is implemented and achieved effectively. Gap

analysis on the other hand is associated with benchmarking as a tool for learning modern management thinking. It represents the difference between the actual practice of an enterprise and the ideal practices or best practices in the business community. The gap is evaluated by use of scores that represent practices of organisations in addressing their improvement. The gap analysis provides a basis for examining in more depth about those areas that are not being given due attention.

### **3.3 Methods of measuring integrity in organisations**

Various methods are used in measuring integrity in organisations.

#### **3.3.1 Codes of conduct and compliance programmes**

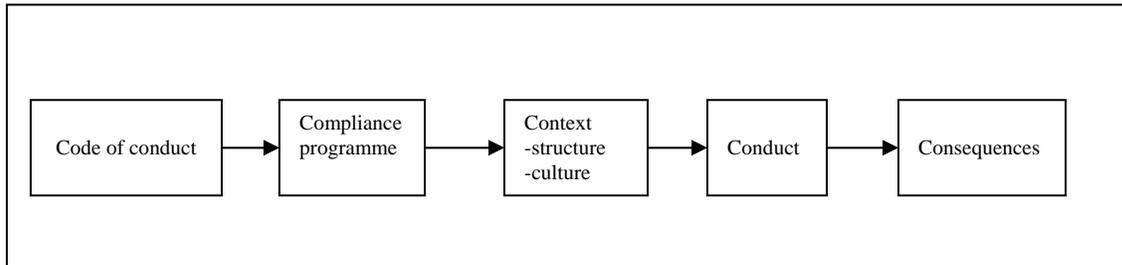
Kaptein and Avelino (2005) stated that the first step for companies in developing their integrity is to introduce a code of conduct. This is a document that articulates company's business values, principles and standards. Codes of conduct are becoming increasingly prevalent globally. Adopting a code of conduct is generally the starting point followed by an ethics compliance programme that includes board and management oversight, employee communication and training, auditing and monitoring plans, hotlines, and disciplinary and enforcement mechanisms.

London et al. (2006) reported on levels of ethical behaviour in construction procurement process with key emphasis on the role of the construction client in the formulation of good ethical practices in the industry. The main finding was concern for ethical culture of the industry particularly in relation to the impact on subcontractors and client or government behaviour and practice. The report concluded that given the disparate nature of the construction industry, it makes it difficult to monitor behaviour on an individual level and that codes of practice seem the best way to bring about a change in practice.

Kaptein and Avelino (2005) provided Figure 3.1 for assessment perspectives ranging from code of conduct to consequences. Some elements of corporate integrity include:

- the existence of codes of conduct;
- the quality of compliance programmes;

- the ways these codes and programmes are imbedded in and supported by the corporate structure and culture;
- the frequency of unethical conduct; and
- the potential and impact of unethical conduct on the company and its stakeholders.



**Figure 3.1:** Assessment perspectives ranging from code to consequences  
(After Kaptein and Avelino, 2005)

Transparency International (2008a) observed that new officers employed in an organisation should ensure that they have been informed and trained in codes of conduct.

Kaptein and Avelino (2005) however noted that distributing a code of conduct, rolling out a compliance programme and waiting for the hotline to ring are a recipe for false comfort. The Code of Ethics needs to have a monitoring compliance programme. Different methods to assess the integrity of an organisation include interviews, group sessions, surveys, desk research, information systems and fact finding.

Kaplan (2011) noted that the positive aspects of having a compliance programme in place were that:

- it was effective in helping companies detect wrongdoing early;
- employees are more likely to report wrongdoing within the company;
- whistle blowers could report internally and the company could deal with the unethical report internally;
- it would demonstrate to the government and clients that the company is responsible and trustworthy; and
- in some countries, punishment due do unethical misconduct may be less severe for companies with a compliance programme.

### **3.3.2 Prevalence of unethical conduct**

It is very important for management of an organisation to be aware of the misconduct that occurs in their organisation. Kaptein and Avelino (2005) stated that some misconduct is typically observable across all job functions. Others are job specific by nature. Given a likely prevalence of misconduct, management should be suspicious if there are no reported incidents within their organisation.

### **3.3.3 Consequences of unethical misconduct**

Kaptein and Avelino (2005) stated that too often, a disproportional amount of attention is paid to relatively immaterial issues while too little attention is paid to the significant ones. It is important to remember that one scandal in an organisation can have a higher impact than a hundred cases of petty theft. Given the likely prevalence of misconduct, management should be suspicious if there are no reported incidents within their organisation. They further stated that their survey showed that ethical business enhances the ability of organisations to attract and retain good employees and customers.

### **3.3.4 Organisational context**

It is desirable for organisations to have insights not only into the scope of the unethical conduct and its impact, but also its causes. Kaptein and Avelino (2005) stated that the causes of unethical employee conduct may be found in both the culture of the organisation and the structure of the organisation. Understanding the organisation's culture and structure form important points of departure for improving the ethical quality of management and employee conduct.

Companies need to examine the quality of ethical messages being passed on to the employees. For example, is there clarity on how employees should conduct business in a responsible way? Do employees have enough support in doing business in a responsible manner? Are employees committed to acting responsibly? Can ethical dilemmas be discussed openly within the company? Will unethical behaviour become visible? Is there ethical climate in which offenders are called to account? And how does the organisation deal with employees who raise suspicions of misconduct?

### **3.3.5 Benchmarking ethical conduct**

It is important to benchmark the efforts to combat ethical misconduct. An integrity review casts its shadow ahead and promotes the effectiveness of other ethics activities. It is said that “what you inspect, is what you get”. Kaptein and Avelino (2005) stated that it is important for an organisation to undertake organisational integrity review for the following reasons.

- (a) *signal effect*. By involving employees, the organisation not only shows that ethics receives management attention, but also that staff opinions count.
- (b) *awareness raising in the mind of employees*. By contemplating the extent to which the organisation lives up, employees increase their awareness of the ethics of their own conduct and that of their work environment.
- (c) *momentum creation*. A review conducted among employees fosters support for tackling ethical issues.
- (d) *irreversible*. Involving employees raises expectations of eminent improvement in the ethics of the organisation.
- (e) *value information*. Consulting employees ensures that their perceptions are their reality and therefore affect their behaviour. Furthermore, employees are often more successful than their managers at detecting misconduct.

### **3.3.6 Legal framework**

Transparency International (2008a) noted that it is important to establish a legal framework to deal with corruption and unethical matters. These include:

- how reports of unethical matters are reported;
- protection of self-incrimination and whistle blowers;
- how a report of corruption and other unethical practices may be made to the criminal authorities; and
- how a report on corruption and unethical practices should be made so as to avoid any risk of liability for defamation for the person making the report.

### **3.3.7 Employing a questionnaire to measure manager and employee perceptions**

It can be asserted that the levels of employee awareness of misconduct in an organisation give cause for serious concern. Organisations thus clearly face the risk of unethical behaviour

undermining their performance. To curb unethical behaviour, it is essential that companies have a clear idea of the effectiveness of current efforts aimed at preventing unethical conduct. This would stimulate ethical behaviour. Kaptein and Avelino (2005) stated that management needs to conduct ethics and compliance audits in order to establish to what extent their picture of the organisation is a true reflection of the state of affairs. In order to implement an effective ethics or compliance programme and to take adequate measures to prevent misconduct, it is important that managers have insight into the nature, scope and seriousness of existing problems. Examining the causes of and interdependencies between different forms of ethical conduct enables management to put measures in place to avoid similar unethical conduct in the future.

### **3.3.8 Use of a questionnaire in determining ethical conduct**

A questionnaire is a useful tool for measuring employee perceptions on unethical conduct. Kaptein and Avelino (2005) stated that advantages of using a questionnaire include:

- *its is efficient.* A questionnaire is a cost effective and quick method of collecting information and well suited to extracting information from larger groups of people;
- *confidentiality.* Employees will provide reliable information only if they are confident that the information they divulge will not later be used against them. A questionnaire can guarantee anonymity; and
- *comparability.* Quantitative data generated by a questionnaire can easily be compared with data from best practice.

The results of an integrity assessment can be used in the planning and control cycle of the company, as basis for evaluating the performance of the company.

However, there are pitfalls to a questionnaire survey. If respondents fear their anonymity might be compromised, they will give socially desirable answers or might not fill out the questionnaire at all. Kaptein and Avelino (2005) stated that to minimise these risks, an ethics survey has to be presented and employed as a tool for looking forward instead of simply identifying offenders and taking reactive or repressive measures. Respondents should

perceive the survey as a non-threatening, common responsibility to enhance the integrity of the organisation and as a means to tattle on colleagues or management.

Dubinsky and Richter (2009) also presented a set of universal standards that describe what it takes for an ethics and compliance program to be effective and successful. They devised a benchmarking tool designed for self-assessment protocol, permits organisations to review and evaluate what they are doing in terms of ethics and integrity. These included: vision and goals; leadership; infrastructure; legal compliance, policies, and rules; organisational culture; disciplinary and reward measures; whistle blowing; measurement, research, and assessment; confidential advice and support; training; communications and corporate social responsibility.

Dubinsky and Richter (2009) advised that organisations must use benchmarks in a number of ways which include:

- to set and expand organisational standards. Standards are useful to employees, managers, executives, and board members because they help define excellence. The benchmarks may be used to set standards for achieving ethics and integrity in the organisation as part of a strategy and planning process. They can also be used to help expand existing standards;
- to engage employees and promote accountability for progress;
- to determine and evaluate organisational progress towards short-term and long-term program goals. The use of organisation's benchmark scores to determine which of the categories are most important or strategic, and then set goals for achieving some of the benchmarks and work toward increasing the percentage or score;
- to engage in continuous improvement of your organisation's ethics and integrity systems and processes;
- to educate senior leaders and governance authorities on expectations, goals, and structures for effective ethics and integrity programs within an organisation;
- to compare the organisation to others in the same industry, sector, or geographical area. These standards provide a common framework and vocabulary for organisations to describe their efforts in promoting an ethical workplace;

- to include a focus in business decision-making that goes beyond financial cost-benefit considerations; and
- to assess ethical risk. These standards provide a tool to help organisations identify, describe and assess enterprise-wide reputation risks.

Camerer (2001) stated that an expert panel on ethical behaviour in South Africa found out that practices effective in combating unethical conduct included: greater transparency in government tender processes; provision of training and education in ethics in schools; legal protection of ‘whistle-blowers’; prosecution of high profile corrupt individuals; greater financial controls and internal audits of government spending; national corruption hotlines; and vigorous news media investigation of corruption.

### **3.4 Frameworks in prevention of unethical practices**

Very few frameworks have been formulated to address various unethical practices in the organisations. Most of the frameworks have been formulated to combat corruption.

#### **3.4.1 Principles for corruption prevention in the United Kingdom**

The United Kingdom (UK) anti-corruption forum, a working group formed to combat corruption proposed a best practice framework of principles to prevent corruption. It is depicted in Table 3.1.

**Table 3.1: Principles for corruption prevention in the United Kingdom**

Principles	Procedures
<p><b>1. Risk Assessment</b></p> <p>The commercial organisation regularly and comprehensively assesses the nature and extent of the bribery risks to which it is exposed</p>	<p>The organisation should implement procedures to identify, assess and manage bribery risks, including:</p> <ul style="list-style-type: none"> <li>• enterprise-wide risks</li> <li>• sector and market risks</li> <li>• country risks</li> <li>• project or transaction-specific risks</li> <li>• third party risks: agents, representatives and other intermediaries, partners and others, including the supply chain</li> </ul> <p>Such procedures should (i) identify how bribery risks can occur in the different parts of its business, with particular reference to geographic risks; (ii) assess what procedures it has in place to manage such risks; (iii) identify what control enhancements are required to reduce those risks to an acceptable level; and (iv) implement those enhancements.</p>
<p><b>2. Top Level Commitment</b></p> <p>The top level management are committed to preventing bribery. They establish a culture in which bribery is never acceptable, and they take steps to ensure that everyone who works for the organisation is fully aware of this commitment and this culture.</p>	<p>The owners, Board of Directors or other equivalent most senior management should demonstrate their clear anti-bribery commitment and take accountability for the anti-corruption programme.</p> <p>Organisations above a certain size may need to designate a senior manager to oversee the development, implementation and testing of the anti-bribery programme.</p> <p>The senior manager should have the authority and resources to implement the programme, but the organisation should emphasise that compliance is a line management responsibility.</p>
<p><b>3. Clear Policies</b></p> <p>The organisation has clear anti-bribery policies that are practical, accessible and enforceable.</p>	<p>The organisation should put in place a clear anti-bribery code and, depending on its risk assessment, other policies to address high-risk areas such as:</p> <ul style="list-style-type: none"> <li>• gifts and hospitality;</li> <li>• Conflicts of interest;</li> <li>• political and charitable support; and</li> <li>• engaging agents and other high-risk third parties.</li> </ul> <p>Compliance with such code and policies should be a clear condition of the terms of employment or engagement of people who work for the organisation.</p>
<p><b>4. Communications and Training</b></p> <p>The organisation ensures that its anti-bribery culture and policies are clearly understood and embedded through communication, education and training, and that communication is two-way, so that people can seek guidance on such matters and report conduct that may be inconsistent with the culture and policies.</p>	<p>The organisation could consider the following best practice procedures for ensuring that people who work for it understand and follow the organisation’s policies and help detect non-compliance:</p> <ul style="list-style-type: none"> <li>• internal communication;</li> <li>• education and training;</li> <li>• external communication to business partners, supply chain and other stakeholders; and</li> <li>• “Whistle-blowing” channels.</li> </ul>

**Table 3.1: Principles for corruption prevention in the United Kingdom (continued)**

Principles	Procedures
<p><b>5. Procedures and Controls</b></p> <p>The organisation has procedures and controls to help prevent bribery, even by people who ignore or fail to understand the organisation's policies</p>	<p>To guard against the risk of people who work for the organisation not understanding its anti-bribery commitment and policies, the organisation could consider the following best practice procedures for helping to prevent bribery from occurring:</p> <ul style="list-style-type: none"> <li>• due diligence to assess the reputation, ethics and interests of employees and third parties; and</li> <li>• employment procedures to help ensure that the organisation hires good people, incentivises them appropriately, and enforces sanctions for inappropriate conduct.</li> </ul> <p>Financial and commercial controls and decision-making processes, to ensure that high-risk activities are approved at an independent, senior level, including:</p> <ul style="list-style-type: none"> <li>▪ delegations of authority;</li> <li>▪ separation of functions;</li> <li>▪ avoiding and managing conflicts of interest so decisions and appointments are objectively and legitimately justifiable</li> </ul> <p>Anti-bribery contract terms</p> <p>Procedures for gaining assurance that third parties can and will comply with an obligation to ensure that bribery does not take place</p>
<p><b>6. Monitoring, Enforcement and Review</b></p> <p>The organisation monitors, enforces and reviews its policies, procedures and controls to ensure they are properly embedded, implemented and effective.</p>	<p>The following procedures can help the organisation to test, enforce and continually improve its anti-bribery programme:</p> <ul style="list-style-type: none"> <li>• Keeping records;</li> <li>• Auditing and monitoring to detect breaches and weaknesses and test controls;</li> <li>• Investigation of breaches and control weaknesses and corrective or remedial action;</li> <li>• Measurement and reporting;</li> <li>• Continual improvement; and</li> <li>• Feeding lessons learned into ongoing risk assessment.</li> </ul>

### 3.4.2 United States Federal Sentencing guidelines compliance programme

Izraeli and Schwartz (2000) stated that in 1991, the United States Congress enacted the Federal Sentencing Guidelines. The aim was to create incentives for compliance to ethics programmes. The guidelines also impose sentences to offenders as deterrence; encourage development of internal mechanisms to prevent, identify and report on unethical practices in organisations and to apply just punishment.

The elements of the sentencing guidelines are: oversight by high level personnel, for example, a compliance or ethics officer; policies and procedures; training and education; lines of communication for raising concerns; enforcing standards; prompt corrective action; auditing and monitoring; and a risk-based approach, with review and continual improvement based on evolving risks and lessons learned.

### 3.5 Papers reviewed

Content analysis of articles reviewed is presented in Table 3.2 below.

**Table 3.2:** Content analysis of technical papers reviewed.

No.	Author	Year	Title of study	Purpose of study	Methodology	Findings and recommendations
1	Abdul-Rahman, H., Wang, C. and Saimon, M.A.	2011	Clients' perspectives of professional ethics for civil engineers.	To study clients' perspectives of impact of civil engineering works that codes of professional ethics have.	Structured interviews	Various unethical practices occur in the construction sector in Malaysia. All interviewees to the study had a code of ethics.
2	Abdul-Rahman, H., Wang, C. and Yap, X.W.	2010	How professional ethics impact construction quality: perception and evidence in a fast developing economy	To see for relationship between professional ethics and quality related issues in Malaysian construction sector	Questionnaire survey	Professional ethics are a pre-requisite in attaining sustainable and acceptable quality in construction.
3	Ameah, O.J. and Oduami K.T.	2010	Professionals' Ambivalence toward Ethics in the Nigerian Construction Industry	To assess perception of construction professionals regarding ethical issues in the Nigerian Construction Industry	A survey research was conducted among construction professionals in Nigerian	There was decline in incidences of unethical conduct compared to the pre 1999 era. Quantity Surveyors were perceived as most susceptible to corruption. Project financiers should ensure adequate and prompt remuneration of construction services
4	Barnard, A., Schurink, W. and De Beer, M.	2008	A conceptual framework of integrity	To explore the constructions of integrity of South African business leaders in work context.	In-depth interviews were conducted on six South African business leaders	A conceptual framework of integrity was developed
5	Bartlett, E.J., Kotrlík, W.J. and Higgins, C.C.	2001	Organisational Research: Appropriate Sample Size in Survey Research	The procedures for determining sample size for continuous and categorical variables using Cochran's (1977) formulas are determined.	Critical review, discussion and illustration of sample size formulas, including the formula for adjusting the sample size for smaller populations..	Procedures for determining the appropriate sample size for multiple regression and factor analysis, and common issues in sample size determination are examined.
6	Bryson, J.M.	1988	A strategic planning process for public and non-profit organisations	To explore the strategic planning methods	Case study	Strategic planning was important to both public and non profit organizations.

**Table 3.2:** Content analysis of technical papers reviewed (continued)

No.	Author	Year	Title of study	Purpose of study	Methodology	Findings and recommendations
7	Bommer, M., Gratto, C., Gravander, J. and Tuttle, M.	1987	A behavioural Model of ethical and Unethical Decision Making	To propose and describe a conceptual model of ethical and unethical behaviour in organisations	Desk research was conducted	A model is developed which identifies and describes various factors which affect ethical and unethical behaviour in organizations.
8	Bowen, P., Akintoye, A., Pearl, R. and Edwards, P.J.	2007	Ethical behaviour in the South African construction industry	An opinion survey of South African architects, quantity Surveyors, engineers and contractors regarding ethical behaviour within the construction industry	A survey research was conducted among construction professionals in South Africa	The range of problems encountered includes collusion, bribery, negligence, fraud, dishonesty and unfair practices. Most construction professionals believe that the industry suffers from unfair tendering practices.
9	Bowen, P., Pearl, R. and Akintoye, A.	2007	Professional ethics in the South African construction industry	An overview of business and professional ethics in the construction industry	A survey research was conducted among construction professionals in South Africa	The professionals, notwithstanding noticeable breaches, take their responsibilities and obligations seriously and regard a balance between their obligations to clients and the general public as paramount.
10	Ciulla, J.B.	2005	The state of leadership ethics and work that lies before us	An overview of ethics in leadership	Desk top research	The relationship between ethics and effectiveness is at the core of leadership ethics.
11	Doran, D.	2004	Survey of the construction industry – Ethical practices	To assess ethical practices and conduct in the construction industry in the United States of America	An online survey was conducted to gauge ethical practices and concerns in the construction industry.	Eighty Four per cent of those surveyed encountered situations that they considered unethical in their business dealings.
12	Ehsan, N. Anwar, S. and Talha, M.	2009	Professional Ethics in the construction industry of Pakistan	To study the ethical issues facing the construction industry of Pakistan.	A questionnaire survey, interviews and telephonic survey of various stakeholders in projects	All construction professionals in the construction industry in Pakistan had witnessed some degree of unethical conduct
13	Green, J. and Walker, K.	2009	A contingency model for ethical decision making by educational leaders	To explore the kinds of ethical dilemmas school administrators typically face and the process they use to justify the ethical claim for their decisions	A qualitative design based upon studies by students enrolled in doctoral level was undertaken	A contingency model for decision making was developed.
14	Jones, T.M.	1991	Ethical decision making by individuals in organisations: An Issue-contingent model	To develop a model that supplements other models	A qualitative desk top research on various literatures and models in ethical decision making	An Issue-Contingent Model of ethical decision making in organisations was developed.

**Table 3.2:** Content analysis of technical papers reviewed (continued)

No.	Author	Year	Title of study	Purpose of study	Methodology	Findings and recommendations
15	Kaptein, M. and Aveliono	2005	Measuring corporate integrity: a survey-based approach	To illustrate how management can examine corporate integrity	A questionnaire survey was undertaken	Of the respondents, seventy six per cent being aware of a violation of the law or of company standards by a colleague or manager in the past twelve months. Many organisations are also sending employees the wrong message when it comes to conducting themselves in an ethical manner.
16	Linda, C.N. and Paul F.W.	2005	Ethical issues in the construction industry	To investigate the nature of ethical problems encountered and how construction professionals respond to them.	Postal Questionnaire survey	Quality management was not up to date and there were loose links stemming from insufficient ethical education.
17	Liu, A.M.M., Fellows, R. and Ng, J.	2004	Surveyors' perspectives on ethics in organisation culture	An investigation into perceptions on ethics amongst surveyors working in Hong Kong.	The empirical work is of survey design and the data are analysed using principal component factor analysis, correlation and analysis of variance.	It is postulated that individual factors pose major influences on behaviours
18	Martini, C and Hanaff, P.	2010	Model validation: theory, practice and perspectives	To summarise the development a consistent framework for measuring risk	Desk top research	Model validation spans a variety of disciplines and issues.
19	Mason, J.	2008	Promoting Ethical Improvement in the construction Industry – a single professional code	The benefit of promoting a single ethical code for the construction industry	Desk Top research	Ethical codes do not operate in a vacuum and that the promotion of a single code will only bear fruit when seen as a apart of larger raft of measures including longer term relationships and collaborative working and a higher profile for ethics in training and education.
20	Mason, J.	2009	Ethics in the construction industry: the prospects for a single professional code	To consider the potential for generating improved levels of ethical conduct within the construction industry through the introduction of a single industry-wide professional code.	A critical analysis of the Society of Construction Law's statement of ethical principles (the code) on the role of unethical conduct within the construction industry and the role of criminal sanctions can play to address the same.	A single industry-wide code has a contribution to make in improving the ethical standard of conduct within the construction industry.
21	McDevitt, R., Giapponi, C. and Tromley, C	2007	A model of Ethical decision making: the integration of process and content	To develop a model of ethical decision making that integrates the decision-making process and the content variables considered by individuals facing ethical dilemmas	Desk top research of various literature on ethical decision making	An integrated model is developed which aids in understanding the complexity of the decision process used by individuals facing ethical dilemmas.
22	Moylan, W.A.	2008	Building Ethics in Construction partnerships	To address the applicability of value-based leadership concepts to the building of ethical partnerships on construction facilities projects.	A mixed methods research approach using both a quantitative and the qualitative surveys	The construction industry must embrace values-based leadership concepts, values and skills as the foremost leadership construct in building ethical partnership among stakeholders of constructed facilities project.

**Table 3.2:** Content analysis of technical papers reviewed (continued)

No.	Author	Year	Title of study	Purpose of study	Methodology	Findings and recommendations
23	Moylan, W.A.	2008	Ethics in construction bidding: considering the “Friedman” Vs the “Freeman” views.	The potential effect of accepting lowest price bid on stakeholders, the owner/client, designer, architect, the bidding contractors and the public.	The Friedman Versus Freeman views were analysed and critically reviewed.	Methods to improve the results that reward ethical conduct in the construction industry include understanding an integrity chain as the appropriate process for improved profitability, developing courses on ethics in construction as part of education programmes and including ethical conduct as part of professional service agreements for construction management.
24	Osei-Tutu, E., Badu, E. and Owusu-Manu, D.	2010	Exploring corruption practices in public procurement of infrastructural projects in Ghana.	To explore and discuss corruption practices inherent in public procurement of infrastructural projects in Ghana.	Desktop research	Conflict of interest, bribery, embezzlement, kickbacks, tender manipulation and fraud were observed corrupt practices in the Ghanaian construction infrastructural project delivery system.
25	Oyewobi, L.O., Ganiyu, B.O., Oke, A.A., OLA- AWO, A.W., and Shittu, A.A.	2011	Determinants of unethical performance in Nigerian Construction Industry	To identify the factors contributing to unethical performance at pre-tender stage and also to identify the factors contributing to unethical performance during project execution stage.	Questionnaire survey	Ethical problems were observed in all stages of the project from pre-tender to completion.
26	Rahman,H.A., Karim, S.B.A., Danuri, M.S.M., Bewari, M.A. and Wen, Y.X.	2007	Does Professional Ethic affects construction quality	To identify the correlation between quality-related issues and professional ethics and to examine the influence of professional ethics in quality management practice	A questionnaire survey and interviews were undertaken in this study	Various forms of unethical conducts are found in the construction industry in Malaysia has a significant effect on the quality of construction
27	Shakantu, W.	2006	Corruption in the construction industry, forms, susceptibility	To show the effects of corruption on the construction process	A overview of corruption in the construction industry in South Africa	Corruption flourishes in virtually all phases of the construction process and that participants at every level in it..
28	Shakantu, W. and Chicha, C.	2009	Corruption in the construction industry: the case of Malawi	The paper reviews the issue of corruption using Malawi as a case study	A survey research method was used	There is prima facie evidence that there is corruption in Malawi. Corruption practices include bribery, fraud, collusion and negligence. Local conditions and procurement systems seem to shape the form and extent of corruption.

**Table 3.2:** Content analysis of technical papers reviewed (continued)

No.	Author	Year	Title of study	Purpose of study	Methodology	Findings and recommendations
29	Svensson, G. and Wood, G.	2003	The dynamics of business ethics: a function of time and culture – cases and models	To describe the dynamics of business ethics as a function of time and culture	Analysis of both time and culture with respect to business ethics.	Both the company's view and views of others may determine what is acceptable or unacceptable in business ethics. Further, ethics and business ethics constructs are dependent upon two principal parameters – time and culture.
30	Vee, C. and Skitmore, R.M.	2003	Professional ethics in the construction industry	A study concerning their views and experiences on a range of ethical issues in the construction industry in Australia.	A questionnaire survey was developed for seeking the views of practitioners on the main ethical issues surrounding construction activities.	All respondents had witnessed or experienced some degree of unethical conduct, in the form of unfair conduct, negligence, conflict of interest, collusive tendering, fraud, confidentiality and propriety breach, bribery and violation of environmental ethics.
31	Zou, P.X.W.	2006	Strategies for minimizing corruption in the construction industry in China	The study was aimed at providing strategies for supervisory officials to undertake systematic inspections reviews of construction projects	Observe actual tendering, focus group workshops, site visits and face to face interviews	The study revealed that corruption may occur in different forms and at any phase during the procurement of construction projects, the root causes are project participants.

### **3.6 Summary**

In this chapter, literature on measuring integrity in an organisation was reviewed. The methods of measuring integrity in organisations include use Codes of Ethics, the compliance programmes and benchmarking.

The next chapter addresses the research methodology and design undertaken to achieve the aim and objectives of this study.

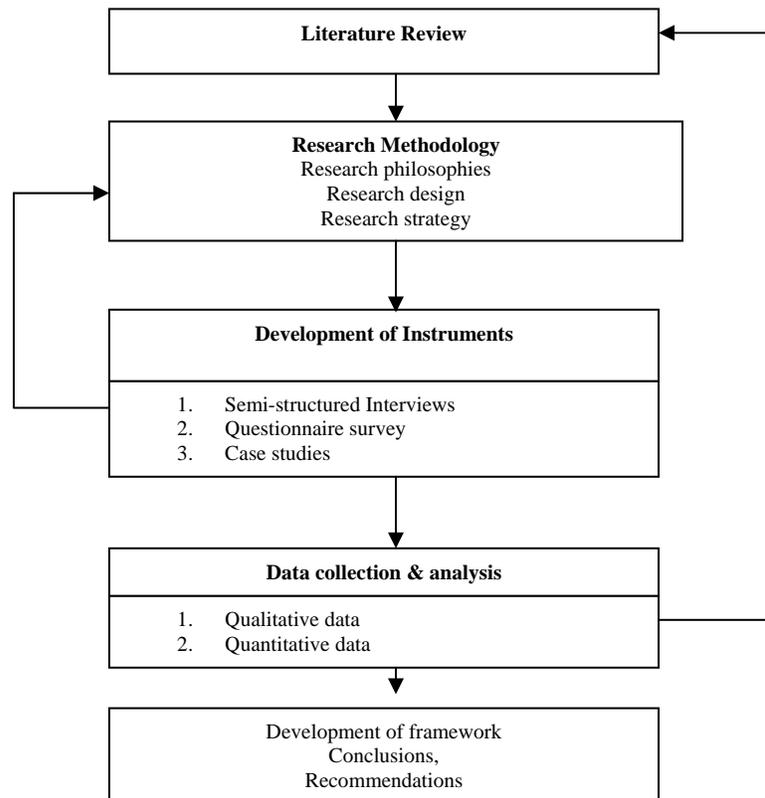
## CHAPTER FOUR: RESEARCH METHODOLOGY

### 4.1 Introduction

Literature on measuring integrity in the construction industry was reviewed in Chapters 2 and 3. In this chapter, research methods, design and strategy used in achieving the aim and objectives of this study are presented.

### 4.2 Research methodology

Bailey (1987) defined methodology as the philosophy of the research process. It includes the assumptions and values that serve as a rationale for research and the standards or criteria the researcher uses for interpreting data and reaching conclusions. The methodology in this research was designed to ensure sufficient insights into the ethical issues in the construction industry in Zambia. This study was undertaken using the framework illustrated in Figure 4.1.



**Figure 4.1:** Framework for the research process

### **4.3 Research philosophies**

Neville (2005) stated that there are two main research philosophies. These are the Positivist and the Phenomenological. He further stated that the research philosophy can impact on the methodology adopted for the research project.

#### **4.3.1 Positivist philosophy**

MANCOSA (2003) stated that positivist research is generally quantitative and involves the use of numerical measurement and statistical analyses of measurements to examine social phenomenon. In the positivist philosophy, the world is external and objective, the observer is independent. The researcher looks for causality and fundamental facts. MANCOSA further stated that the positivist paradigm tend to produce quantitative data, uses large samples, has high reliability, low validity and generalises from sample to the population. The research is deductive in nature.

Researchers critical with the positivism argue that rich insights into this complex world are lost if such complexity is reduced entirely to a series of law-like generalisations (Saunders et al., 2000). They argue that the social world is far too complex to lend itself to theorising by definite laws in the same way as the physical sciences.

#### **4.3.2 Phenomenological philosophy**

In the phenomenological philosophy on the other hand, the world is socially constructed and subjective and the main focus is on meanings. MANCOSA (2003) stated that the phenomenological philosophy tends to produce qualitative data, uses small samples, is concerned with generating theories, has low reliability, high validity and generalises from one setting to another. The research is inductive in nature. MANCOSA further stated that the advantage of this qualitative, interpretive orientation in research are that the findings often have greater validity and less artificiality as the process of observing phenomena in natural, real life settings often allows researchers to develop more accurate understanding of those phenomena.

Saunders et al. (2000) stated that research often takes the mixture of the two philosophies. Hussey and Hussey (1997) supported this by stating that the two main paradigms, positivist and phenomenological, represent two extremes of a continuum and therefore, it is possible for a researcher to use a blend of both philosophies and methodologies.

In this study, both qualitative and quantitative research was undertaken. Quantitative approach provided the numerical data on the prevalence of ethical issues in the construction industry in Zambia. Qualitative data on the other hand provided insights into the unethical practices in the construction industry in Zambia.

#### **4.4 Research design**

O'sullivan et al. (2010) defined research designs as plans that guide decisions about when and how often to collect data, what data to gather, from whom and how to analyse it. It's a plan for the study's methodology.

Herbert (1994) stated that the main criteria for research design can be summed up by two questions:

- does the research generate answers to the research question?; or
- does it adequately test the hypothesis if it is hypothesis-testing study?

Herbert (1994) further stated that the critical point to remember is that the research problem or question should determine the approach. Saunders et al. (2003) identified two approaches to research design as deductive and inductive. The deductive approach involves the development of a theory that is subjected to a rigorous test. It is the dominant research method in the natural sciences where “laws provide the basis of explanation, permit the anticipation of phenomena, predict their occurrence and therefore allow them to be controlled”. It searches to explain causal relationships between variables. Rabson (1993) lists five sequential stages through which deductive research progresses:

- deducting the hypothesis, a testable proposition about the relationship between two or more events or concepts from the theory;
- expressing the hypothesis in operational terms;

- testing this operational hypothesis. This involves an experiment or some other form of empirical enquiry;
- examining the specific outcome of the enquiry. This would either tend to confirm the theory or indicate the need for its modification; and
- if necessary, modify the theory in the light of findings. Verification of the revised theory by going back to the first step and repeating the whole cycle is then attempted.

On the other hand, research using the inductive approach is concerned with the context in which events are taking place. Potter (2006) argued induction is the process of drawing inferences from observations in order to make generalizations. Inductive methods analyse the observed phenomenon and identify the general principles, structures, or processes underlying the phenomenon being observed. It would be concerned with the context in which the events are taking place. Saunders et al. (2003) stated that researchers in this tradition are more likely to work with qualitative data and to use a variety of methods to collect these data in order to establish different views of phenomenon. Potter (2006) stated that the induction method consists of four main stages described in Table 3.1.

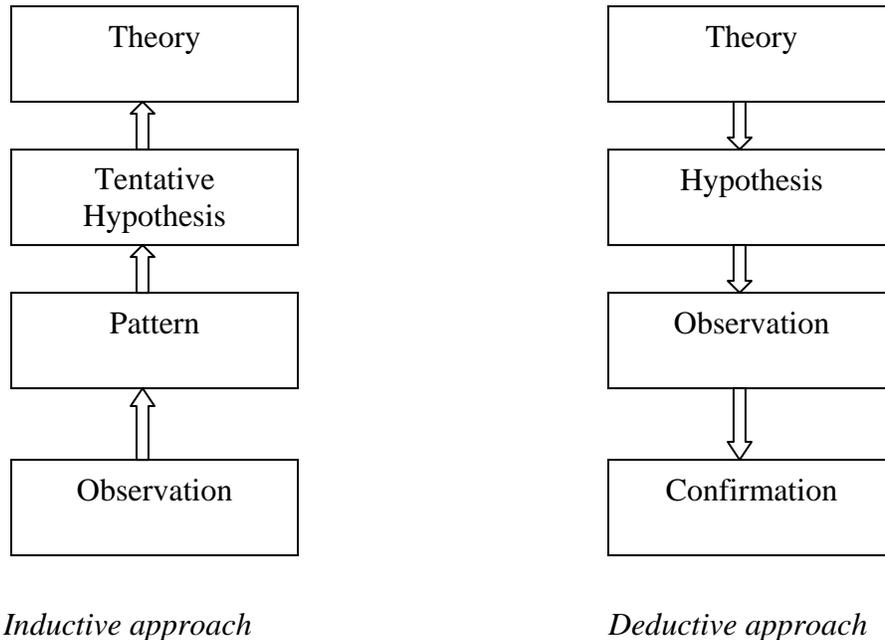
**Table 4.1:** Stages in the induction method

Stage 1	Observation	Observe and record all facts without being selective or having any pre-conceptions about their significance
Stage 2	Analysis	Analyse, compare and classify these facts to identify regularities, without reference to any hypothesis
Stage 3	Inference	From this analysis of regularity, infer generalisations about the relations between the facts, for example, the “laws of nature”.
Stage 4	Confirmation	Test these “laws of nature” through further observation of facts.

The deductive method is therefore concerned with theory-testing, while the inductive method is concerned with theory-generating. In the inductive method, theory follows data whilst in the deductive method, data follows theory. Saunders et al. (2003) postulated that followers of the inductive approach criticise the deductive approach because of its tendency to construct a rigid methodology that does not permit alternative explanations of what is going on. However, Potter (2006) argued that the theories generated in the inductive approach could

only be tested by applying the deductive method. In this study, an inductive approach was undertaken.

The processes of deductive and inductive thinking are shown in Figure 4.2.



**Figure 4.2:** Deductive and inductive thinking

## 4.5 Research strategy

Research strategy is a general plan of how a researcher goes about answering the research questions. It contains clear objectives, specific sources of data, and considers the constraints. Saunders et al. (2003) identified eight research strategies, namely: experiment, survey, case study, grounded theory, ethnography, action research, cross-sectional and longitudinal studies and exploratory, descriptive and explanatory studies.

### 4.5.1 Experiment

MANCOSA (2003) stated that experimental designs have been adapted from the physical sciences. They seek to identify causal relationships. The aim is to manipulate the independent variable in order to observe the effect on the dependent variable.

An experimental design typically involves:

- the definition of a theoretical hypothesis;
- the selection of samples of units from known populations;
- allocation of samples to different experimental conditions;
- introduction of planned change on one or more of the variables;
- measurement on a small number of the variables; and
- the control of the other variables.

This method could not be used in this study because it was not found suitable and required a controlled environment to undertake it.

#### **4.5.2 Survey**

Bailey (1987) stated that a survey consists of asking questions of a representative cross-section of the population. Surveys therefore allow the collection of large amounts of data from a sizeable population in a highly economical way. Based most often on the questionnaire, these data are standardised allowing for easy comparisons. Methods of doing a survey include the structured questionnaire and interviews. MANCOSA (2003) stated that surveys typically use questionnaires and interviews in order to determine the opinions, attitudes, preferences and perceptions of persons of interest to the researcher. MANCOSA further advised that to ensure greater reliability and validity, the researcher must also ensure that questionnaires and interviews do not reveal bias in the way the items and questions are presented. Using this method allows the researcher more control over the research process. The disadvantages of a survey are that sometimes it is time consuming and depends on the goodwill of respondents.

A questionnaire survey was used for primary data collection in this study. Structured, non structured, closed form and open-ended questions to capture as much information as possible were used.

#### **4.5.3 Case study**

O'sullivan et al. (2010) stated that case studies are investigations that examine in depth persons, decisions, programmes, or other entities that have a unique characteristic of interest.

MANCOSA (2003) stated that case studies are intensive investigation of the factors that contribute to the characteristics of the case. Case studies are the preferred research strategy if one wants to learn the details about how something happened and why it may have happened. Herbert (1994) defined a case study as a reconstruction and interpretation of a segment of a subject's life story based upon the most reliable evidence available. Rabson (1993) also defined a case study as the 'development of detailed, intensive knowledge about a single "case", or a small number of related "cases"'. This strategy is useful if the researcher wishes to gain a rich understanding of the context of the research and the process being enacted. Rabson (1993) further stated that the case study approach also has considerable ability to generate answers to the "why", "what" and "how" questions.

Herbert (1994) outlined the procedure in undertaking a case study as follows:

- state clearly the problems and issues;
- collect background information;
- put forward explanations, conjectures or hypotheses and solutions on the basis of the information available;
- search again and admit for consideration sufficient evidence to eliminate as many of the suggested explanations or hypotheses as possible, in the hope that one of them will be close to reality as to account for the evidence and be contradicted by none of it;
- enquire critically into the sources of evidence as well as the evidence itself;
- examine carefully the internal logic, coherence and external validity of the entire network of hypotheses formulated to explain predicament and proposals to solve the problems;
- select the likely interpretation, provided it is compatible with the evidence;
- work out the implications of your explanations for intervention or some other action; and
- prepare the case report as a scientific account.

MANCOSA (2003) stated that case study research include questionnaires, in-depth interviews, documentary record, direct observation, narrative or log and focus groups. This method was used in this study to verify the authenticity of information provided by respondents in a questionnaire survey.

#### **4.5.4 Grounded theory**

MANCOSA (2003) stated that grounded theory methodology has as its basic tenet the view that theory must be inductively derived from data. In grounded theory, therefore, data collection starts without the formation of an initial theoretical framework. Data collection and analysis are deliberately fused. Initial data analysis is used to shape continuing data collection. Theory is developed from data. Theory is generated by a series of observations. This method could not be used in this study because it was time consuming.

#### **4.5.5 Ethnography**

This emanates from the field of anthropology. Ethnography attempts to relate the social world the research subjects inhabit and the way in which they interpret it. This type of research is time consuming and takes place over an extended time period and therefore could not be used in this study. Saunders et al. (2000) stated that the research process needs to be flexible and responsive to change since the researcher will constantly be developing new patterns of thought about what is being observed.

#### **4.5.6 Action research**

This involves the carefully documented and monitored study of an attempt by the researcher to actively solve a problem or change a situation. MANCOSA (2003) stated that action research is a cyclic process that consists of planning, action, review of the outcomes of action and a return to planning on the basis of outcomes. At each point in this cycle, the data so far available is used to determine the next stage. Thus action research differs from other forms of research because of its explicit focus on action, in particular promoting change within an organisation. The researcher is involved in the action of change.

#### **4.5.7 Cross sectional studies**

Cross sectional studies involve investigations of a certain phenomenon across a cross section of society, for example the effect of information technology on design among engineers.

#### **4.5.8 Longitudinal studies**

Longitudinal studies are mainly used to study change and development. In longitudinal studies the basic question is ‘has there been any change over a period of time?’ O’sullivan et al. (2010) stated that longitudinal designs collect information on the same cases or comparable cases for two or more distinct time periods.

#### **4.5.9 Descriptive studies**

Saunders et al. (2003) stated that the object of descriptive studies is to portray an accurate profile of persons, events or situations. Descriptive studies are not favoured by many researchers because of their failure to draw on conclusions and recommendations. The description may be well captured, but ‘so what?’

#### **4.5.10 Exploratory studies**

MANCOSA (2003) stated that exploratory studies are primarily concerned with finding out what is happening and discovering new insights about a phenomenon. Exploratory studies are a valuable means of finding out ‘what is happening; to seek new insights; to ask questions and to assess phenomena in new light’. It is a particularly useful approach if one wished to clarify their understanding of a problem. It is likened to the activities of a traveller or explorer. Saunders et al. (2003) stated that there are three principal ways of conducting exploratory research:

- a search of the literature;
- talking to experts in the subject; and
- conducting focus group interviews.

The greatest advantage of this method is that it is flexible and adaptable to change. Thus the researchers must be willing to change their direction as a result of new data which appears and new insights which occur to them.

#### **4.5.11 Explanatory studies**

Explanatory studies are those which establish causal relationships between variables. MANCOSA (2003) stated that explanatory studies seek to explain the relationship among

variables and to identify the connectedness among the components of a phenomenon. The basic aim in these studies is to closely study a problem, collect data on the phenomenon and through an analytic and deductive process explain the relationship among variables. The emphasis here is on studying a situation or a problem in order to explain the relationships between variables. For example a study to determine rate of 'return jobs' and experience of artisans. Some form of explanatory studies is done through the use of a questionnaire.

#### **4.5.12 Time series**

O'sullivan et al. (2010) stated that time series studies collect and present data on a single unit or set of objectives. The data is collected on the same variables at frequent, closely spaced regular intervals over a relatively long period. The data can depict both short term changes and long term trends in a variable.

O'sullivan et al. (2010) further stated that time series studies were suited to:

- (a) establish a baseline data measure;
- (b) describe changes over time;
- (c) keep track of trends;
- (d) forecast future trends; and
- (e) evaluate the impact of a programme or policy.

#### **4.5.13 Interviews**

Sidhu (2009) stated that an interview is a two-way method which permits an exchange of ideas and information. It is unique in that it involves the collection of data through direct verbal interaction between the interviewee and the interviewer. The interviewer probes into causal factors, determine attitudes, discover the origin of the problem and involve the interviewee in an analysis of his or her own problems. The major weakness of the interview is that it is biased.

##### **(i) Structured interviews**

O'sullivan et al. (2010) stated that structured interviews refer to surveys in which all respondents are asked the same questions in the same order by all interviewers. The

researchers want different answers to reflect differences among subjects, not differences among interviewers. The interviewer is there to clarify any confusion the questions may pose. The disadvantages include the restriction of the interviewee.

### **(ii) Unstructured interviews**

Unstructured interviews provide the interviewer complete freedom to ask any question in the area of interest to the interviewee, allowing for questions to change during the interview depending on how the interview proceeds (Mwiya, 2009). The purpose of this tool is to:

- (a) obtain specific quantitative and qualitative information from a sample of the population;
- (b) obtain general information relevant to specific issues for example to probe for what is not known; and
- (c) gain a range of insights on specific issues.

The advantages are that the interviewee is not restricted and usually provide in-depth data gained from experience. However, comparison, quantification and analysis of the responses is very demanding.

### **(iii) Semi structured interviews**

Semi structured interviews incorporate elements of both quantifiable, fixed choice responses and the facility to explore and probe in more depth certain areas of interest (Brewerton and Millward, 2001). Whilst being easy to compare, quantify and analyse, the method also allows for in-depth exploration in the area of interest.

Semi structured interviews were used in this study. Mwiya (2009) stated that interviews in general enable the interviewer to be in control and able to assist the interviewee if there are any problems. Further, the response rate for this method is generally high.

#### **4.5.14 Multi-method approach**

Saunders et al. (2003) stated that research approaches and strategies do not exist in isolation and therefore could be mixed and matched. They identified two advantages of using the multi-method approach:

- different methods and approaches when used together provided confidence that the most important issues were being addressed; and
- it enabled triangulation to take place. Triangulation is the application of three research methodologies in the study of the same phenomenon. Each method has its unique strengths and weaknesses. For example, use of semi-structured interviews may be a valuable way of triangulating data collected by other means such as a questionnaire. MANCOSA (2003) stated that the use of triangulation enables multiple techniques to be used in a parallel sense, so that they provide overlapping information, making it possible to check results from more than one view point.

Parthe (1993) also argued that a single approach on its own may not provide in-depth understanding of a research problem. The application of multiple methods often prove powerful than a single research method.

Livesey (2007) stated that triangulation could be used for a number of purposes, namely:

- to collect different types of information such as qualitative and quantitative or primary and secondary data;
- with two or more researchers using the same method such as observation and their findings could be compared to see if they agree that they have seen the same things in the same ways; to check that data collected in one form such as through a structured interviews is reliable and valid by using another method such as questionnaire; and
- to verify that data collected is accurate.

In this study, a multi-method approach was undertaken. An interview, a questionnaire survey and case study methods were used to collect data. Data collected by use of interview and questionnaire survey was triangulated by use of case studies. This was done to authenticate the data collected during the questionnaire survey by checking baseline information available at the respondents' organisations.

## **4.6 Sampling**

O'sullivan et al. (2010) defined a sample as a subset of units from a larger set of the same units. They are the units studied and provide data for use in estimating characteristics of the larger set. A population is the total set of units in which the researcher is interested, that is, the larger set from which the sample is drawn.

### **4.6.1 Probability sampling**

O'sullivan et al. (2010) stated that with probability sample, each unit in the population has some chance of being in the sample and that chance is greater than zero and can be calculated. Probability samples permit a precise estimate of the parameters in a population.

O'sullivan et al. (2010) further identified four common probability sampling designs as; simple random sampling, systematic sampling, stratified random sampling, and cluster sampling. Simple random sampling requires that each unit of the population has a known, equal, non-zero probability of being included in the sample. The selection of each unit is independent of the selection of any other unit. Therefore, the selection of one member of the population for a sample should not increase or decrease the probability that any other member of the population will also be chosen for the sample.

Systematic sampling requires a list of the population units. To construct a systematic sample, the researcher first divides the number of sample units in the sampling frame by the number desired for the sample. The resulting number is called the skip interval. Thus if the sampling frame consists of 50,000 units and a sample of 1,000 is desired, the skip interval equals 50.

Stratified random sampling ensures that a sample adequately represents selected groups in the population. The first step is to divide or classify the population into strata, or groups, on the basis of some common characteristics such as sex, race or profession. The classification should be done so that every member of the population is found in one and only one stratum. Separate random samples are then drawn from each stratum. This method was utilised in the administration of the questionnaires. Various groups in the construction industry were clustered as consultants in engineering, quantity surveying and architecture, contractors in

grades 1-3 that have a national character, main clients, interest groups and cooperating partners.

Cluster sampling is recommended for studies involving a large geographical area. It helps to compensate for the lack of a sampling frame. Although cluster sampling reduces costs and time, it requires a larger sample than other methods for the same level of accuracy.

Muya (1999) stated that truly random processes are difficult to achieve and are subject to human errors. Furthermore, the costs and time required to conduct a probability sample are often greater than a non-probability sample.

#### **4.6.2 Non probability sampling**

O'sullivan et al. (2010) stated that non probability sample can work well for many types of studies, particularly exploratory and those used to generate hypotheses to be more fully tested by further research. Non probability sampling designs are used more widely. They are cheaper, quicker and easier to carry out than probability designs. Their major weakness is that, in using them, one cannot estimate parameters from sample statistics. If the purpose is to make accurate generalisations to a larger population, the probability sampling is necessary. Non probability sampling may include snowball, convenient, purposive and quota sampling.

Convenient sampling involves sampling of available units. These are inappropriate for generalising with any degree of certainty. They can, however, provide illustrative case material or serve as the basis for exploratory studies.

In purposive sampling, the main criterion for selection of any unit from the population using this sampling procedure is the researcher's judgment that the unit somehow represents the population. Because of this, it is also called judgmental sampling. The probability that any unit will be selected is unknown because it depends entirely on the judgment of the researcher. Often units for this type of sample are selected on the basis of known characteristics that seem to represent the population. This method was used in coming up with the sample for interviews. Information rich, senior members of the construction

profession were carefully selected to be interviewed. The participants to the interview were sampled from different strata.

Quota sampling is a technique where the researcher attempts to structure a sample that is a cross section of the population. It is less costly and easier to administer than a comparable probability sample. The researcher, therefore, attempts to select a quota of individual units with defined characteristics in the same proportion as they exist in the population.

Snowball or referral sampling is used when members of a population cannot be located easily by other methods and where the members of a population know or are aware of each other. In snowball sampling, each member of the population who is located is asked for names and address of other members.

National Audit Office (1999) summarised the sampling methods as shown in Table 4.2.

#### **4.6.3 Sample size**

Bartlett, et al. (2001) stated that one method of determining sample size is to specify margins of error for the items that are regarded as most vital to the survey. The confidence level, also known as the margin of error, measures how sure one is on a particular issue. The confidence level is the likelihood that the results obtained from the sample lie within the associated precision. The higher the confidence level, the larger the sample size required. Therefore, a 95% confidence level means that one can be 95% certain. Bartlett, et al. (2001) further stated that for categorical data, the margin of error of 0.05 (or 5%) was a norm. Saunders et al. (2003) also supported this view by stating that researchers normally worked with a 95% level of certainty. O'sullivan et al. (2010) stated that the most common level of confidence used in administrative and managerial works is 95%. O'sullivan et al. (2010) also stated that sampling error occurs because sampling has taken place, the difference between a parameter and its estimate is random and due to the probability of selecting one unit rather than another. They further stated that the formula for calculating the necessary sample size for a study uses sampling error, confidence level and variability.

**Table 4.2 : Sampling methods, their use and limitations**

<b>Method</b>	<b>Definition</b>	<b>Uses</b>	<b>Limitations</b>
<b>Cluster sampling</b>	<p>Units in the population can often be found in geographical groups or cluster for example Schools households etc.</p> <p>A random sample of clusters is taken, then all units within those clusters are examined.</p>	<ul style="list-style-type: none"> <li>• Quicker, easier and cheaper than other forms of random sampling</li> <li>• Does not require complete population information.</li> <li>• Work best when each cluster can be regarded as a microcosm of the population.</li> </ul>	<ul style="list-style-type: none"> <li>• Larger sampling error than other forms of random sampling</li> <li>• If clusters are not small it can become expensive.</li> <li>• A larger sample size may be needed to compensate for greater sampling error.</li> </ul>
<b>Convenience sampling</b>	Using those who are willing to volunteer, or cases which are presented to you as a sample	<ul style="list-style-type: none"> <li>• Readily available.</li> <li>• The larger the group, the more information is gathered.</li> </ul>	<ul style="list-style-type: none"> <li>• Sample results cannot be extrapolated to give population results.</li> <li>• May be prone to volunteer bias</li> </ul>
<b>Judgment sampling</b>	Based on deliberate choice and excludes any random process.	<ul style="list-style-type: none"> <li>• Normal application is for small samples from a population that is well understood and there is a clear method for picking the sample.</li> <li>• Is used to provide illustrative examples or case studies</li> </ul>	<ul style="list-style-type: none"> <li>• It is prone to bias.</li> <li>• The sample is small and can lead to credibility problems.</li> <li>• Sample results cannot be extrapolated to give results.</li> </ul>
<b>Multi-stage sampling</b>	The sample is drawn in two or more stages for example. a selection of offices at the first stage and a selection of claimants at the second stage.	<ul style="list-style-type: none"> <li>• Usually the most efficient and practical way to carry out large surveys of the public.</li> </ul>	<ul style="list-style-type: none"> <li>• Complex calculation of the estimates and associated precision.</li> </ul>
<b>Probability proportional to size</b>	Samples are drawn in proportion to their size given a higher chance of selection to the larger items	<ul style="list-style-type: none"> <li>• Where you want each element to have a equal chance of selection rather than each sampling unit.</li> </ul>	<ul style="list-style-type: none"> <li>• Can be expensive to get the information to draw the sample.</li> <li>• Only appropriate if you are interested in the elements.</li> </ul>
<b>Quota sampling</b>	<p>The aim is to obtain a sample that is representative of population.</p> <p>The population is stratified by important variables and the required quota is obtained from each stratum.</p>	<ul style="list-style-type: none"> <li>• It is a quick way of obtaining a sample.</li> <li>• It can be fairly cheap.</li> <li>• If there is no sampling frame it may be the only way forward.</li> <li>• Additional information may improve the credibility of the results.</li> </ul>	<ul style="list-style-type: none"> <li>• Not random so stronger possibility of bias.</li> <li>• Good knowledge of population characteristics is essential.</li> <li>• Estimates of the sampling error and confidence limits probably can't be calculated.</li> </ul>

Easterby-Smith et al. (2006) suggested the formula below for determining the sample size.

$$n = \{P(100-P)/E^2 \}$$

Where:            n is the sample size required;  
                      P is the percentage occurrence of the state; and  
                      E is the maximum error required.

#### **4.6.4 Population**

The construction industry in Zambia involves many players. They include the project promoters, clients or end users, architects, engineers, quantity surveyors, construction managers, contractors, sub-contractors and suppliers of materials. The population of architects was collected from the register at the Zambia Institute of Architects; the register at the Association of Consulting Engineers of Zambia (ACEZ) was used to determine the population of consulting engineers while the register at Surveyors Institute of Zambia (SIZ) was used to determine the population of quantity surveyors. The National Council for Construction register was used to determine the population for contractors. The contractors targeted were those of national character and registered with the Association of Building contractors. A subjective method of determining the sample for clients was undertaken. However, all main clients in Zambia were included. The major clients or project promoters such as Road Development Agency; Ministry Transport, Works, Supply and Communications; Ministry Local Government, Housing, Early Education and Environmental Protection; the ministry responsible for tourism and environment; Zambia Wildlife Authority; Zambia Revenue Authority; Bank of Zambia; National Pensions Scheme Authority; Zambia State Insurance Corporation; Konkola Copper Mines; Mopani Copper Mines; Zambia Electricity Supply Corporation; and Zambia Sugar Company were included in the study.

#### **4.6.5 Sampling for semi-structured interviews**

In this study, semi-structured interviews and a questionnaire were used. The purpose of adopting the semi-structured interview was to enable the researcher to compare and contrast

different information gained in the literature review by asking similar questions to all interviewees. A non probability, purposive sampling was undertaken.

#### **4.6.6 Sampling for semi-structured questionnaire**

For the semi-structured questionnaire, a stratified random sample method was used in determining the sample size. The population was stratified into engineers, quantity surveyors, architects, contractors, clients or project promoters. The purpose of stratifying the sample was to eliminate any bias that could emanate from one group of professionals with regard to their perceptions.

#### **4.7 Summary**

In this chapter the research methods, design and strategies employed in achieving the aim and research objectives of this study were reviewed. The research strategies included: the experiment; the survey; the grounded theory; ethnography; action research; descriptive studies, exploratory studies; explanatory studies; cross sectional and longitudinal studies; and the case study methods. A multi-method approach was undertaken in this study.

In the next chapter, data collected by use of the semi-structured interviews would be analysed and discussed.

## **CHAPTER FIVE: DATA ANALYSIS AND DISCUSSION OF RESULTS FOR SEMI-STRUCTURED INTERVIEWS**

### **5.1 Introduction**

In the previous chapter, common research methodologies were described. Two main research philosophies, namely, the positivist and the phenomenological were discussed. Research design and strategies to achieve the main aim and objectives of this study were also discussed. Research strategies reviewed included: experiments; surveys; grounded theory; ethnography; action research; descriptive studies; exploratory studies; explanatory studies; cross sectional and longitudinal studies; and case study.

The survey was identified as the most suitable method to achieve the research objectives in this study. Semi-structured interviews and a questionnaire survey were the research instruments used in the collection of data.

In this chapter, the data collected from semi-structured interviews was analysed and discussed.

### **5.2 Semi-structured interviews**

Ethical issues in construction sector and any other industries are usually concealed and respondents are not free to discuss them openly as they fear to be quoted. Mwiya (2009) observed that this usually resulted in falsification of information in face-to-face interviews. The semi-structured interviews were structured in such way that respondents were not required to provide personal information so that they remained anonymous. The interviewees were also assured of confidentiality and anonymity of all information provided.

Interview questions were used to first determine whether respondents generally agreed with the information gathered in the literature review. The interview instrument was subjected to three reviews before it was piloted. The interview questions were piloted among four professionals in the construction industry. These were an architect, an engineer, a quantity surveyor and a project promoter. The main purpose of the pilot was to determine whether the

questions and instructions were clear and unambiguous and whether interviewees found the questions appropriate. The pilot was also done to determine whether there were any deficiencies in the interview questions.

As a result of the pilot-testing, minor changes were made to the wording of certain questions. Some questions which were open-ended were changed to closed type to provide respondents with alternative choices. It was further found that interviewees preferred to remain anonymous as most of the questions were sensitive and personal. Therefore, any question in the interview that required the interviewee to provide personal information was removed.

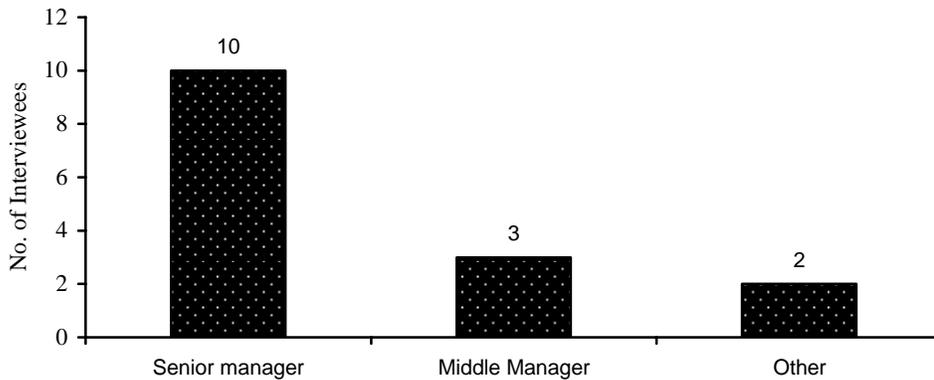
A non-probability, purposive sampling was used. The sample included engineers, quantity surveyors, architects, contractors, organisations that sponsor projects and interest groups such as TIZ, ZPPA and ACC. Fifteen persons were interviewed. The interviewees were purposefully sampled so as to seek information-rich research participants who could contribute to the understanding of ethical issues in the construction industry.

### **5.3 Analysis of interviews results**

Fifteen persons from the construction sector and other interest groups were interviewed. The analysis of the results is indicated below.

#### **5.3.1 Professions and positions of interviewees**

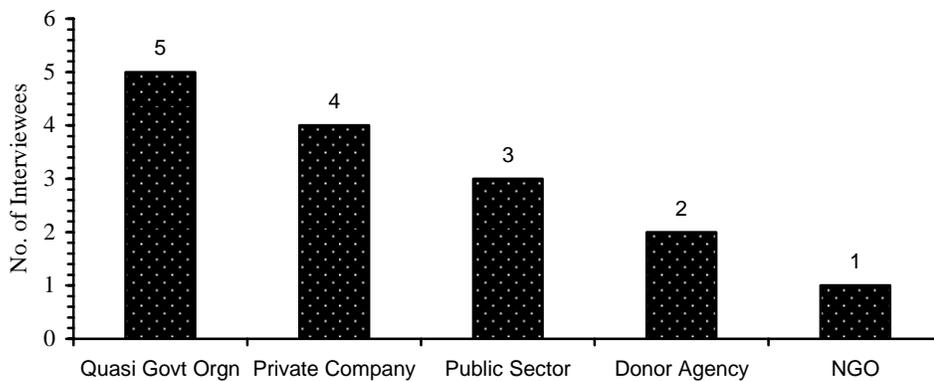
The analysis of interviewees showed that out of fifteen, ten of them were senior managers, three were middle managers and two were in junior management positions in the construction sector as shown in Figure 5.1. These results indicated that most of the interviewees were in positions where they could comprehend unethical practices in the construction industry.



**Figure 5.1:** Number of interviewees according to positions held

### 5.3.2 Type of organisations interviewees worked for

The interviewees represented all sectors that are involved in the construction industry in Zambia as shown in Figure 5.2. The government is the main promoter of most of the construction projects. Donor agencies also provide funding for developmental projects, while the Non-Governmental Organisations such as TIZ is a strong advocate for a corruption free environment. A senior official from the ACC was also interviewed. The interviewees from private companies were from construction companies specialising in roads, bridges and buildings.



**Figure 5.2:** Number of interviewees according to organisations they represented

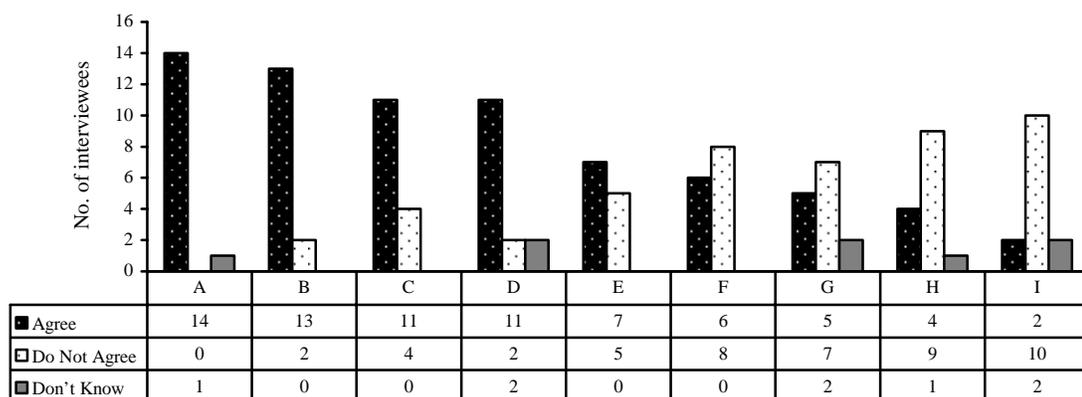
### 5.3.3 Corruption in the construction industry in Zambia

All interviewees stated that there was corruption in the construction industry in Zambia. This was in agreement with Shakantu (2006), who stated that some form of corruption takes place and flourishes at every stage of construction projects. This was also in agreement with the Corruption Perception Index for Zambia that indicated that corruption was high in the country. The CPI for Zambia for 2011 was 3.2, which indicated that the perception of the levels of corruption was high. According to transparency International, CPI was determined on a scale of 1 to 10. The CPI for countries with highly perceived corruption is score 1. Score 10 is for countries with low incidences of corruption.

### 5.3.4 Reasons for corruption in the construction industry in Zambia

Most of the interviewees indicated that the reasons why the construction industry is more prone to unethical practices was because of: political interference in public works selection; the bureaucratic nature of procurement processes; competition to get projects was high; and that contractors were willing to do anything to get the contract especially that tender sums were usually large and lucrative. Legal loopholes in procurement procedures were also highlighted as a reason for unethical practices in the construction industry in Zambia. It was also established that persons that perpetuated the vice were rarely punished.

Figure 5.3 shows the frequency and reasons why persons were involved in corruption.

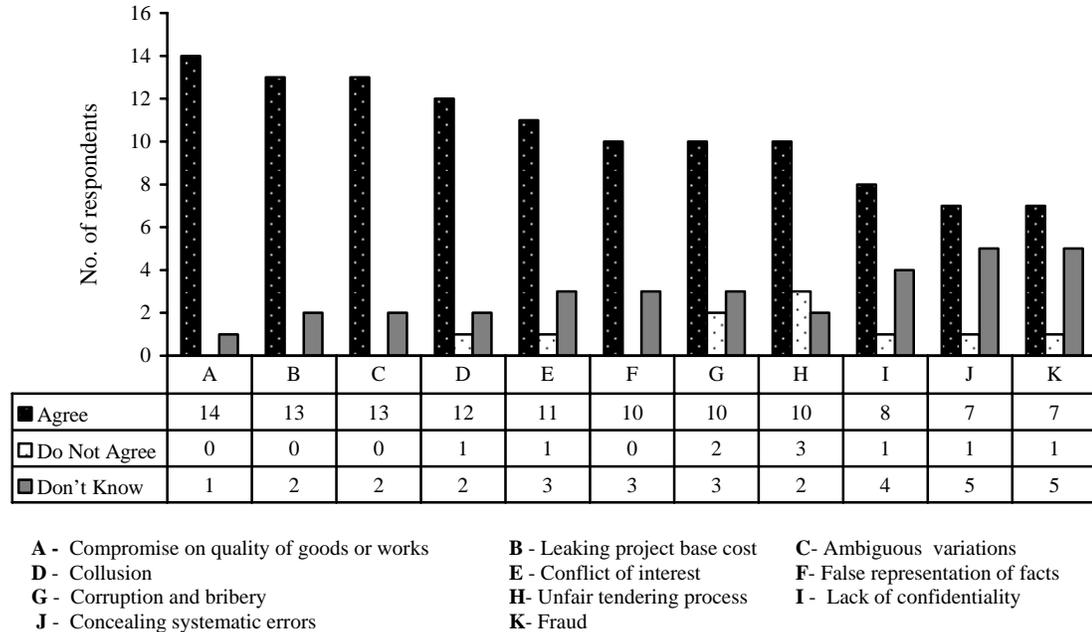


- A – Political interference in public works
- B - Bureaucratic nature of procurement
- C - Competition to get projects is high
- D - Contracts are usually high and lucrative
- E - Legal loopholes in procurement procedures
- F - Fragmented nature of the industry
- G - Low entry barriers
- H - The industry is project based
- I - Nomadic nature of labour force

**Figure 5.3:** Reasons for corruption in the construction industry in Zambia

### 5.3.5 Unethical practices witnessed in the construction industry

The interviewees were asked to state which unethical practices they had ever witnessed or had noticed someone get involved in. The majority of the interviewees agreed that they had witnessed unethical practices or noticed someone get involved in unethical conduct. Fourteen out of fifteen interviewees had witnessed compromised quality of works on projects. Unfair tendering processes; lack of confidentiality; conflict of interest; corruption and bribery; fraud; collusion; false representation of facts; leaking of project base cost; ambiguous variations; and concealment of errors were also identified as unethical practices noticed or witnessed by the interviewees. In South Africa, Bowen et al. (2007) reported that 79 per cent of the quantity surveyors and 76 per cent of the contractors had either witnessed or experienced collusive tendering. In Malawi, Shakantu and Chiocha reported that there is deep-rooted corruption in the construction industry and that this was evident at every phase of project delivery. Some of the unethical practices identified in the Malawian construction industry included: collusion; price differentiation; bid rigging; and tempering with claims and payment certificates.



**Figure 5.4** Unethical issues witnessed in the construction industry

Other unethical practices witnessed included:

- (a) abuse of material deviations during evaluation of tenders;
- (b) inconsistencies in evaluation criteria; and
- (c) ignoring professional advice from consultants by clients.

When asked if Zambia had enough laws, regulations and procedures to deal with unethical practices in the construction industry, eleven out of the fifteen interviewees agreed. It was further reported that most project managers lack courage to enforce requirements of the law. There was also lack of political will to enforce these laws, regulations and procedures.

The laws, regulations and procedures that deter unethical practices in the construction industry in Zambia were identified as the:

- (a) Zambia Public Procurement Authority (ZPPA) Act of 2008;
- (b) National Council for Construction (NCC) Act No. 13 of 2003;
- (c) Anti Corruption Act No. 42 of 1996;
- (d) Public Interest Disclosure (Protection of whistle blowers) Act No. 4 of 2010; and
- (e) Prohibition and Prevention of Money Laundering Act No. 14 of 2001.

When requested to state any necessary improvements to the regulations, laws and procedures, some interviewees stated that there was need to have a provision in the procurement procedures for a ten-day window period before the contract was signed to allow for resolution of disputes arising from the tender process. Some interviewees further stated that the involvement of construction professionals in law enforcement agencies would also help to curb unethical practices.

The interviewees were also asked to state the main unethical issues at project conception, tendering stage; construction and supervision; and project closure and commissioning. The responses are recorded below.

**(a) Project conception and tendering stage**

Projects are always conceived by the client or project promoter. After conception, consultants are engaged to undertake the designs and production of bills of quantities. The tendering process is then undertaken. The client and the consultants are usually involved in the tendering process which includes the floating and evaluation of tenders and award of contract. The following were identified as unethical practices at project conception and tendering stage:

- (i) copyright infringements especially by engineers and architects;
- (ii) overstatement the project scope;
- (iii) over-designing;
- (iv) uncompetitive tendering processes which involve insertion of unfair clauses in bid documents with the aim of excluding other potential bidders from participating;
- (v) inconsistencies in the application of material deviations during evaluation of tenders;
- (vi) inclusion of unreasonable provisional sums in the tender due to inadequate take-offs;
- (vii) political interference;
- (viii) abuse of the practice of single sourcing;
- (ix) lack of confidentiality;
- (x) conflict of interest;
- (xi) concept of lobbying for projects;
- (xii) biasness in tender evaluation;
- (xiii) collusion among bidders;
- (xiv) bribery and corruption; and
- (xv) tampering with tender documents during evaluation to favour a preferred bidder.

**(b) Construction and supervision stage**

Construction of the works is undertaken by the contractors and subcontractors. Consultants, who are engaged by the client, may supervise the works. The following were identified as the unethical practices during construction and supervision of works:

- (i) certification of poor quality works;
- (ii) negligence of duty by consultants when supervising projects;
- (iii) fraudulent fabrication of test results by contractors at the expense of quality;

- (iv) unreasonable and dishonest variations during project implementation;
- (v) acceptance of bribes and corruption;
- (vi) collusion to de-fraud the client by contractors with consultants and sometimes with client representatives;
- (vii) fraudulent certification of works;
- (viii) concealment of errors; and
- (ix) deliberate delay in payments to induce corruption and bribes.

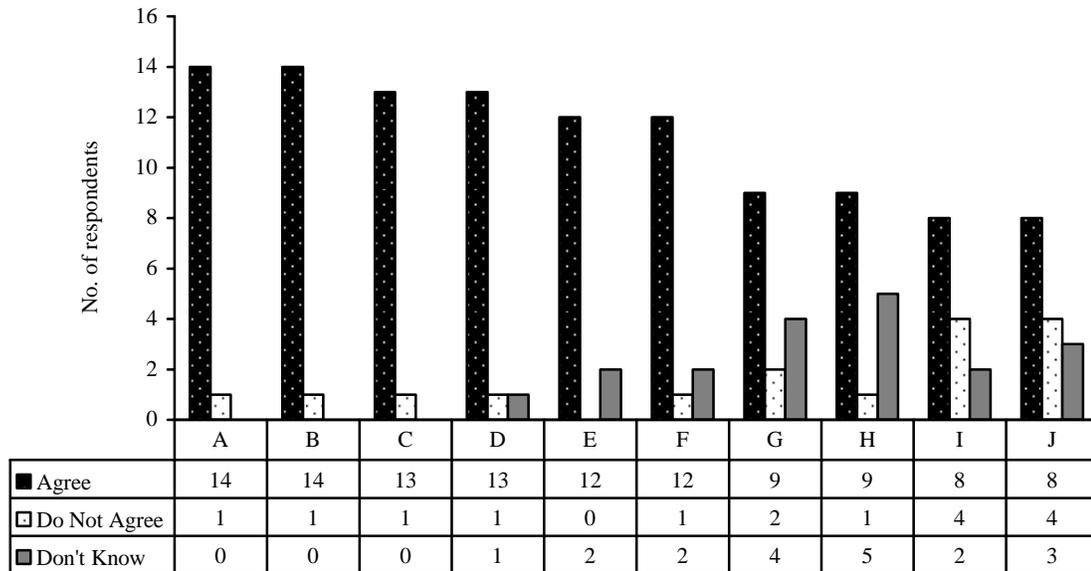
**(c) Project closure and commissioning stage**

At project closure, the contractor produces as-built drawings before handing over of the project. All the works are subject to the defect liability period which may differ from project to project. Some minor projects may have a defect liability period of six months. Other projects may include the period for adverse weather such as the rain season. The following were identified as the unethical practices during project closure and commissioning:

- (i) ignoring defective work;
- (ii) falsifying final accounts;
- (iii) premature commissioning of works due to political interference;
- (iv) concealment of errors;
- (v) providing favourable report about a project even when works were sub-standard; and
- (vi) failure to provide as-built drawings.

**5.3.6 Effects of unethical practices in the construction industry in Zambia**

The interviewees were asked to state what they thought were the effects of corruption and other unethical practices in the construction industry. Fourteen out of fifteen interviewees stated that it distorted prices in the construction market and also led to substandard works. Figure 5.5 shows the effects of corruption and other unethical practices in the construction industry in Zambia. The majority of the interviewees also agreed that: corruption re-directed resources to individual interests instead of social causes; increased project costs; undermined managerial efficiency; curbed economical growth and sustainable development; deterred investment; caused delays in obtaining permits from public agencies; project procurement processes were deliberately delayed; and that it undermined legal and judicial systems.



**A** - Distorts prices in the market  
**B** - Leads to substandard works  
**C** - Re-direct resources to individual interests instead of social causes  
**D** - Leads to costly projects  
**E** - Undermines managerial efficiency  
**F** - Curbs economical growth and sustainable development  
**G** - Deters investment  
**H** - Causes delays in obtaining permits from public agencies  
**I** - Deliberate delays in the project procurement process  
**J** - Undermines legal and judicial systems

**Figure 5.5:** Effects of unethical practices in the construction industry in Zambia

### 5.3.7 Effects of politics in the construction industry in Zambia

When asked whether politics had an effect on ethical behaviour of professionals in the construction industry, thirteen out of fifteen interviewees agreed. When asked how politics affected ethical behaviour of professionals in the construction industry in Zambia, the following were the responses:

- professionals were scared to challenge politicians whenever they had different views on technical matters;
- there was a belief that contractors that aligned themselves to the political party in power and provided resources to support it, tended to be awarded more contracts;
- government tended to favour certain contractors for certain projects;
- there was a belief that certain professionals appeared to want to appease their political masters so as to gain some favours; and
- some appointments at controlling officer level were political and are made for the

sole purpose of influencing contract awards.

### **5.3.8 Code of Ethics**

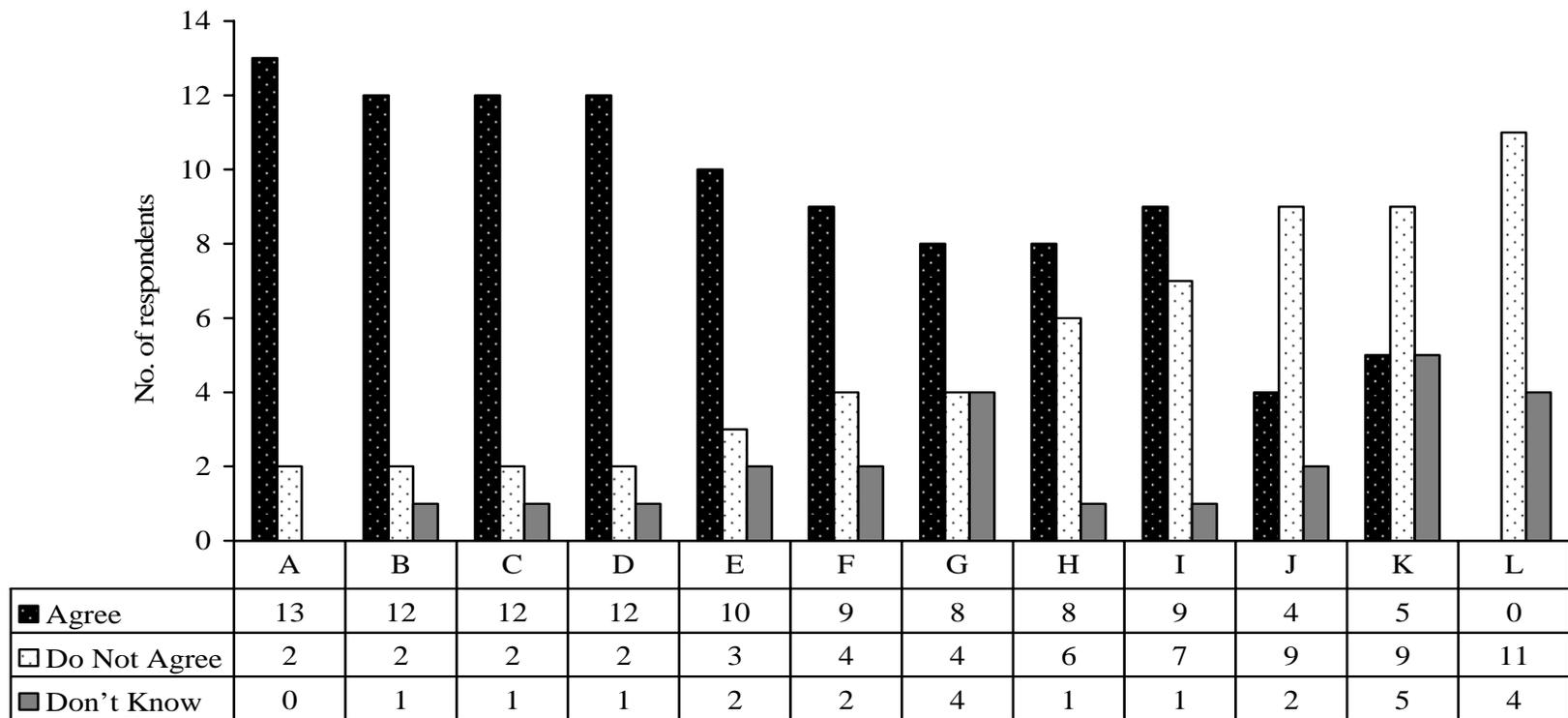
Interviewees were asked to state whether they belonged to a professional body. Thirteen out of fifteen interviewees agreed. When asked further whether their professional bodies had Codes of Ethics, fourteen out of fifteen of the interviewees agreed and also stated that they have read and understood their professional Codes of Ethics. When asked whether they practiced what was in the Code of Ethics, thirteen interviewees agreed. Fourteen of the respondents also agreed that adherence to professional Codes of Ethics could contribute to ethical behaviour in the construction industry.

The interviewees also identified the following as obstacles to adherence to professional Codes of Ethics in the construction industry:

- (a) inconsistencies in application of Codes of Ethics by professional bodies and construction organisations;
- (b) political interference in procurement process of works;
- (c) failure to effectively monitor adherence to Codes of Ethics by professional bodies;
- (d) lack of effective communication and dissemination of information on the Codes of Ethics to members of professional bodies;
- (e) failure to act or punish persons who breach Codes of Ethics; and
- (f) the industry had been infiltrated by persons who are not trained and qualified to handle construction projects and may not appreciate the importance of Codes of Ethics.

### **5.3.9 Factors affecting an individual to act in an ethical manner**

Interviewees were asked to state what factors at an individual level affected a person to act in an ethical manner. Figure 5.6 shows the factors at an individual level that affect ethical behaviour of a person. Thirteen out of fifteen of the interviewees stated that fear of punishment was one of the main reasons why people act ethically. Twelve of them stated that: the status of an individual; moral maturity; ego strengths and peer pressure were the other reasons.



**A** – Fear of punishment      **B** – Status      **C** - Ego strengths      **D** - Peer pressure      **E** - Family      **F** - Work experience  
**G** - Socialisation      **H** – Religion      **J** - Age (life experiences)      **K** – Demographics      **L** – Gender      **I** - Work environment

**Figure 5.6:** Factors at an individual level that affect ethical behaviour of a person

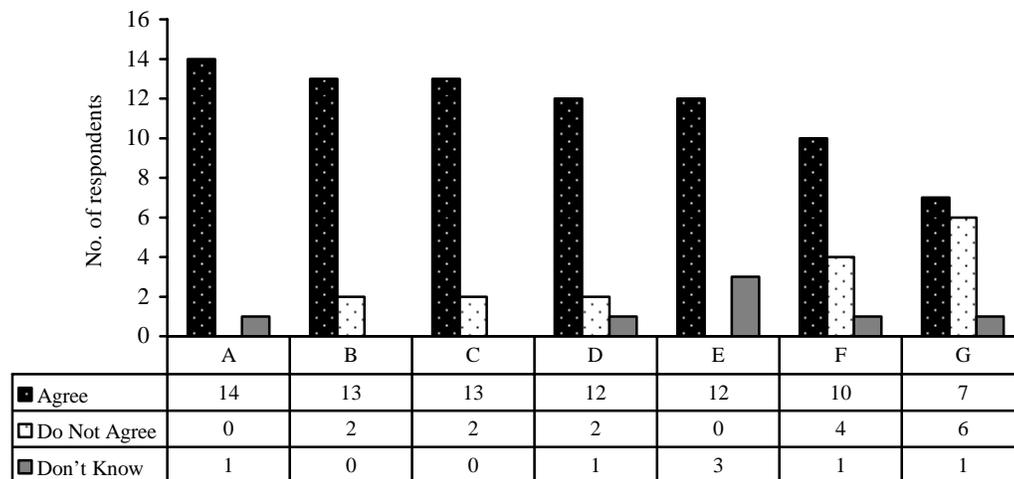
Other reasons were the upbringing of an individual and family obligations, work experience, socialisation, religious beliefs and work environment encompassing corporate goals, policies and culture affected the way an individual acted ethically.

Interviewees however stated that the age and life experiences, demographics and gender did not influence the way a person acted ethically.

### 5.3.10 Factors at organisation level that lead employees to act ethically

When asked to state the factors at organisational level that led employees to act in an ethical manner, fourteen out of fifteen interviewees stated that the type of leadership available in the organisation was one of the main reasons. Figure 5.7 shows the factors at an organisation level that led to ethical behaviour of employees. Other reasons cited, in descending order of citation by interviewees were: organisational culture; individual local factors and values; organisation Code of Ethics; internal disciplinary procedures; laws and regulations of the country and external forces such as societal norms; economic conditions; legal and political systems; and family obligations.

Some interviewees also stated that there was need for an independent body of control to provide oversight of all external submissions of tenders.



A- Type of leadership

B - Organisation culture

C - Individual local factors and values

D - Organisation code of ethics

E - Internal disciplinary procedures

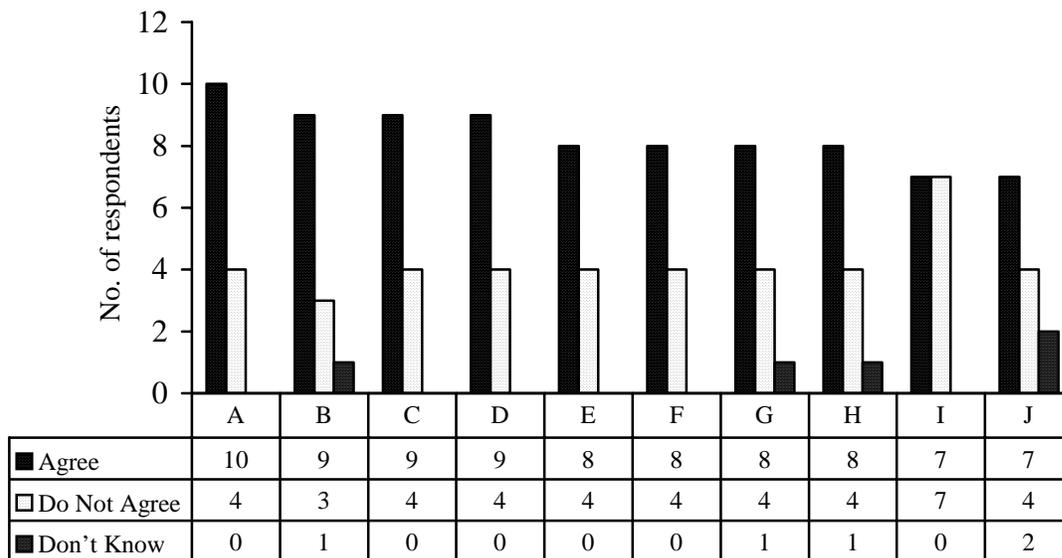
F – Laws and regulations of the country

G - External forces

**Figure 5.7:** Factors at an organisation level that affect ethical behaviour of a person

### 5.3.11 Factors external to an organisation that affect an employee to act ethically

Interviewees were also asked to identify external factors to an organisation that affected an employee to act in an ethical manner. Figure 5.8 shows the external factors to an organisation that led employees to act ethically. Ten out of fifteen interviewees stated that political and social factors such as religious, humanistic, cultural and societal values were the factors external to the organisation that affected an individual to act in an ethical manner. Others reasons were: economic conditions of the country; fear of punishment, professional codes of conduct; competition for scarce resources; legislation and legal environment; social norms; and family obligations. However half of the interviewees stated that the type of judicial system also affected a person to act in an ethical manner while the other half disagreed.



A - Political and social factors  
 D - Professional codes of conduct  
 G - Social norms  
 J - Scarce resources  
 B - Economic conditions  
 E - Competition  
 H - Family obligations  
 C - Fear of punishment  
 F - Legislation (legal environment)  
 I - Type of judicial system

**Figure 5.8:** External factors to an organisation that affect a person to act in an ethical manner

### 5.3.12 Role of leadership

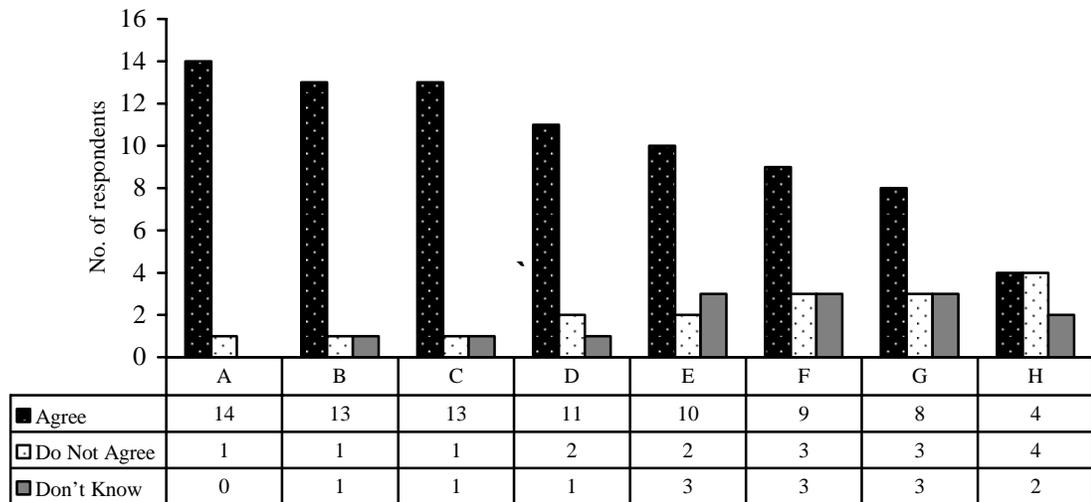
Interviewees were asked to state what role leadership played in ethics in an organisation. Respondents identified that leadership could:

- (a) provide guidance to subordinates;
- (b) develop strategies to ensure ethical behaviour;

- (c) formulate, disseminate and enforce Codes of Ethics;
- (d) act as role models and lead by example; and
- (e) ensure that organisations practice corporate governance.

**5.3.13 Detection and prevention of unethical practices in Zambia**

Interviewees were asked to state the measures an organisation could employ to detect unethical behaviour. Figure 5.9 shows methods of detecting unethical practices in an organisation. Fourteen out of fifteen interviewees agreed that reports of unethical practices could be used to detect unethical behaviour. Others reasons in descending order of citation by interviewees were: frequency of communication on ethical matters; internal system of dealing with ethical matters; Auditor’s reports; levels of education and training provided; number of whistle blowers; and reports to law enforcement agencies.



- A** - Reports of unethical matters
- B** - Frequency of communication on ethical matters
- C** - Internal system of dealing with ethical matters
- D** - Auditor’s reports
- E** - Levels of education and training provided
- F** - Number of whistle blowers
- G** - Reports to laws enforcement agencies
- H** - Number of self incrimination

**Figure 5.9:** Detecting unethical practices in an organisation

Interviewees were also asked to state how unethical practices in the construction industry in Zambia could be prevented. The interviewees stated that:

- (a) professional bodies or boards of directors and not politicians should be the only

- competent bodies to appoint heads of organisations. This could ensure that there was no political interference in the procurement of construction works;
- (b) simplify the bidding procedures and encourage transparency throughout the bidding process;
  - (c) introduce a screening and feedback method where all bidders are briefed on the outcome of their bids;
  - (d) separation of powers clients, consultants and contractors to improve in project oversight;
  - (e) training and education in ethics;
  - (f) good corporate governance practices when handling contracts;
  - (g) enforcement of Code of Ethics of Code of Ethics;
  - (h) stiffer punishment of offenders;
  - (i) implementation of checks and balances at every level and strengthen third party monitoring;
  - (j) involvement of certain law enforcement agencies during the tendering processes; and
  - (k) good remuneration of personnel handling tendering of projects.

When asked to state what strategies could be employed to combat unethical practices in the construction industry, the interviewees identified the following:

- (a) development, dissemination and enforcement of Code of Ethics;
- (b) provision of training and education on ethical matters;
- (c) undertake ethical awareness campaigns;
- (d) creation of simple and open tendering procedures;
- (e) dissemination of information to the public on various projects where public has interest;
- (f) stiffer punishment of offenders;
- (g) removal of political influence on institutions dealing with the procurement of construction projects; and
- (h) strengthen work processes from project conception to commissioning.

### **5.3.14 Role of NCC in promotion of ethics in the construction industry**

The interviewees were also asked to state what role the National Council for Construction could play in promoting ethical behaviour in the construction industry in Zambia. The respondents identified the following:

- (a) provision and enforcement of Code of Ethics among contractors;
- (b) provision of training and education on ethical matters;
- (c) streamlining of contractor registration processes;
- (d) sanctioning erring contractors;
- (e) dissemination of information to the public on various projects where the public has an interest;
- (f) technical auditing of construction projects; and
- (g) review of tender procedures in conjunction with the Zambia Public Procurement Authority (ZPPA).

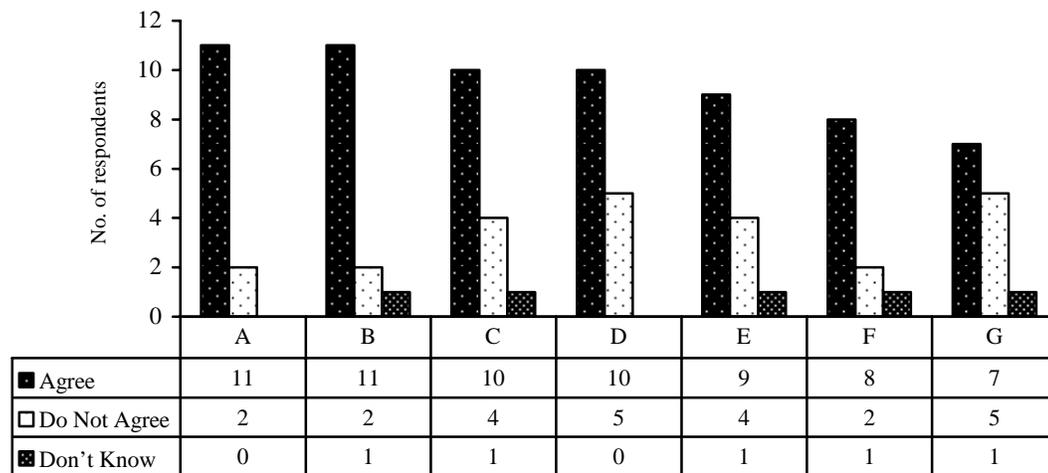
### **5.3.15 Integrity in organisations**

Interviewees were asked to state how integrity in an organisation could be measured. Figure 5.10 indicates the methods of measuring integrity in an organisation as cited by interviewees. They all agreed that: existence of the quality compliance programmes; Codes of Ethics; good corporate culture; corporate structures to support ethical behaviour; existence of a benchmarking system with best practice; and existence of a register of unethical conduct in an organisation were all important in measuring integrity in an organisation.

### **5.3.16 Other inadequacies in the construction sector**

The interviewees were then asked to state what other inadequacies they saw in the construction sector that promoted unethical behaviour. They stated that:

- (a) government departments such buildings department should not be allowed to act as consultants and at the same time as the client on behalf of government;



**A** - Existence of quality compliance programmes  
**B** - Existence of the Code of Ethics  
**C** - Existence of code of conduct  
**D** - Corporate culture  
**E** - Corporate infrastructure (structure)  
**F** - Existence of benchmarking system with best practice  
**G** - Frequency of unethical conduct

**Figure 5.10:** Measuring integrity in an organisation

- (b) lack of adequate funding for approved construction projects by government encouraged corruption as contractors compete to be paid on time;
- (c) registration of contractors by NCC was not done rigorously;
- (d) there was need to enforce and stiffen punishment for erring persons or construction companies;
- (e) there was no co-ordination between different parties of the construction industry and that the NCC could play this role;
- (f) there was undue political influence on construction contracts; and
- (g) there should be separation of powers between the client management, the client board of directors, consultants, contractors and suppliers.

#### 5.4 Summary

Results of the semi-structured interview were analysed and discussed in this chapter. In the next chapter, data collected by use of a semi-structured questionnaire will be analysed and discussed.

## **CHAPTER SIX: DATA ANALYSIS AND DISCUSSION OF QUESTIONNAIRE SURVEY RESULTS**

### **6.1 Introduction**

In the previous chapter, data collected by use of semi-structured interviews was analysed and discussed. In this chapter, data collected by use of a questionnaire survey is analysed and discussed.

### **6.2 Questionnaire survey**

A questionnaire was designed based on the information in the literature review and the results of the data from the semi-structured interviews. Six questionnaires were prepared and pilot-tested among three professions, namely, engineers, quantity surveyors and architects. Two persons from each profession responded to the pilot-test. These were the main professions in the construction industry in Zambia at the time the study was conducted. The purpose of pilot-testing the questionnaire was to determine if it had any deficiencies or whether there were any ambiguous questions. The purpose was also to determine if there were any sensitive questions and whether the sequence, structure and arrangement of the questions were in order. This process enabled the researcher to identify construction defects in the questionnaire. This also helped to improve on the clarity of the questions and on the response rate. After pilot-testing, all defective questions were re-phrased. Other minor adjustments were also made to certain questions, but the substantive document remained unchanged.

### **6.3 Sample size for the questionnaire survey**

Bartlett et al. (2001) stated that a common goal of a survey research was to collect data representative of the population. The information gathered from the survey is then used to generalise findings from a drawn sample back to the population within the limits of random error. A stratified random sample was used in the administration of the questionnaire. The population was divided into the following strata: Consulting firms representing engineers, architects and quantity surveyors; contractors; major project sponsors; interest groups such as the ACC, TIZ, NCC and ZPPA; and cooperating partners such as the World Bank, Danish

International Development Agency (DANNIDA), European Union (EU), Japanese International Cooperation Agency (JICA), German Technical Cooperation (GTZ) and Department for International Development (DFID). The sample size was determined by using the formula provided by Easterby-Smith et al. (2006):

$$n = \{P(100-P)/E^2 \}$$

where: n is the required sample size;  
P is the percentage occurrence of the state; and  
E is the maximum allowable error.

Bartlett et al. (2001) stated that the acceptable error for categorical data of  $E=0.05$  was a norm in educational and social research. Field (2000) also stated that 95% confidence level forms the basis of modern statistics. Therefore, if the probability of the value of the test statistic was less than 5%, it is generally accepted that the result was significant. If the probability was greater than 5%, the result is rejected as not significant. The non significant result means that the effect is not big enough to be anything other than a chance.

Saunders et al. (2000) stated that for statistical analysis, a minimum sample of 30 was required. Table 6.1 shows the population and sample size used in this study.

**Table 6.1:** Sampling frame for different strata of surveyed respondent construction industry groups

<b>No.</b>	<b>Stratum</b>	<b>Type of organisation</b>	<b>Population</b>	<b>Sample size</b>
<b>1</b>	<b>Consultants</b> Architects Engineers Quantity Surveyors	Zambia Institute of Architects	92	74
		Association of Consulting Engineers	27	25
		Institute of quantity surveyors	39	35
<b>2</b>	<b>Grades 1-3 Contractors</b>	Association of Building Contractors	364	187
<b>3</b>	<b>Clients</b>	Major project promoters	33	30
<b>4</b>	<b>Interest groups</b>	Anti corruption Commission, Transparency International Zambia, National Council for Construction, Zambia Public Procurement Authority	4	4
<b>5</b>	<b>Cooperating Partners</b>	World Bank, Dannida, European Union, JICA, German Technical Cooperation, DFID	6	6
<b>Total</b>			<b>565</b>	<b>361</b>

The list of major clients and project promoters in the construction industry in Zambia include: RDA; Ministry of Transport, Communications, Works and Supply; Ministry Local Government, Housing, and Environment; Ministry responsible for Tourism; Ministry of Health; ZAWA; ZRA; NAPSA; Zambia State Insurance Corporation (ZSIC); Konkola Copper Mines; Mopani Copper Mines; ZESCO and Zambia Sugar Company.

Other project promoters included in the survey were the district, municipal and city councils. They included Livingstone, Choma, Monze, Mazabuka, Lusaka, Kabwe, Ndola, Kitwe, Luanshya, Mufulira, Chingola, Chipata, Solwezi, Mansa, Mongu and Kasama.

Commercial banks are also some of the major sponsors of construction projects. In Zambia, they include Bank of Zambia, Zambia National Commercial Bank, Stanbic Bank, Investrust Bank, Barclays Bank and Standard Chartered Bank.

Contractors in Grades 1 to 3 of the NCC are of national character and are normally expected to compete for works anywhere within the country. Contractors in Grades 4 to 6 are normally emerging contractors and do not possess the national character. Grade 6 was the lowest grade and was for small enterprises entering the industry. Contractors graduated from Grade 6 to Grades 5, 4, 2 and eventually 1 based on their demonstrated capacity and past performance. Contractors in Grades 1 to 3 are expected to have more experience and exposure to ethical issues in the construction sector as a consequence of their having operated in the industry for much longer periods than the ones in Grades 4 to 6. The sampling in the contractors' stratum was therefore targeted at those in Grades 1 to 3.

#### **6.4 Response rate**

Three hundred and sixty one questionnaires were prepared. These were either sent by email or hand delivered to the sampled population. Seventy one of the sampled population could not be located, therefore only 290 questionnaires were successfully either hand delivered or sent by email. Reminder emails and follow-up phone calls were made to the persons who received the questionnaires. Seventy four were returned completed. The reasons for failure to

respond to the questionnaire by non-respondents were not given. However, Kululanga (1999) stated that the reasons for non-respondents can be classified into three groups:

- (a) pressure of work at the time the questionnaires were received;
- (b) frequency of questionnaires from researchers that professionals receive; and
- (c) sensitivity of the subject area.

Neuman (2000) stated that the response rate in research is calculated by use of the formula:

**Response rate = (total number of responses) / (total number in sample –ineligible)**

Neuman (2000) further stated that a more common way was to determine an active response rate which is calculated by the formula:

**Active response rate = {total number of responses} / {total number in sample – (ineligible + unreachable)}**

Using this formula, the response rate was:

$$\text{Response rate} = 74 / (361 - 71) = 0.26$$

Therefore the response rate was 26 per cent for this study. Easterby-Smith et al. (2006) stated that the expected industry norm is of the order 25 to 30 per cent if the appropriate measures for increasing questionnaire responses are undertaken. Therefore, a response rate of 26 per cent was acceptable.

## **6.5 Descriptive and inferential statistics**

Descriptive statistics simply describe what is or what the data shows whereas inferential statistics infer from the sample data what the population thinks (Trochim, 2006). Descriptive statistics were used to describe the basic features of the data in this study. Descriptive statistics provide simple summaries about the sample. Together with graphics analysis, they form the basis of virtually every quantitative analysis of data. With descriptive statistics you are simply describing what the data shows. Inferential statistics on the other hand make inferences from collected data to more general conditions. With inferential statistics, a researcher tries to reach conclusions that extend beyond the immediate data alone. Most of the major inferential statistics come from a general family of statistical models known as the

general linear model. These include the t-test, Analysis of Variance (ANOVA), Analysis of Covariance (ANCOVA), regression analysis, and many of the multivariate methods like factor analysis, multi-dimensional scaling, cluster analysis and discriminant function analysis.

### 6.5.1 Parametric and non parametric tests

A parametric test is one that requires data from one of the large catalogue of distributions. The following conditions need to be met for parametric tests to be done:

- (a) normally distributed data. To determine normality, the values of skewness and kurtosis are determined, the value of zero or close to zero indicates normal distribution. The kolmogorov-smirnov test could also be used;
- (b) homogeneity of variance;
- (c) data should be measured at least at interval level; and
- (d) data from different participants are independent.

Stieve (2002) stated that there were assumptions about data when deciding on parametric or non parametric tests. Table 6.3 show the assumptions taken when determining whether to use parametric or non parametric statistics.

**Table 6.2:** Assumptions taken when deciding type of tests

Nonparametric	Parametric
<ul style="list-style-type: none"> <li>• Nominal or ordinal data</li> <li>• Random sampling</li> </ul>	<ul style="list-style-type: none"> <li>• Interval or ratio data</li> <li>• Random sampling</li> <li>• Normal distribution</li> <li>• Equal variances of the scores in populations that the samples come from.</li> </ul>

*(After Stevie, 2002)*

Whether to use parametric or non parametric test is a matter of judgement. Table 6.2 presents the list of commonly used statistical methods.

**Table 6.3:** Commonly used statistical tests

Analysis	Data type	Purpose	Reporting
Regression	Nonparametric (categorical dummy variables can be used)	<b>Simple Linear Regression</b> predicts the value of one variable from another. <b>Multiple Regression</b> predicts the value of one variable from the values of two or more variables.	(a) MODAL: $F$ with the df from the Regression and Residual in subscript from the ANOVA table = result, $p$ ( $\leq$ ) number from the ANOVA table, and the Adjusted R Square from the Model Summary. (b) SIGNIFICANT DEPENDENT VARIABLE(S): Name of Variable, = result, $p$ ( $\leq$ ) number.
Logistic Regression	Categorical variable to be predicted.	To predict the value of a categorical variable from the value(s) of other variables.	(a) MODAL: $F$ with the df from the Regression and Residual in subscript from the ANOVA table = result, $p$ ( $\leq$ ) number from the ANOVA table, and the Adjusted R Square from the Model Summary. (b) SIGNIFICANT DEPENDENT VARIABLE(S): Name of Variable, = result, $p$ ( $\leq$ ) number.
ANOVA	Parametric and categorical	Performs multiple t-tests.	$F$ with the df from the Regression and Residual in subscript from the ANOVA table = result, $p$ ( $\leq$ ) number from the ANOVA table
Nonparametric	Kruskal-Wallis	using Kruskal-Wallis, $X^2$ = result, $p$ ( $\leq$ ) result.	using Kruskal-Wallis, $X^2$ = result, $p$ ( $\leq$ ) result.

(After Stevie, 2002)

Frequency tables, bar and pie charts were constructed using the data from the questionnaire survey. Inferential statistics were used to make inferences to the population.

### 6.5.2 Inferential statistics

Stieve (2002) stated that nominal and ordinal data are non-parametric. In this study, both nominal and ordinal data collected by use of the questionnaire survey were analysed. Non-parametric methods were used as only ordinal and nominal data was collected.

Field (2005) stated that there are a variety of non-parametric statistics that could be used to analyse data. These include the chi-square, the mann-whitney test, the kruskal-wallis test, the wilcoxon's test, the ANOVA and Regression Analysis.

The **Wilcoxon signed-rank test** is a non-parametric statistical hypothesis test used when comparing two related samples or repeated measurements on a single sample to assess whether their population mean ranks differ for example if it is a paired difference test.

The **mann-whitney test** is a non-parametric statistical hypothesis test for assessing whether one of two samples of independent observations tends to have larger values than the other. It is one of the most well-known non-parametric tests for significance. The following assumptions need to be considered before using the mann-whitney test:

- (a) all the observations from both groups are independent of each other;
- (b) the responses are ordinal;
- (c) under the null hypothesis the distributions of both groups are equal, so that the probability of an observation from one population ( $X$ ) exceeding an observation from the second population ( $Y$ ) equals the probability of an observation from  $Y$  exceeding an observation from  $X$ , that is, there is symmetry between populations with respect to probability of random drawing of a larger observation; and
- (d) under the alternative hypothesis, the probability of an observation from one population ( $X$ ) exceeding an observation from the second population ( $Y$ ), after exclusion of ties, is not equal to 0.5. The alternative may also be stated in terms of a one-sided test, for example:  $P(X > Y) + 0.5 P(X = Y) > 0.5$ .

The **chi-square** is often shorthand for Pearson's chi-square test or chi-square goodness-of-fit test or chi-square test for independence. It is any statistical hypothesis test in which the sampling distribution of the test statistic is a chi-square distribution when the null hypothesis is true, or any in which this is asymptotically true, meaning that the sampling distribution, if the null hypothesis is true, can be made to approximate a chi-square distribution as closely as desired by making the sample size large enough (Field, 2005).

The **ANOVA** is a multiple t-test. Instead of doing a t-test for every group and all the combinations, ANOVA is able to check the means of each group (Stieve, 2002). Stieve (2002) further stated that kruskal-wallis test was a non-parametric equivalent of ANOVA.

The **kruskal-wallis test** is a non-parametric method for testing whether samples originate from the same distribution. The factual null hypothesis is that the populations, from which

the samples originate, have the same median. It is identical to a one-way Analysis of Variance with the data replaced by their ranks.

**Regression analysis** not only measures relationships between two variables but also predicts one variable from another (Field, 2005). In regression analysis, fitting of data to a predictive model is done. The model is then used to predict values of the dependent variable from one or more independent variables. Landau and Everitt (2004) stated that the linear regression is used to model the relationship between a single response variable and a single explanatory variable. If variables are categorical with values of 1 or 2 for example, Stieve (2005) recommends using logistic regression. One of the consequences of the linear regression model is that the dependent variable must be continuous because the condition of normal error terms implies that the dependent variable has a normal distribution. Field (2005) stated that for linear regression to be valid, the observed data should contain a linear relationship. When the outcome variable is dichotomous, this assumption is usually violated. If the variables have dichotomous data, logistic binary regression is recommended. Kathleen and Carmen (2002) observed that other forms of regression suffered from multi-collineality among the predictor variables which can lead to biasness in estimates and inflated standard errors. However, when the group membership is truly categorical, binary logistic regression procedure is very effective. The first classification table corresponds to a model that does not include an independent predictor. The second classification table corresponds to a model when all the independent variables are included (Kathleen and Carmen, 2002).

### **6.5.3 Binary logistic regression analysis**

Binary logistic regression analysis was used in this study. Peng et al (2002) recommend that the data reported on the results of the logistic regression analysis should include:

#### **(a) Statistical tests of individual predictors or independent variables**

Statistical significance of individual predictors is tested using the Wald chi-square statistic. The predictors, whose p-values are smaller than 0.05 are significant, and this was analysed by looking at the table of the 'variables in the equation' of the output data using the Statistical Package for the Social Sciences (SPSS).

**(c) Goodness-of-fit test statistics**

The goodness-of-fit tests indicate the appropriateness of the model, how well it fits with the actual outcomes. This can be estimated with the Hosmer-Lemeshow test, where the insignificance of the chi-square value is an indicator of goodness-of-fit, that is,  $p > 0.05$  indicates that the model fits the data well.

**(d) An assessment of the predicted probabilities**

The predictive accuracy of the binary logistic model can be presented in a classification table, where the predicted outcome is compared to the actual outcome. The classification table is especially recommended in a report, if classification is a stated goal of the analysis (Peng et al, 2002). According to Garson (2009), however, the Hosmer-Lemeshow chi-square test of goodness-of-fit is often preferred over classification tables. This is achieved by looking at the output data in the Hosmer-Lemeshow test table.

According to Spicer (2004), many reports of logistic regression analysis don't include information about the chi-square for the model, classifications results, and the logistic coefficients, but instead focus on the odds for each independent variable and their significance.

**6.5.4 Factors used in binary logistic regression**

A binary regression was run using dependent factors against independent factors. Both nominal and ordinal data collected was analysed using SPSS version 10.

The dependent factors used in the binary logistic regression analysis were as shown in (i) to (iii) below.

**(i) Unethical practices at project conception and tendering stage**

- (a) Copyright issues with regard to abuse of drawings by others especially by engineers and architects;
- (b) Overstating the scope and over-designing;
- (c) Insertion of unfair clauses in bid documents with the aim of excluding

potential bidders from participating;

- (d) Uncompetitive tendering;
- (e) Inclusion of unreasonable provisional sums in the tender due to inadequate take-offs;
- (f) Political interference;
- (g) Abuse of single sourcing;
- (h) Lack of confidentiality;
- (i) Conflict of interest;
- (j) Concept of lobbying for projects;
- (k) Biasness in tender evaluation;
- (l) Collusion among bidders;
- (m) Bribery and corruption;
- (n) Tempering with tender documents during evaluation to favour a preferred bidder;
- (o) Leaking engineers' estimate;
- (p) Exaggerating experience and academic qualifications; and
- (q) One sided contracts.

**(ii) Unethical practices at project supervision and construction stage**

- (a) Certification of poor quality works;
- (b) Fabrication of test results at the expense of quality;
- (c) Unreasonable variations during implementation;
- (d) Bribery and corruption;
- (e) Collusion of contractor with consultants;
- (f) Collusion of contractor with client representatives;
- (g) False certification of works;
- (h) Concealing systematic errors;
- (i) Deliberate delay in payments to induce corruption and bribes;
- (j) Certifying work not done;
- (k) Ambiguous variations and fluctuations;
- (l) Failure to appropriately advise the client;

- (m) Fraud - tempering with signed contract;
- (n) Fraud - altering contract documents;
- (o) Fraud - covering up poor workmanship;
- (p) Negligence of duty;
- (q) Dishonesty and unfair conduct;
- (r) Unfair reward for work done;
- (s) Lack of integrity;
- (t) Adversarial relationships between consultants and contractors;
- (u) Recruitment of poorly qualified and inexperienced consultants;
- (v) Failure to enforce specifications and standards;
- (w) Low quality monitoring procedures;
- (x) Delays and slow decision making;
- (y) Constant change of project specifications; and
- (z) Violation of environmental ethics.

**(iii) Unethical practices at project closure and commissioning stage**

- (a) Ignoring defective work done;
- (b) Falsifying final accounts;
- (c) Premature commissioning of works due to political influence;
- (d) Concealing errors;
- (e) Covering up project failure; and
- (f) Saving other consultant's necks for poor performance.

The independent factors used in binary regression indicated in (i) to (iv) below.

**(i) Ethics in the construction industry**

- (a) Does your company have a company Code of Ethics?;
- (b) Do you belong to a professional body?;
- (c) Does the professional body have a code of ethics?;
- (d) Have you read and understood the Code of Ethics of your profession?;
- (e) Have you read and understood the Code of Ethics of your company?;
- (f) Do you practice what is written in the code of ethics?; and

(g) Have you ever undergone training in ethics?.

**(ii) Factors influence ethical behaviour in organisations**

- (a) Organisation culture;
- (b) Organisation Code of Ethics;
- (c) Individual local factors and values;
- (d) Laws and regulations of the country;
- (e) External forces - societal norms;
- (f) External forces economic conditions;
- (g) External forces - political system;
- (h) External forces - family obligations;
- (i) Type of leadership; and
- (j) Internal disciplinary procedures.

**(iii) Individual influences that affect employees to act in an ethical manner**

- (a) Ego strengths;
- (b) Religious beliefs;
- (c) Individual moral maturity;
- (d) Age of a person;
- (e) Life experiences;
- (f) Work experience;
- (g) Socialisation of an individual;
- (h) Peer pressure;
- (i) Family obligations;
- (j) Status in community or society;
- (k) Gender of an individual;
- (l) Work environment (corporate goals, policies & culture); and
- (m) Fear of punishment.

**(iv) External factors that affect employees to act in an ethical manner**

- (a) Economic conditions;

- (b) Competition for scarce resources;
- (c) Political and social factors;
- (d) Legislation or legal environment;
- (e) Type of judicial system;
- (f) Social norms;
- (g) Professional codes of conduct;
- (h) Family obligations; and
- (i) Industry norms and practices

A binary regression was run using dependent factors against independent factors. The predicted variables were the probabilities and group membership. The likelihood, significance and goodness of fit tests were determined to establish significance.

## **6.6 Structure of the semi-structured questionnaire**

The structure of the questionnaire is as shown in Table 6.3. The questionnaire is attached in Appendix B. The type of data collected was both categorical and ordinal. A categorical variable, sometimes called a nominal variable, is one that has two or more categories, but there is no intrinsic ordering to the categories. For example, gender is a categorical variable having two categories, male and female, and there is no intrinsic ordering to the categories. A purely categorical variable is one that simply allows a researcher to assign categories but cannot clearly order the variables. An ordinal variable on the other hand is similar to a categorical variable. The difference between the two is that there is a clear ordering of the variables.

**Table 6.4:** Structure of the questionnaire

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<b>Section 1</b>		
<b>General information</b>		
1.1	Position	1.2 Age
		1.3 Sex
1.4	Profession	1.5 Marital status
		1.6 Education
1.7	Type of organisation	

---

<b>Section 2</b>	
2.1	Ethics in the construction
2.4	Why construction industry is prone to unethical behaviours
2.5	Unethical issues prevalent in the construction industry
2.6	What unethical issues respondents have witnessed and very prevalent in the construction industry
2.7	How does corruption in the construction industry affect Zambia as a country?
2.8	What factors influence ethical behaviour in organisations?
2.9	What individual influences affect employment to act in an ethical manner?
2.10	What external factors employees to act in an unethical manner?
2.11	How do you think Post Contract assessment can contribute to reduction in unethical behaviour?

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<b>Section 3</b>	
3.1	Role of National Council for Construction in promoting ethical behaviour

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<b>Section 4</b>	
4.1	Role of leadership in promoting ethical behaviour

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<b>Section 5</b>	
5.1	Solutions to unethical behaviour

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<b>Section 6</b>	
6.1	Corporate governance in the construction industry

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<b>Section 7</b>	
<b>Measuring and assessing integrity in an organisation</b>	
7.4	How to measure integrity in an organisation
7.5	How should management measure levels of integrity in an organisation
7.6	What is to be included in an ethics assessment programme in an organisation

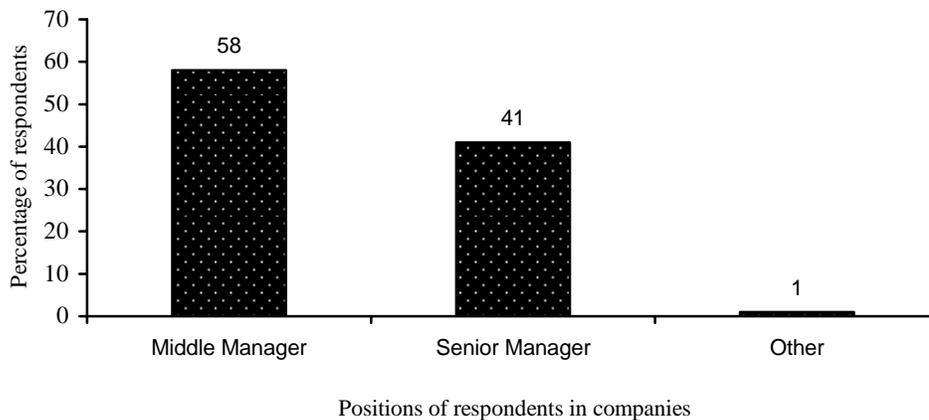
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### 6.6.1 General information about respondents

The respondents were requested to provide information on their positions, age, gender, profession, educational level attained and the type of company they worked for. The results are as shown in Figures 6.1 to 6.6.

### 6.6.2 Positions of respondents in their companies

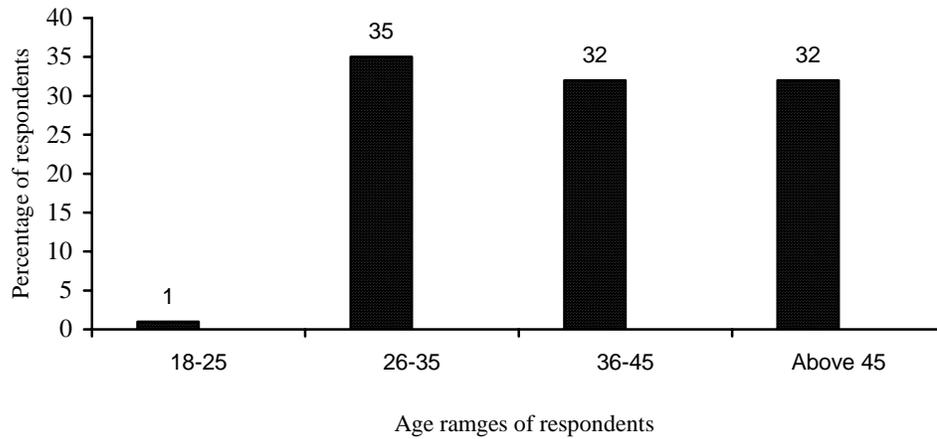
The positions of the respondents were: 41 per cent senior managers, 58 per cent middle managers and one per cent in positions lower than middle manager as shown in Figure 6.1. From these results, it was clear that the majority of the respondents were middle and senior managers and could be expected to speak from experience about unethical practices in the construction industry.



**Figure 6.1:** Positions of respondents in companies

### 6.6.3 Age ranges of respondents

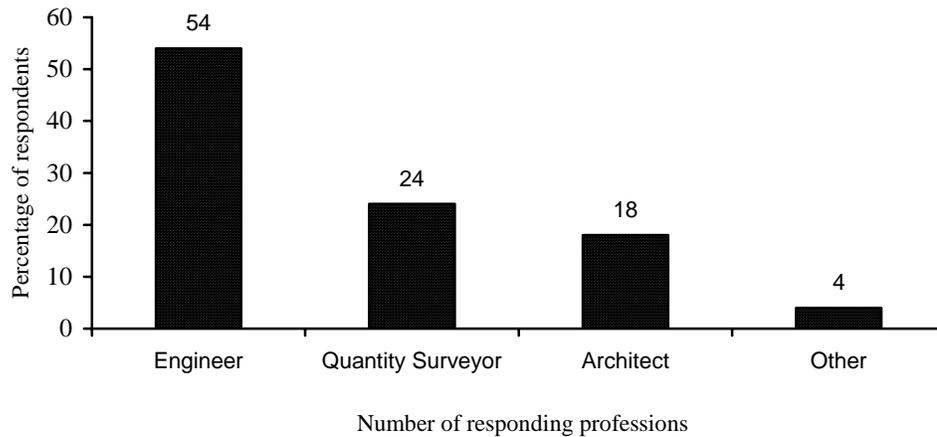
The ages of the respondents were grouped as follows: 18 to 25; 26 to 35; 35 to 45 and above 45 years. The number of respondents in each age range was as indicated in Figure 6.2. Ninety nine per cent of the respondents were 26 years old and above.



**Figure 6.2:** Age ranges of respondents

#### 6.6.4 Professions of respondents

Various professions that responded to the semi-structures questionnaire were as shown in Figure 6.3. Fifty four per cent were engineers, 24 per cent quantity surveyors, 18 per cent architects and 4 per cent other professions such as business administration. Engineers, quantity surveyors and architects were the main professions involved in the construction industry in Zambia at the time of the study.

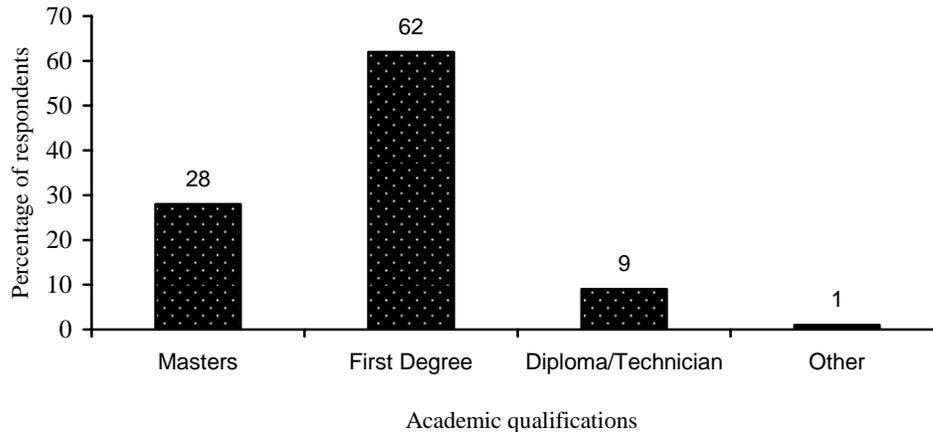


**Figure 6.3:** Professions of respondents

#### 6.6.5 Educational level of respondents

Respondents were also requested to provide information on their levels of education. The results are shown in Figure 6.4. Sixty-two per cent had first degrees, 28 per cent had masters'

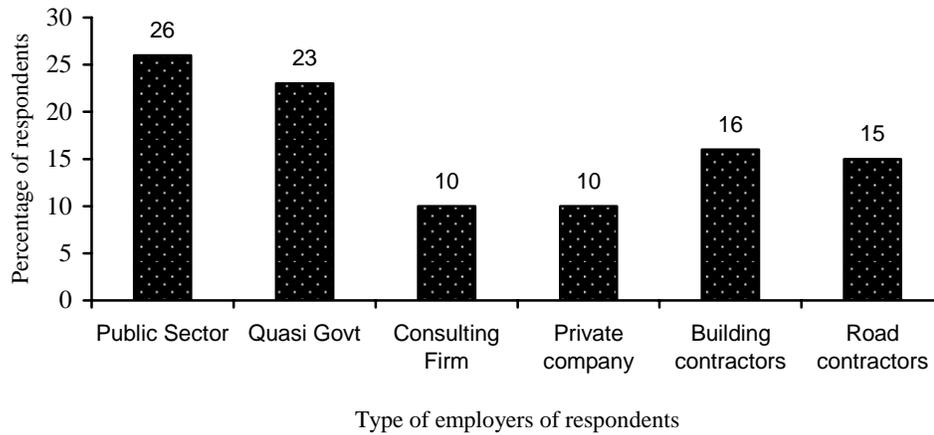
degrees, nine per cent were either technicians or diploma holders and only one per cent had other educational levels. None of the respondents were doctorate holders. From these results, most of the respondents had adequate education to comprehend ethical issues in the construction industry.



**Figure 6.4:** Educational level of respondents

#### **6.6.6 Types of organisations respondents worked for**

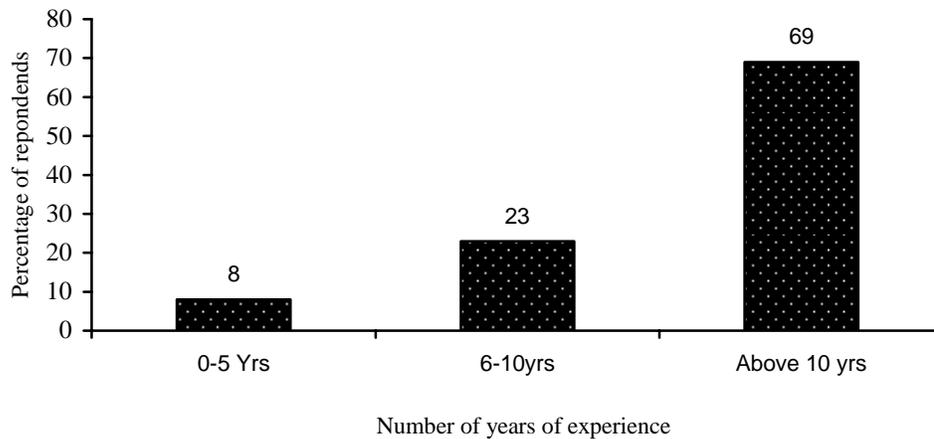
The type of organisations which respondents worked for are as shown in Figure 6.5. These are the main players in the construction industry in Zambia. Three questionnaires were hand delivered to donor agencies. However, they were not responded to. Mwiya (2009) also failed to have access to donor funded projects for her case studies. It appears that the sensitive nature of the subject of unethical practices in the construction industry could have discouraged them to participate. The bureaucratic procedures in donor agencies of getting approvals for officials to participate in a survey could also be cited as the reason for failing to respond to the questionnaire.



**Figure 6.5:** Organisations which respondents belonged to

### 6.6.7 Experience of respondents

The numbers of years of experience of the respondents were grouped as: 0 to 5; 6 to 10; and above 10 years of experience. Figure 6.6 shows the number of years of experience of the respondents in the construction industry. A combined total of 92 per cent of the respondents had six or more years of experience. It was therefore expected that the majority of the respondents had enough experience to have encountered unethical practices in the construction industry.



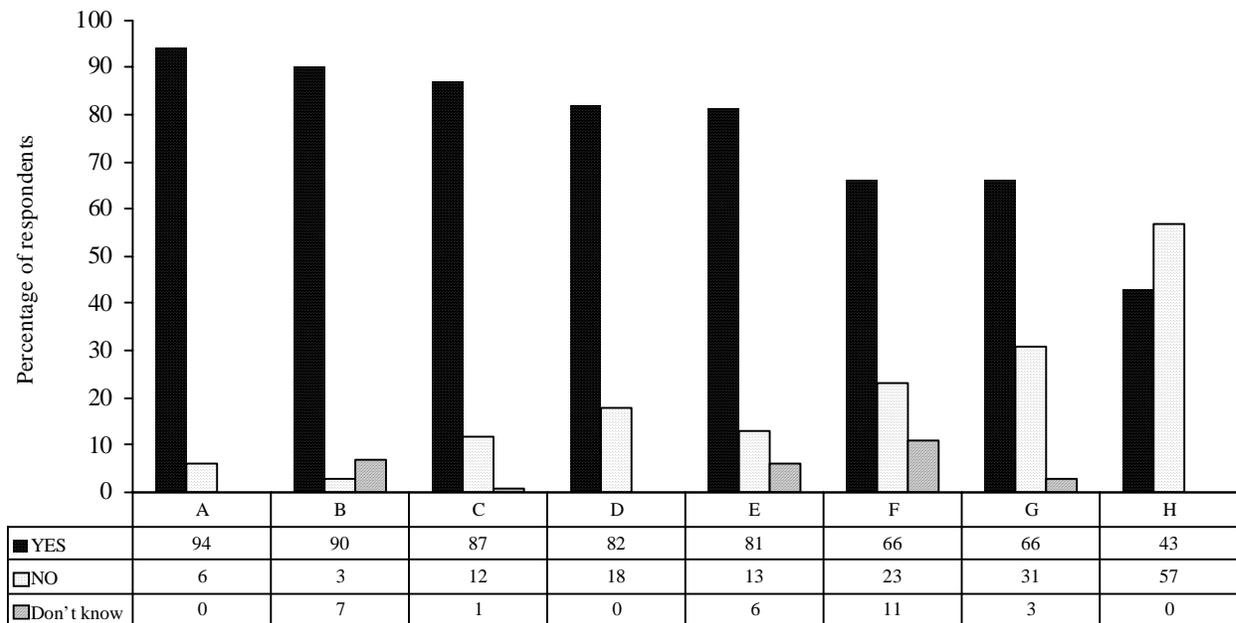
**Figure 6.6:** Years of experience of respondents

Other general information obtained was that 86 per cent of the respondents were male while 14 per cent were female. The construction industry in Zambia is dominated by males.

From the general information above, it was clear that most of the respondents were adequately experienced to understand and articulate ethical issues and that their analysis could be relied upon. The results also show that all the major players in the construction industry in Zambia responded to the questionnaire, with the exception of donor agencies.

### 6.7 Ethics in the construction industry

The respondents were requested to state their position on the Code of Ethics in their companies and professions. Figure 6.7 shows the position of the respondents with respect to the Codes of Ethics of their companies and professions.



- A** Do you belong to a professional body
- B** Does the professional body have a Code of Ethics
- C** Do you think the construction industry can benefit by having single code of conduct and ethics
- D** Have you read and understood the Code of Ethics of your profession
- E** Do you practice what is written in the Code of Ethics
- F** Does your company have a company Code of Ethics
- G** Have you read and understood the Code of Ethics of your company
- H** Have you ever undergone training in ethics

**Figure 6.7:** Position on Code of Ethics of companies and professions of respondents

From the results in Figure 6.7, most of the respondents agreed that:

- (a) they belonged to a professional body;
- (b) their professional bodies had Codes of Ethics;
- (c) they believed that the construction industry could benefit by having a single Code of Ethics;
- (d) they had read and understood the Code of Ethics of their professions and companies;
- (e) they practiced what was written in the Code of Ethics; and
- (f) the companies they worked for had Codes of Ethics.

Ninety-four per cent of the respondents belonged to a professional body. This is in comparable to 98 per cent in South Africa and 90 per cent in Australia (Bowen et al., 2007). Vee and Skitmore (2003) stated that this was an indication that most of the respondents had some form of infrastructure to guide them in making decisions for judging their ethical content and guard against unethical behaviour. It was therefore expected that these professionals should be ethically compliant.

Eighty-seven per cent of the respondents agreed that the construction industry could benefit by having a single Code of Ethics. These results are also comparable with those by Doran (2004) where it was established that 85 per cent of the respondents to a survey advocated for an industry-wide Code of Ethics.

However, most of the respondents stated that they had never undergone training in ethics. Only 43 per cent had undergone training in ethics. Doran (2004) in his study established that more than 90 per cent thought training in ethics could be the answer to unethical practices. Ninety seven per cent of the respondents also stated that training should start at collegiate level. However, before companies increase training on ethics, there is need to adopt ethical codes. When this happens, training would be more goal-oriented and become part of the overall corporate strategy.

Respondents were further asked to state whether a Code of Ethics was important to an organisation. Ninety-nine per cent of the respondents agreed. The following reasons were put forward as reasons why respondents felt that a Code of Ethics was important to an organisation:

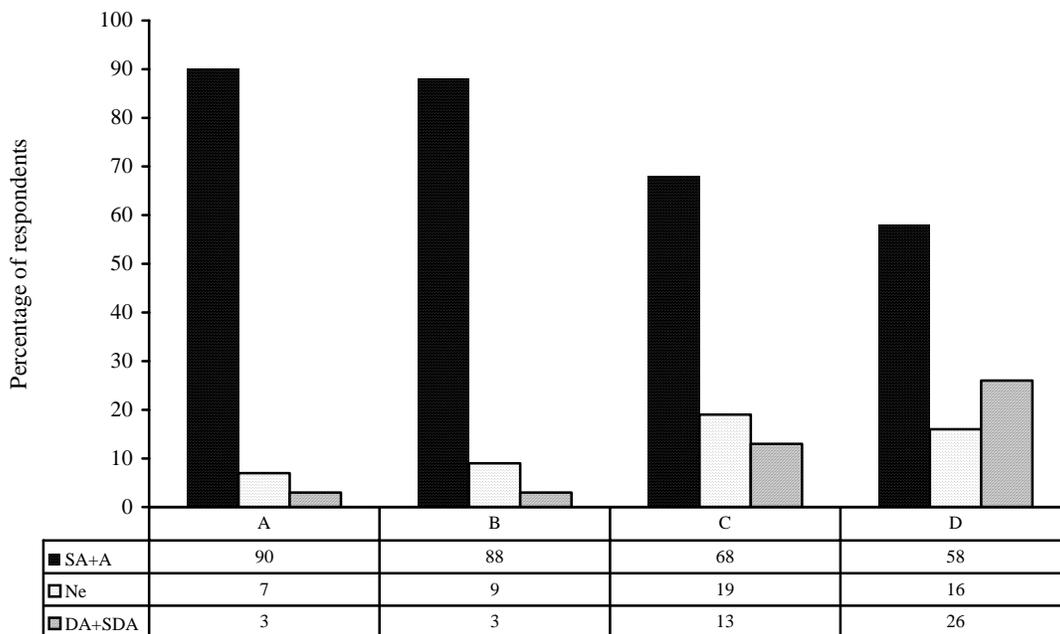
- (a) it regulates, controls and enhances professionalism of construction personnel in their conduct on duty;
- (b) it enables organisations achieve their objectives as all members are guided by the same Code of Ethics;
- (c) sets and maintains standards for industry to act in a harmonious way;
- (d) helps unify operation standards and requirements in an organisation;
- (e) deters workers from engaging in unethical practices and brings about accountability in an organisation;
- (f) promotes high levels of integrity;
- (g) gives guidance on standards of conduct expected from employees;
- (h) defines the confines within which employees are expected to execute their responsibilities;
- (i) promotes safety, health and welfare of the public;
- (j) regulates employees with regard to moral and ethical conduct; and
- (k) brings about compliance with rules and regulations in an organisation.

## **6.8 Reasons why the construction industry is prone to unethical practices**

Respondents were asked to state why the construction industry in Zambia was prone to unethical practices. The results were as shown in Figure 6.8.

### **6.8.1 Effects of politics on public works**

Ninety per cent of the respondents agreed that the effect of politics on public works was one of the reasons the construction industry in Zambia was prone to unethical behaviour. Public works are normally procured by government. Political leadership flex their muscles in influencing the contracting process. Osei-Tutu et al. (2010) agreed with this statement by stating that in Ghana, politicians influenced the choice of contractors or suppliers in total disregard of procurement processes.



SA = Strongly Agree, A = Agree, Ne = Neutral, DA = Disagree, SDA = Strongly Disagree

A – Effect of politics on public works

B - Competition to get projects was high

C – Bureaucratic nature of procurement

D – Legal loopholes in tender processes

**Figure 6.8:** Reasons why the construction industry is prone to unethical practices

### 6.8.2 Competition to win projects was very high

Eighty-eight per cent of the respondents agreed to the statement that competition to win projects in the construction industry was very high and this led to unethical practices. This was supported by Baker (2005) and Bowen et al (2007) who stated that that most projects are one-off, unique and contract amounts are large and lucrative, and therefore companies are under pressure to win them.

### 6.8.3 Bureaucratic nature of procurement

Sixty-eight per cent of the respondents agreed that the bureaucratic nature of the procurement process was one of the reasons the construction industry in Zambia was prone to unethical behaviour. Nineteen per cent of the respondents were neutral while 13 per cent disagreed with the statement. The procurement processes for construction projects in Zambia are normally long and bureaucratic. Contractors and consultants take advantage of these long processes to commit unethical practices such as bribery to win these tenders.

#### **6.8.4 Legal loopholes in tender procedures**

Fifty-eight per cent of the respondents agreed that legal loopholes in tender procedures were one of the reasons the construction industry in Zambia was prone to unethical behaviour. Sixteen per cent were neutral while twenty six per cent disagreed. Osei-Tutu et al. (2010) in agreement to this statement noted that the usual human greed and corruption provided by huge system loopholes, laxities in legal and administrative systems, a culture of non-transparency compounded by wide discretionary powers at the disposal of officials were the reasons for high prevalence of unethical practices.

From the results above, it was clear that the effect of politics in public works was one of the main reasons the construction industry in Zambia was prone to unethical practices. Others, in descending order of frequency, were competition in the construction industry to win projects was very high, bureaucratic nature of procurement and legal loopholes in tender procedures.

Other reasons put forward by respondents on why the construction industry was prone to unethical behaviours were:

- (l) lack of proper guidelines on procurement procedures;
- (m) project sums were usually huge and therefore contractors were willing to engage in unethical practices to win contracts;
- (n) the fragmented nature of the industry meant that many rules of corporate governance were not adhered to;
- (o) the participation of non-professionals in the industry;
- (p) high poverty and low income levels;
- (q) long duration taken to complete projects;
- (r) Selfishness, greedy and personal interest;
- (s) poor conditions of service in the public service;
- (t) corruption and bribery; and
- (u) monopoly of specialised services by certain contractors and consultants.

## **6.9 Unethical practices experienced in the construction industry in Zambia**

The phases of a construction project are: inception and tendering; project supervision and actual construction; and project closure and commissioning.

### **6.9.1 Project inception and tendering**

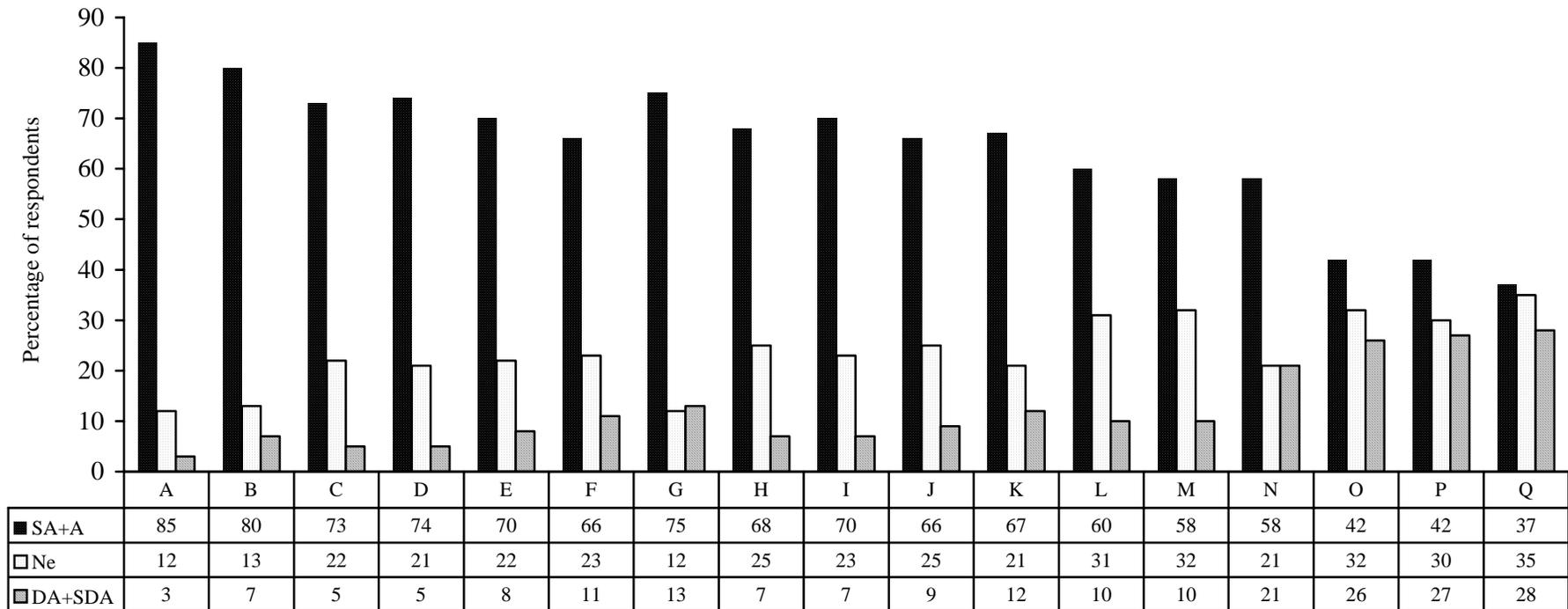
Respondents were asked to state the unethical practices experienced during project inception and tendering process of construction works. Project inception includes development of project idea and design of the project. Most of the respondents agreed to the statement that there were unethical practices during project inception and tendering of construction works as shown in Figure 6.9.

#### **(a) Political interference**

Eighty-five per cent of the respondents had a combined score of ‘strongly agree’ and ‘agree’ to the statement that political interference was one of the unethical practices at project inception and tendering stage, while 12 per cent were ‘neutral’ and three per cent had a combined score of ‘strongly disagree’ and ‘disagree’. Most projects are funded by government or through it by donor agencies. Politicians being heads of government ministries tend to influence the process of procurement of construction projects. Political interference was ranked first among all factors in project conception and tendering of works. Other factors in descending order were as shown below.

#### **(b) Bribery and corruption**

Eighty per cent of the respondents had a combined score of ‘strongly agree’ and ‘agree’ to the statement that bribery and corruption practices were prevalent during project inception and tendering stage, while 13 per cent were ‘neutral’ and seven per cent had a combined score of ‘strongly disagree’ and ‘disagree’. In South African, Bowen et al. (2007) reported that 41 per cent of the respondents in the construction sector had witnessed or experienced bribery. In Australia, Vee and Skitmore (2003) stated that only 26 per cent had witnessed or experienced bribery. These results show that bribery and corruption was more prevalent in Zambia than in South Africa and Australia.



SA= Strongly Agree

A = Agree

Ne = Neutral

DA= Disagree

SDA = Strongly Disagree

**A** - Political interference

**C** - Abuse of single sourcing

**E** - Exaggerating experience and academic qualifications

**G** - Copyright issues with regard to abuse of people's drawings

**I** - Conflict of interest

**K** - Biasness in tender evaluation

**M** - Collusion among bidders

**O** - Insertion of unfair clauses in bid documents with the aim of excluding potential bidders from participating

**P** - Tampering with tender documents during evaluation to favour preferred bidder

**Q** - One sided contracts

**B** - Bribery and corruption

**D** - Overstating the scope

**F** - Inclusion of unreasonable provisional sums in the tender due

**H** - Leaking engineers' estimate

**J** - Concept of lobbying for projects

**L** - Lack of confidentiality

**N** - Uncompetitive tendering

**Figure 6.9:** Unethical practices experienced at project inception and tendering stage

Shakantu (2006) in agreement to this statement stated that one point or another some form of corruption such as bribery, extortion, theft and fraud takes place within the confines of the construction project. Though bribery is rarely reported, it is one of the major unethical practices in the industry.

Mason (2008) on the other hand stated that the majority of contractors who do engage in corrupt practices tend to do so not because they want to, but because they feel compelled by the way the industry and political environment operate. Abdul-Rahman et al (2011), in a study of clients' perspectives of professional ethics, stated that interviewees ranked unethical award of contracts and bribery as first and second. Abdul-Rahman et al (2011) further stated that bribery had become a culture in the Malaysian construction industry. Shakantu (2006) observed that infrastructure sectors of most economies are particularly exposed to corruption practices. This suggested that any improvement in reduction of corruption in the public procurement system will have a direct and substantial impact on the overall economic situation. Mawenya (2008) acknowledged that this would result in savings and public expenditure efficiencies.

**(c) Abuse of single sourcing**

Single sourcing under the ZPPA is mainly used:

- (i) for tasks that represent continuation of previous work carried out by the firm;
- (ii) in emergency cases such as disasters;
- (iii) for very small routine assignments; and
- (iv) when only one firm is qualified or has experience of exceptional worth for the assignment.

Single sourcing has therefore been abused to unethically contract works. Seventy three per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that abuse of single sourcing was one of the unethical practices at project inception and tendering stage, while 22 per cent were 'neutral' and five per cent had a combined score of 'strongly disagree' and 'disagree'.

**(d) Exaggeration of experience and academic qualification of those tendering**

Public tender documents normally detail the requirement of experience and academic qualifications of key technical personnel. Ameh and Odusami (2010) observed that the labour force in the industry is nomadic in nature. At the end of every project, a good number of workers move on to other projects or companies. To win tenders, contractors tend to exaggerate their experience and academic qualifications of the key technical staff, and even include staff that had either left or are not in employment.

In this study, 70 per cent of the respondents had a combined score of ‘strongly agree’ and ‘agree’ to the statement that exaggeration of experience and academic qualifications was one of the unethical practices at construction project tendering stage, while 22 per cent were ‘neutral’ and eight per cent had a score of ‘disagree’. None of the respondents scored ‘strongly disagree’.

These results were comparable with those by Oyewobi et al. (2011) who stated that 73 per cent of the respondents agreed that contractors provided fraudulent qualifications when preparing for tenders. Mwiya (2009) also stated that 100 per cent of the respondents in her study indicated that provision of fraudulent qualifications by contractors during tendering was very common.

**(e) Overstating scope and over designing**

Consultants’ fees scales are mainly based on percentage of scope of work. For example, the professional fee scale for architects is six per cent of the scope in line with the Zambia Institute Architects Chapter 442 of the Laws of Zambia. There is, therefore, a tendency to over design or over state scope so as to increase the amount of fees payable. Seventy-four per cent of the respondents had a combined score of ‘strongly agree’ and ‘agree’ to the statement that overstating scope and over designing were some of the unethical practices at project conception and tendering stage while 21 per cent were ‘neutral’ and six per cent had a score of ‘disagree’. None of the respondents scored ‘strongly disagree’.

**(f) Unreasonable provisional sums in tenders**

Provisional sums are included in tender documents as a safeguard for unforeseen circumstances that may have a cost. They are normally expended at the approval of the project manager. However, this is a source of unethical behaviour as fictitious work is created to siphon the provisional sums. Sixty-six per cent of the respondents agreed to this statement.

**(g) Copyright abuse of designs especially by engineer and architects**

The designs of the engineer or architect have copyrights and are only intended for a particular defined use. The Copyright and Performance Rights (Amendment) Act No. 25 of 2010 of Zambia state that any person who, during the subsistence of copyright in a work makes for sale or hire any infringing copy or distributes infringing copies or makes or has in that person's possession, any article used or intended to be used for the purpose of making infringing copies without the consent of the copyright owner commits an offence and is liable, upon conviction to a fine or conviction of up to ten years or to both. Despite this provision, this is still a major unethical practice in the industry. Seventy-five per cent of the respondents agreed to this statement.

A binary logistic regression was performed on seven predictor variables in section 6.5.2 above to ascertain whether they had an effect on the dependent variable, copyright issues with regard to infringement of copyrights with respect to drawings especially by engineers and architects. The likelihood tests and score tests was significant at score = 4.28,  $df = 1$ ,  $p < 0.05$ . Independent variable 'do you practice what is written in the Code of Ethics' was significant at  $df = 1$ ,  $p < 0.05$  with the odds ratio  $\exp(B) = 0.13$ . The goodness of fit of the model shows that  $p > 0.05$ , indicating that the model fits the data well. This result showed that there was a relationship between practicing what is in the Code of Ethics and infringement of copyrights. Professionals who practice what is written in the Code of Ethics are not expected to violate the copyright issues.

**(h) Leaking Engineer's estimate**

A common practice in project procurement is that an engineer's estimate is prepared to act as a guide during the tendering process and evaluation of bids. Responsive bids are expected to be within a certain range of the engineer's estimate. Leaking the Engineer's estimate therefore advantages one set of bidders over others and is unethical. Sixty eight per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that leaking of Engineer's estimate was one of the unethical practices at project conception and tendering stage while 25 per cent were 'neutral' and seven per cent had a combined score of 'strongly disagree' and 'disagree'.

A binary logistic regression was performed on seven predictor variables in section 6.5.2 above to ascertain whether they had an effect on the dependent variable, 'Leaking Engineers' estimate'. The likelihood-test and score-test was significant at score = 5.57,  $df = 1$ ,  $p < 0.05$  on the independent variable 'have you ever undergone training in ethics' with the odds ratio  $\exp(B) = .11$ . The goodness of fit hesmer and lemeshow test of the model showed that  $p > 0.05$ , indicating that the model fits the data well. Therefore, persons that have been trained in ethics are not expected to leak Engineer's estimates.

**(i) Conflict of interest**

Conflict of interest in an unethical act as it creates an appearance of impropriety that can undermine confidence in the ability of a person to act properly in his or her position (Ferrell et al., 2000). Seventy per cent of the respondents agreed to this statement. Sixty-three per cent of the respondents to a survey by Mwiya (2009) observed that non-declaration of interest was very common in the construction industry in Zambia.

A binary logistic regression was performed on the predictor variables in section 6.5.2 above to ascertain whether they had an effect on the dependent variable, 'conflict of interest'. The likelihood-test and score-test was significant at score = 4.90,  $df = 1$ ,  $p < 0.05$ . Independent variable 'do you practice what is written in the Code of Ethics' was also significant at  $df = 1$ ,  $p < 0.05$  with the odds ratio  $\exp(B) = 0.10$ . The goodness of fit hesmer and lemeshow test of the model showed that  $p > 0.05$ , indicating that the model fits the data well. From these

results, therefore, there was a relationship between conflict of interest and practicing what is written in the Code of Ethics. Conflict of interest is not allowed in all Codes of Ethics.

These results are slightly comparable with those in the Australian construction industry (Vee and Skitmore, 2003) where high incidences of unacceptable behaviour of conflict of interest were reported. Forty eight per cent of the respondents had witnessed breaches of conflict of interest.

**(j) Biasness in tender evaluation**

Biasness may involve using different evaluation criteria among different bidders for the same tender. This is unethical as it tends to favour one bidder over others (Moylan, 2005). Sixty-seven per cent of the respondents agreed to this statement.

A binary logistic regression was performed on the predictor variables in section 6.5.2 above to ascertain whether they had an effect on the dependent variable, 'biasness in tender evaluation'. The likelihood-test and score-test was significant at score = 8.78,  $df = 1$ ,  $p < 0.05$ . Independent variable 'have you ever undergone training in ethics' was also significant at  $df = 1$ ,  $p < 0.05$ . The goodness of fit hesmer and lemeshow test of the model showed that  $p > 0.05$ , indicating that the model fits the data well. From these results it was expected that persons who have undergone training in ethics are not expected to practice the unethical behaviour of biasness in tender evaluation.

**(k) Concept of lobbying for projects**

The concept of lobbying is closely related to political interference. This is a belief among some contractors or consultants that they could only win construction projects through lobbying. This act interferes with competition. Sixty-six per cent of respondents had a combined score of 'strongly agree' and 'agree' to the statement that the concept of lobbying for projects was one of the unethical practices during the tendering stage while 25 per cent were 'neutral' and eight per cent had a combined score of 'strongly disagree' and 'disagree'.

A binary logistic regression was performed on the predictor variables in section 6.5.2 above to ascertain whether they had an effect on the dependent variable, 'concept of lobbying for projects'. The likelihood-test and score-test was significant at score = 6.25, df = 1,  $p < 0.05$ . Independent variable 'have you ever undergone training in ethics' was also significant at df = 1,  $p < 0.05$  with the odds ratio  $\exp(B) = .15$ . The goodness of fit hesmer and lemeshow test of the model showed that  $p > 0.05$ , indicating that the model fits the data well. From these results it was expected that persons who have undergone training in ethics are not expected to practice the unethical behaviour of lobbying for projects.

**(l) Lack of confidentiality**

In Zambia, it is expected that officers in public procurement of works or consultants appointed for the construction project act with utmost confidentiality in line with the ZPPA guidelines. Sixty per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that the lack of confidentiality was one of the unethical practices during project conception and tendering stage while 31 per cent were 'neutral' and 10 per cent had a combined score of 'strongly disagree' and 'disagree'.

A binary logistic regression was performed on the predictor variables in section 6.5.2 above to ascertain whether they had an effect on the dependent variable, 'lack of confidentiality'. The likelihood-test and score-test was significant at score = 3.44, df = 1,  $p < 0.05$ . Independent variable 'industry norms and practices' was also significant at df = 1,  $p < 0.05$ . The goodness of fit hesmer and lemeshow test of the model showed that  $p > 0.05$ , indicating that the model fits the data well. It was, therefore, expected that if the industry norms do not permit or condone the malpractice of lack of confidentiality, professionals are unlikely to be involved in it.

**(m) Collusion among bidders**

In South Africa, Bowen et al. (2007) reported that 72 per cent of respondents to their questionnaire had some experience or contact with collusive tendering practices. Vee and Skitmore (2003) also indicated in his study that 44 per cent of the respondents in the construction sector had either witnessed or been involved in collusive tendering practices in

Australia. Collusion may involve two or more contractors or a contractor and a consultant or contractor and the client representative. Fifty-eight per cent of the respondents in this survey had a combined score of 'strongly agree' and 'agree' to the statement that the collusion among bidders was one of the unethical practices during the tendering stage while 32 per cent were 'neutral' and 10 per cent had a combined score of 'strongly disagree' and 'disagree'. Although collusion is lower according to these results than in South Africa, it was still a major problem in the construction sector in Zambia. Another survey by Mwiya (2009) indicated that 53 per cent of the respondents stated that collusion was prevalent in the construction industry in Zambia.

Bowen et al. (2007) gave severe recession as one of the reasons bidders may resort to collusive tendering practices. This enables contractors forming such groups to spread work among themselves. This could be true in certain sectors of the construction industry in Zambia, such as roads.

#### **(n) Uncompetitive tendering**

Uncompetitive tendering is unethical. Zhou (2006) described uncompetitive tendering practices to include abuse of evaluation criteria, preferential treatment of bidders, disclosure of baseline price of project and lack of integrity on the part of members of the evaluation committee. Uncompetitive tendering may bring about company failures. Fifty-eight per cent of the respondents agreed to this statement.

A binary logistic regression was performed on the predictor variables in section 6.5.2 above to ascertain whether they had an effect on the dependent variable, 'uncompetitive tendering'. The likelihood tests and score tests was significant at score = 6.92, df = 1,  $p < 0.05$ . Independent variable 'have you ever undergone training in ethics' was also significant at df = 1,  $p < 0.05$  with the odds ratio  $\exp(B) = 0.10$ . The goodness of fit hesmer and lemeshow test of the model showed that  $p > 0.05$ , indicating that the model fits the data well. From these results, there was a relationship between uncompetitive tendering and undergoing training in ethics. A person who has undergone training in ethics is therefore not expected to undertake uncompetitive tendering practices.

**(o) Tampering with tender documents**

Tampering with tender documents during evaluation to favour a preferred bidder had a modal response of 'agree'. However, the combined score for 'strongly agree' and 'agree' for this statement was only 42 per cent while for 'strongly disagree' and 'disagree' it was 30 per cent. The score for neutral was 27 per cent. Although the modal response was 'agree', more than half of the respondents did not agree to the statement. Most respondents scored either neutral or disagreed with the statement. This could be true because most bidders deposit their bids on the closing date and each and every page of the bid is stamped during bid opening.

**(p) Insertion of unfair clauses in tender documents**

Insertion of unfair clauses in bid documents with the aim of excluding potential bidders from participating had modal response of 'agree'. The combined score for 'strongly agree' and 'agree' was only 42 per cent while for 'strongly disagree' and 'disagree' was 26 per cent. The scores for 'neutral' were 32 per cent. In this case, even though the modal response was 'agree', more than half of the respondents did not agree with the statement. They either scored neutral or disagreed with the statement. This could be true because bidders are availed bid documents before tendering for works. Normally, many bidders would decline to participate in the tender if it had unfair clauses.

**(q) Contracts are one sided**

The statement that 'contracts were one sided', had a modal and median responses of 'neutral'. However, the combined score for 'strongly agree' and 'agree' to this statement was 37 per cent while for 'strongly disagree' and 'disagree' was 35 per cent. The scores for 'neutral' were 28 per cent. Therefore, more than half of the respondents did not agree with the statement that 'one sided contracts' was one of the reasons for unethical misconduct at tendering stage of the construction project. This could be true because for every tender, some form of pre-conference takes place to discuss among other things, the tender requirements and the proposed contract and amendments are done when necessary.

## **6.9.2 Project supervision and construction**

Respondents were asked to state unethical practices experienced during project supervision and actual execution of the construction projects. Most of the respondents agreed to the statements listed in Figure 6.10.

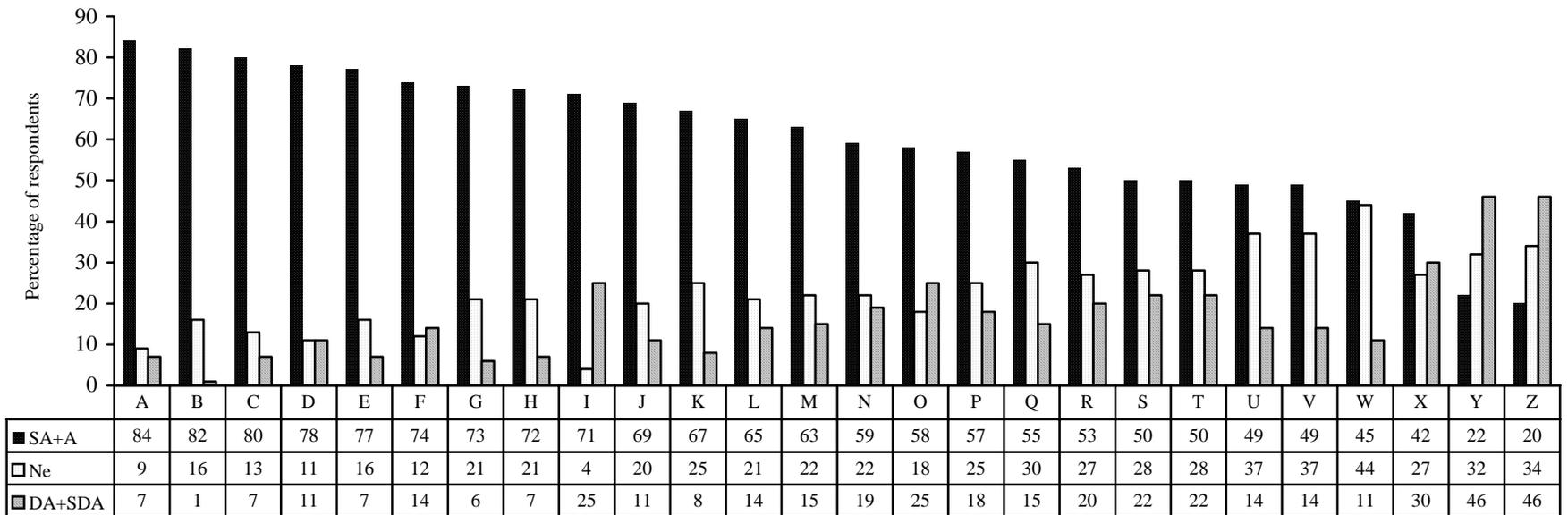
### **(a) Delays and slow decision making**

Delays in decision making are mainly due to consultants' or clients' failure to give clear instructions in time to the contractor on technical matters. Eighty-two per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that the delays in decision making was one of the unethical practices during the construction phase while 16 per cent were 'neutral' and only one per cent had a score of 'disagree'. None of the respondents scored 'strongly disagree'. From these results, it was clear that this problem is quite prevalent.

### **(b) Certification of poor quality works**

In a study by Shakantu (2006) it was noted that certification of poor quality works was prevalent in the South African construction industry. This was unethical as the client does not get good value for money for the construction project. The Auditor general's report of 2010 on RDA also confirmed this statement by stating that poor quality works were observed on most of the contracts in Zambia in the road sector.

Seventy-eight per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that the certification of poor quality works was one of the unethical practices during the construction phase while 11 per cent were 'neutral' and 11 per cent had a combined score of 'strongly disagree' and 'disagree'.



SA = Strongly Agree

A = Agree

Ne = Neutral

DA= Disagree

SDA = Strongly Disagree

A – Low quality monitoring procedures

C - collusion of contractor with client representatives

E - Bribery and corruption

G - Unreasonable variations during implementation

I – False certification of works

K – Failure to appropriately advise client

M – Dishonesty and unfair conduct

O - Recruitment of poorly qualified and inexperienced consultants

Q – Negligence of duty

S – concealing errors

U – Adversarial relationships between consultants and contractors

W – Violation of environmental ethics

Y – tampering with signed contract

B – Delays and slow decision making

D – Certification of poor quality works

F – Failure to enforce specifications and standards

H - Collusion of contractor with consultant

J – Lack of integrity

L – Fabrication of test results at the expense of quality

N– Deliberate delays in payments to induce bribery and bribes

P - Ambiguous variations and fluctuations

R - covering up poor workmanship

T - Unfair reward for work done

V - Constant change of project specifications

X - Certifying work not done

Z - Altering contract documents

**Figure 6.10:** Unethical practices experienced during project construction and supervision stage

**(c) Low quality monitoring procedures**

Eighty-three per cent of the respondents had a combined score of ‘strongly agree’ and ‘agree’ to the statement that low quality monitoring procedures led to unethical practices during the construction phase while 10 per cent were ‘neutral’ and seven per cent had a combined score of ‘strongly disagree’ and ‘disagree’. This can also be confirmed by the Auditor General’s report of 2010 on the RDA which indicated that there was low quality monitoring as result of late engagement of consultants to supervise construction projects.

**(d) Bribery and corruption**

Bribery and corruption are among the most common unethical practices on construction projects. During project execution, the contractor normally bribes the client representatives or the supervising consultant so as to gain favourable treatment. However, most common cases of bribery and corruption are not reported (Shakantu, 2006). Bowen et al. (2007) also stated that in South Africa, bribery in the form of payments and gifts is very prevalent.

Seventy-seven per cent of the respondents had a combined score of ‘strongly agree’ and ‘agree’ to the statement that bribery and corruption was one of the unethical practices during the construction phase while 16 per cent were ‘neutral’ and seven per cent had a combined score of ‘strongly disagree’ and ‘disagree’.

In Malawi, Shakantu and Chiocha (2009) reported that 81 per cent of the respondents stated that the prevalence of corruption was high in the country and that it was bound to increase. The respondents further observed that politicians, public works officials, contractors and suppliers of construction materials and equipments were all involved in corruption. In Malaysia, Abdul-Rahman (2010) reported that 91 per cent of the respondents ranked bribery and corruption among the main unethical practices in the construction industry.

These results are also comparable to those by Rose-Ackerman (2008) who stated that corruption was highly prevalent in the construction industry. The corruption money was easy to hide in construction projects. The competitive nature of the bidding processes of construction projects also encouraged firms to try to outwit others through payoffs.

**(e) Collusion of contractors with client representatives**

Collusion between a contractor and client representatives normally takes place to de-fraud the client. Eighty per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that collusion of contractor with client representative was one of the unethical practices during the construction phase while 13 per cent were 'neutral' and seven per cent had a combined score of 'strongly disagree' and 'disagree'.

These results are comparable to those in Nigeria, according to a study by Oyewobi et al. (2011) who stated that the 84 per cent of the respondents agreed that contractors had a propensity to collude to share the market where they operated from. Oyewobi et al. (2011) admitted that collusion has become a global problem. Zarkada-Fraser (2000) also asserted that there were five major issues in tendering that involve ethical implications which include bid withdrawal, bid cutting, compensation of tendering costs and collusion.

**(f) Collusion of contractors with consultants**

Collusion between a contractor and a consultant normally takes place to de-fraud the client. This could be through duplicate payments and false invoices (the Asian Organisation of Supreme Audit Institutions, 2007) or unreasonable variations. Seventy-two per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that collusion of contractor with consultants was one of the unethical practices during the construction phase while 21 per cent were 'neutral' and seven per cent had a combined score of 'strongly disagree' and 'disagree'.

**(g) Unreasonable variations during implementation**

Unreasonable variations result in unjustified increased project cost. Seventy-three per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that unreasonable variations was one of the unethical practices during the construction phase while 21 per cent were 'neutral' and six per cent had a combined score of 'strongly disagree' and 'disagree'. These results were comparable with those by Mwiya (2009) who stated that 68 per cent of the respondents indicated that increased variation claim was very common in the construction sector in Zambia. Oyewobi et al. (2011) also stated that in Nigeria, 89 per

cent of the respondents agreed that contractors unreasonably increased the scope and once payment is made to them, the money is shared.

**(h) Fabrication of test results at the expense of quality**

Engineering test results are used to confirm that the contract works are being done to required specifications and strength. However, this is often violated by some contractors who fabricate result and is therefore unethical as it compromises the quality of works. Sixty-seven per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that fabrication of test results at the expense of quality was one of the unethical practices during the construction phase while 25 per cent were 'neutral' and eight per cent had a combined score of 'strongly disagree' and 'disagree'.

**(i) Lack of integrity**

Lack of integrity may lead to production of project works that are unsafe, unreliable and unusable. This may result in re-works and therefore an increase in project cost (Vee and Skitmore, 2003). Sixty-nine per cent of the respondents agreed to this statement that that lack of integrity was one of the unethical practices during the construction phase.

**(j) Failure to enforce specifications and standards**

Seventy-four per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that failure to enforce specifications and standards was one of the unethical practices during the construction phase while 13 per cent were 'neutral' and 14 per cent had a combined score of 'strongly disagree' and 'disagree'. This is unethical and compromises quality of the construction project.

A binary logistic regression was performed on the predictor variables in section 6.5.2 above to ascertain whether they had an effect on the dependent variable, 'failure to enforce specifications and standards'. The likelihood tests and score tests was significant at score = 14.87,  $df = 1$ ,  $p < 0.05$ . Independent variable 'industry norms and practices' were also significant at  $df = 1$ ,  $p < 0.05$ . The goodness of fit hesmer and lemeshow test of the model showed that  $p > 0.05$ , indicating that the model fits the data well. It was expected that were

industrial norms do not entertain failure to enforce specifications and standards, this vice was not prevalent.

**(k) Failure to appropriately advise the client**

The consultants are expected to advise the client professionally on the construction project. Failure to appropriately advise the client is unethical and unprofessional. Sixty-five per cent of the respondents agreed to this statement that failure to appropriately advise the client was one of the unethical practices prevalent during the construction phase.

A binary logistic regression was performed on the predictor variables in section 6.5.2 above to ascertain whether they had an effect on the dependent variable, 'failure to appropriately advise the client'. The likelihood tests and score tests was significant at score = 3.67, df = 1,  $p < 0.05$ . Independent variable 'do you belong to a professional body' was also significant at df = 1,  $p < 0.05$ . The goodness of fit hesmer and lemeshow test of the model showed that  $p > 0.05$ , indicating that the model fits the data well. From these results it was expected that persons who belong to a professional body and have a Code of Ethics are not expected to practice the unethical behaviour of failure to appropriately advise the client.

**(l) Deliberate delay in payments to induce corruption and bribes**

Deliberate delay to pay may result in the contractor to panic and offer a bribe to speed-up the payment process. Fifty-nine per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that deliberate delay in payments to induce corruption and bribes was one of the unethical practices during the construction phase while 22 per cent were 'neutral' and 19 per cent had a combined score of 'strongly disagree' and 'disagree'. These results were comparable with those by Mwiya (2009) who stated that 50 per cent of the respondents indicated that delays in issuance of payment certificates was very common in the construction sector in Zambia.

**(m) False certification of works**

The Auditor General's report of 2010 on RDA indicated that some payments were made for work not done. This unethical practice therefore appears widespread. Seventy-eight per cent

of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that false certification of works was one of the unethical practices during the construction phase while four per cent were 'neutral' and 25 per cent had a combined score of 'strongly disagree' and 'disagree'. The modal response for this statement was 'agree'. Mwiya (2009) in her survey indicated that 64 per cent of the respondents stated that false certification of works was very common in the construction industry in Zambia.

**(n) Dishonesty and unfair conduct**

Ferrell et al. (2000) stated that examples of dishonesty and unfair conduct include bribery, fraud, collusive tendering and preparation of forged documents. This unethical practice was wide spread. Sixty-three per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that dishonesty and unfair conduct was one of the unethical practices during the construction phase while 22 per cent were 'neutral' and 15 per cent had a combined score of 'strongly disagree' and 'disagree'. Vee and Skitmore (2003) in their survey stated that 81 per cent of the respondents had witnessed or experienced unfair and dishonesty conduct in the construction sector in Australia.

**(o) Negligence of duty**

The main areas of negligence of duty on a construction project according to Vee and Skitmore (2003) include design negligence, design defect, production defect, inadequate safety standards or a combination of these factors. Bowen et al. (2007) stated that in South Africa negligence mainly occurred from poor documentation and poor workmanship. Eighty-six of the respondents in South Africa reported having experienced or observed professional incompetence (Bowen et al., 2007) compared to 67 per cent in Australia (Vee and Skitmore, 2003).

Fifty five per cent of the respondents in this study had a combined score of 'strongly agree' and 'agree' to the statement that negligence of duty was one of the unethical practices during the construction phase while 30 per cent were 'neutral' and 15 per cent had a combined score of 'strongly disagree' and 'disagree'. These results indicated that the prevalence of professional negligence was lower in Zambia than in South Africa and Australia.

Bowen et al. (2003) further identified poor documentation of contracts and drawings; and poor workmanship as unethical practices prevalent in South Africa. .

A binary logistic regression was performed on predictor variables in section 6.5.2 above to ascertain whether they had an effect on the dependent variable, 'negligence of duty'. The likelihood tests and score tests was significant at score = 4.19, df = 1,  $p < 0.05$ . Independent variable 'industry norms and practices' were also significant at df =1,  $p < 0.05$ . The goodness of fit hesmer and lemeshow test of the model indicates that  $p > 0.05$ , showed that the model fits the data well. It is therefore expected that where the industry norms are strict on the behaviour of professionals, the unethical conduct of negligence of duty is low.

**(p) Recruitment of poorly qualified and inexperienced consultants**

Recruitment of consultants is done by the client. In the public sector, the ZPPA has an elaborate procedure of selection of consultants. Even with this in place, some clients violate the procedure to contract poorly qualified and inexperienced consultants. The effects of poorly qualified consultants include: failure to make quick technical decisions; and poor supervision of complicated projects. Fifty-eight per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that recruitment of poorly qualified and inexperienced consultants was one of the unethical practices during the construction phase as they are incompetent while 18 per cent were 'neutral' and 25 per cent had a combined score of 'strongly disagree' and 'disagree'.

**(q) Fraud - covering up poor workmanship**

Construction projects have aspects that are normally concealed in one way or another. For example, the steel reinforcement is covered in concrete and poor quality blocks with plaster (Fewings, 2009). Some supervisors cover up poor workmanship in such instances. Fifty-three per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that covering up poor workmanship was one of the unethical practices during the construction phase while 27 per cent were 'neutral' and 20 per cent had a combined score of 'strongly disagree' and 'disagree'. In Australian, Vee and Skitmore (2003) reported that 35 per cent of the respondents had experienced or observed fraudulent behaviour compared to

23 per cent in South Africa (Bowen et al., 2007). Vee and Skitmore identified the most common forms of fraud as deceit, misinformation, covering up poor workmanship, falsifying documents and constructing with poorer substitute materials.

Abdul-Rahman et al. (2010) carried out a Pearson correlation between quality of works and work-ethics in the construction sector in Malaysia. It was established that the two were correlated. Quality level in the construction industry, according to Abdul-Rahman et al. (2010), will be better if the work ethics in the sector are better and vice versa. Results further indicated that developing countries should not jump into the quality bandwagon without taking care of the needs of strengthening ethics.

**(r) Ambiguous variations and fluctuations**

Unsubstantiated variations and fluctuations in a construction project are unethical. This is not only typical to Zambia. Stansbury (2003) observed that in the UK, submission of false claims and those which were recklessly inaccurate was one of the major problems. Fifty-seven per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that ambiguous variations and fluctuations were some of the unethical practices during the construction phase while 25 per cent were 'neutral' and 18 per cent had a combined score of 'strongly disagree' and 'disagree'.

**(s) Unfair reward for work done**

Fifty per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that unfair reward for work done was one of the unethical practices during the construction phase while 28 per cent were 'neutral' and 22 per cent had a combined score of 'strongly disagree' and 'disagree'. This may be caused by the contractors who under-bid or by clients who demand so much for less pay.

**(t) Concealing of errors**

Errors could be at design stage, in project specification and during construction. Most professions have a Code of Ethics which deems it unprofessional the conduct of concealing errors. Fifty per cent of the respondents had a combined score of 'strongly agree' and 'agree'

to the statement that concealing of errors was one of the unethical practices during the construction phase while 28 per cent were 'neutral' and 22 per cent had a combined score of 'strongly disagree' and 'disagree'.

A binary logistic regression was performed on the predictor variables in section 6.5.2 above to ascertain whether they had an effect on the dependent variable, 'concealing systematic errors'. The likelihood tests and score tests was significant at score = 6.06, df = 1,  $p < 0.05$ . Independent variable 'does your company have a company Code of Ethics' was also significant at df = 1,  $p < 0.05$ . The goodness of fit hesmer and lemeshow test of the model showed that  $p > 0.05$ , indicating that the model fits the data well. There was a relationship between concealing errors and a company having a Code of Ethics. It was expected that companies that have and practice what was in their Code of Ethics were not expected to conceal errors.

However, most respondents to the questionnaire had a different view on the statements below.

**(a) Certifying work not done**

The modal response was 'agree' for this statement. However the combined score for 'agree' and 'strongly agree' was only 42 per cent compared to the 'neutral' response of 27 per cent, while 30 per cent had a combined score of 'strongly disagree' and 'disagree'. Therefore, more than half of the respondents did not agree to the statement. The same applies to the statements below. This may be because this problem existed but was not wide spread.

**(b) Fraud - tempering with signed contract**

The modal and median responses were 'neutral' for this statement. The combined score for this statement for 'strongly agree' and 'agree' was only 22 per cent while the combined scores of 'strongly disagree' and 'disagree' was 46 per cent. The response for 'neutral' was 32 per cent. Therefore, more than half of the respondents did not agree with this statement.

**(c) Fraud - altering contract documents**

The modal response was 'neutral' for this statement. The combined score for this statement for 'strongly agree' and 'agree' was only 20 per cent while the combined score of 'strongly disagree' and 'disagree' was 46 per cent. The response for 'neutral' was 34 per cent. Therefore, more than half of the respondents did not agree with this statement.

**(d) Violation of environmental ethics**

The modal response for this statement was 'neutral'. The combined score for this statement for 'agree' and 'strongly agree' was 45 per cent while the combined score of 'strongly disagree' and 'disagree' was 11 per cent. The response for 'neutral' was 44 per cent. Therefore, more than half of the respondents did not agree with this statement.

**(e) Constant change of project specifications**

The modal response was 'neutral' for this statement. However, more than fifty per cent of the respondents did not agree with this statement.

**(f) Adversarial relationships between consultants and contractors**

The modal response was 'neutral' for this statement. However, more than fifty per cent of the respondents did not agree with this statement.

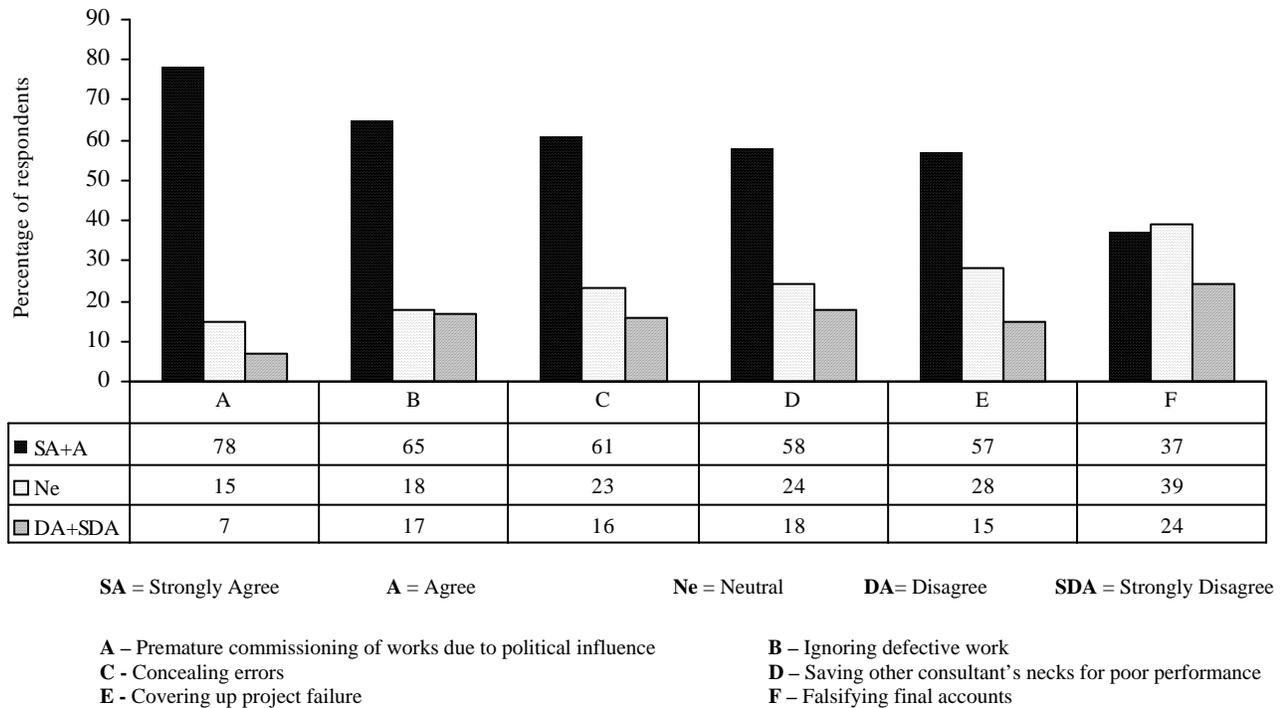
**6.9.3 Project closure and commissioning**

When further asked to state the unethical practices experienced during closure and commissioning of the construction projects, most of the respondents agreed to the statements listed in Figure 6.11.

**(a) Premature commissioning of work due to political influence**

Seventy-eight per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that premature commissioning of work due to political influence was one of the unethical practices at project closure while 15 per cent were 'neutral' and seven per cent had a combined score of 'strongly disagree' and 'disagree'. Other factors, arranged

in descending order are shown below. Political influence in construction was common because projects are seen as a vehicle for re-election.



**Figure 6.11:** Unethical practices experienced at project closure

**(b) Ignoring defective work**

At the completion and handover, the contractor was expected to provide defect liability for works done. The defect liability period may range between six months to one year. This was to ensure that all defects during this period were attended to. However, from these results, it is clear that this was a major unethical practice. Sixty-five per cent of the respondents had a combined score of ‘strongly agree’ and ‘agree’ to the statement that ignoring defective work was one of the unethical practices at project closure while 17 per cent were ‘neutral’ and 18 per cent had a combined score of ‘strongly disagree’ and ‘disagree’.

**(c) Concealing errors**

Sixty-one per cent of the respondents had a combined score of ‘strongly agree’ and ‘agree’ to the statement that concealing errors was one of the unethical practices at project closure while 23 per cent were ‘neutral’ and 16 per cent had a combined score of ‘strongly disagree’

and 'disagree'. This was unethical, unprofessional and a violation of Code of Ethics of most professions.

**(d) Covering up project failure**

A project is conceived to achieve a certain objective. However, more often than not, consultants falsify reports indicating that a project was a success when in fact not. Fifty-seven per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that covering up project failure was one of the unethical practices at project closure while 28 per cent were 'neutral' and 15 per cent had a combined score of 'strongly disagree' and 'disagree'.

A binary logistic regression was performed on the predictor variables in section 6.5.2 above to ascertain whether they had an effect on the dependent variable, 'covering up project failure'. The likelihood tests and score tests was significant at score = 5.57, df = 1,  $p < 0.05$ . Independent variable 'have you ever undergone training in ethics' was also significant at df = 1,  $p < 0.05$  with the odds ratio  $\exp(B) = 0.11$ . The goodness of fit hesmer and lemeshow test of the model showed that  $p > 0.05$ , indicating that the model fits the data well. From these results it was expected that persons who have undergone training in ethics are not expected to practice the unethical behaviour of covering up project failure.

**(e) Saving other consultants' necks for poor performance**

A team of consultants include engineers, architects and quantity surveyors. Fifty-eight per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that saving other consultants' necks for poor performance was one of the unethical practices at project closure while 24 per cent were 'neutral' and 18 per cent had a combined score of 'strongly disagree' and 'disagree'. From these results, it appears some consultants are ready to save the necks of others for poor performance.

However, most respondents were 'neutral' on the statement that falsifying final accounts was one of the unethical issues at project closure and commissioning.

From the results above, it was clear that unethical practices were encountered at each and every stage of the construction project. This is in agreement with Shakantu (2006) who stated that at one point or another, some form of corruption and other unethical issues such as bribery, fraud, collusive bidding take place within the confines of the construction project.

## **6.10 Effects of corruption**

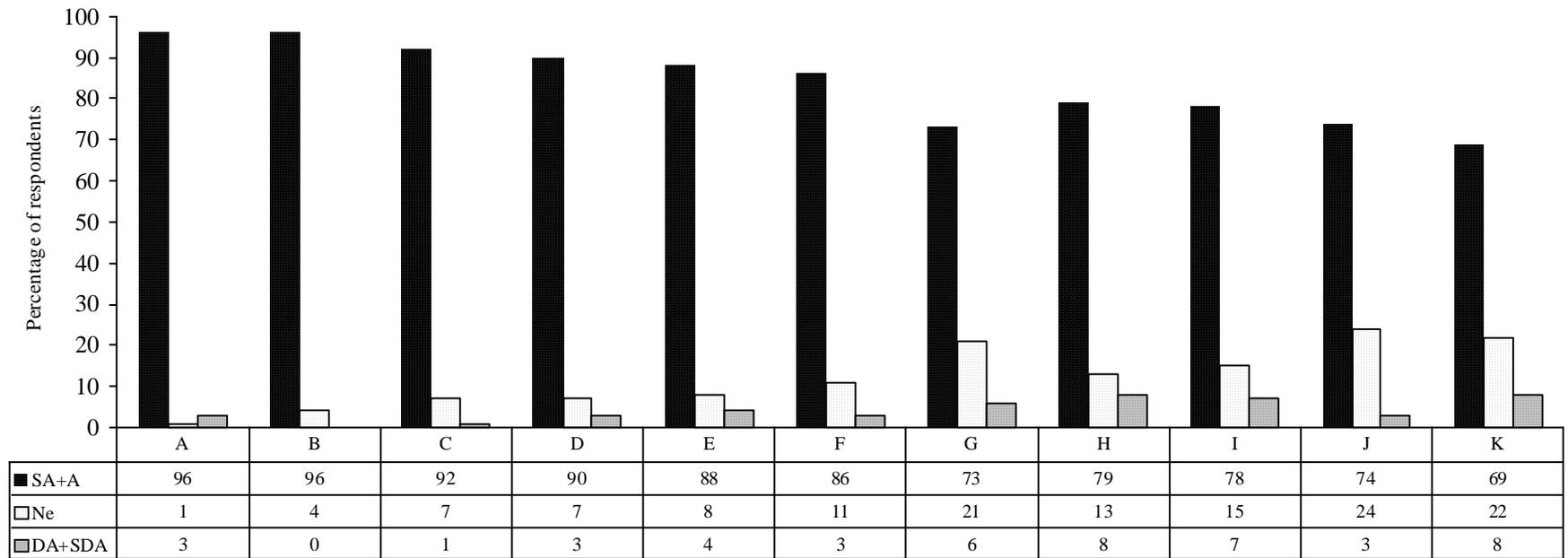
Respondents were asked how corruption affected Zambia as a country. Figure 6.12 shows the results. The majority of the respondents agreed to the statements in Figure 6.12.

### **6.10.1 Undermines managerial efficiency**

The modal response for this statement was 'agree'. Ninety-six per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that corruption undermined managerial efficiency while only one per cent were 'neutral' and three per cent 'disagreed'. There were no responses 'strongly disagree'. This is agreement with Henriot (2007) who stated that leaders who were corrupt tended to be inefficient to create opportunities for corruption.

### **6.10.2 Redirects resources to individual interests**

Ninety-six per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that corruption redirected resources to individual interests while only four were 'neutral'. There were no responses 'strongly disagree' and 'disagree'. The modal response for this statement was 'strongly agree'.



SA = Strongly Agree

A = Agree

Ne = Neutral

DA= Disagree

SDA = Strongly Disagree

A – Undermines managerial efficiency

C - increases cost of projects

E - Distorts prices in the market

G - Undermines legal and judicial systems

I – High rate of uncompleted projects

K – Delays in obtaining permits from public agencies

B – Re-direct resources to individual interests

D – encourages poor quality works

F – Curbs economical growth and sustainable development

H - Delays in the construction process

J – Deters investment

**Figure 6.12:** Effects of corruption in the construction industry

This is in agreement with Shakantu (2006) who stated that corruption redirected resources from global policies to individual interests. This had a corrosive impact on the market opportunities and general business climate. The other factors in descending order are indicated below.

### **6.10.3 Increases project costs**

Ninety-two per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that corruption increased project costs while only seven percent were 'neutral' and one per cent 'disagreed'. There were no responses for 'strongly disagree'. The modal response for this statement was 'strongly agree'. In agreeing to this statement, Doran (2004) stated that up to five per cent on a project is lost or unaccounted for in some sort of unethical transaction which tended to increase the project cost.

### **6.10.4 Encourages poor quality works**

The modal response for this statement was 'strongly agree'. Ninety per cent of the respondents agreed to this statement. These results were very clear that a compromised supervisor would overlook poor quality works.

### **6.10.5 Distorts prices in the market**

The modal response for this statement was 'strongly agree'. Eighty eight per cent of the respondents agreed to this statement. This was similar to the item in section 6.10.3 above. With corruption, all the prices were distorted to include the 'corruption money'.

### **6.10.6 Curbs economical growth and sustainable development**

The modal response for this statement was 'strongly agree' and 'agree' respectively. Eighty six per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that corruption curbed economical growth and sustainable development while 11 were 'neutral' and only three per cent had a combined response of 'disagree' and strongly disagree. Shakantu (2006) observed that corruption impacted negatively on the country's economy and the well being of the industry. Oyewobi et al. (2011) also noted that the pervasiveness of corrupt practices in the Nigerian construction industry if unabated could

retard the growth of the industry and consequently reduce the contribution of the sector to the GDP.

#### **6.10.7 Undermines legal and judicial systems**

The modal response for this statement was 'strongly agree'. Eighty-three per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that corruption undermined legal and judicial systems while 14 per cent were 'neutral' and only three per cent 'disagreed'. There were no responses 'strongly disagree'.

#### **6.10.8 Delays in the construction process**

The modal response for this statement was 'agree'. Seventy-nine per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that corruption led to delays in the construction process while 13 were 'neutral' and only eight per cent had a combined response of 'disagree' and strongly disagree.

#### **6.10.9 High rate of uncompleted projects**

The modal response for this statement was 'agree'. Seventy eight per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that corruption led to a high rate of uncompleted projects while 15 per cent were 'neutral' and only seven eight per cent had score of 'disagree'. There were no responses 'strongly disagree'. One of the reasons why many projects remain uncompleted was because resources were re-directed to individual interests through unethical practices. Mwiya (1999) also observed that 64 per cent of the respondents to the study stated that more than half of the projects they handled were not completed on time mostly as a result of corruption.

#### **6.10.10 Deters investment**

Odusami (2005) observed that empirical research had shown that there was a strong relationship between pervasiveness of corruption and poor development. Developing countries were highly not developed because they do not attract enough investment partly as a result of corruption. The modal response for this statement was 'strongly agree' and 'agree' respectively. Seventy-four per cent of the respondents had a combined score of 'strongly

agree' and 'agree' to the statement that corruption deterred investment while 23 per cent were 'neutral' and only three per cent 'disagreed'. There were no responses 'strongly disagree'.

#### **6.10.11 Delays in obtaining permits from public agencies**

Baker (2005) stated that there was need to obtain numerous permits for any construction project. There are insufficient controls on how government officials behave. This brought about delays in obtaining permits from public agencies and ultimately the procurement of the construction project suffers. The modal and median response for this statement was 'agree'. Seventy-nine per cent of the respondents agreed to this statement.

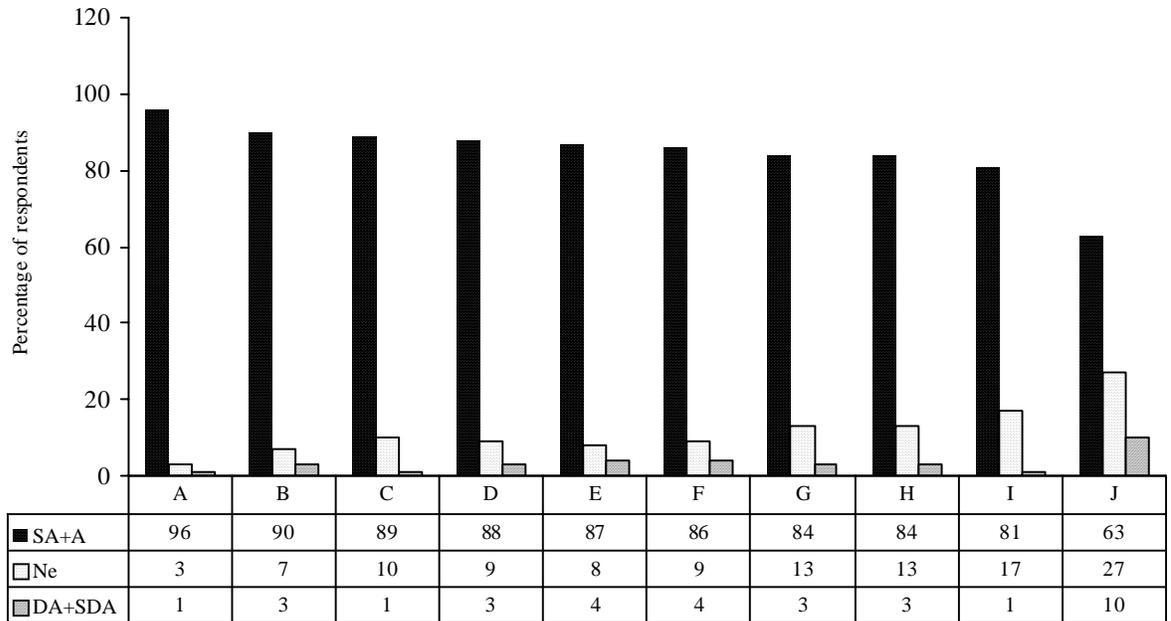
#### **6.11 Factors that influence a person to behave ethically in an organisation**

The respondents were asked to state what factors influence ethical behaviour in organisations. The majority of the respondents agreed to the following statements as factors that affected employees to act in an ethical manner. Figure 6.13 shows the factors.

##### **6.11.1 Organisational Code of Ethics**

The modal response for this statement was 'agree'. Ninety-six per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that organisational Code of Ethics was one of the factors that influenced the way employees behaved ethically while only three per cent were 'neutral' and one per cent of the respondents 'disagreed'. There were no responses 'strongly disagree'.

Codes of ethics have been taunted to help in prevention of unethical practices. Mason (2008) however stated that there are conflicting opinions as to whether or not the adoption of Code of Ethics results in improved ethical standards.



**A** = Strongly Agree      **A** = Agree      **Ne** = Neutral      **DA**= Disagree      **SDA** = Strongly Disagree  
**A** – Organisational Code of Ethics      **B** – Internal disciplinary procedures  
**C** - Organisational culture      **D** – Individual local factors and values  
**E** - Type of leadership      **F** – laws and regulations of the country  
**G** - Economic conditions      **H** - Societal norms  
**I** – political systems      **J** – Family obligations

**Figure 6.13:** Factors that influence a person to behave ethically in an organisation

Some commentators suggested that Codes of Ethics can never be more than ‘window dressing’ and thus self-serving as simply public relations effort.

### 6.11.2 Organisational culture

The modal response for this statement was ‘strongly agree’ and ‘agree’ respectively. Eighty-nine per cent of the respondents had a combined score of ‘strongly agree’ and ‘agree’ to the statement that the organisational culture was one of the factors that influenced the way employees behaved ethically while 10 per cent were ‘neutral’ and only one per cent of the respondents ‘disagreed’. There were no responses ‘strongly disagree’.

### 6.11.3 Individual local factors and values

The modal response for this statement was ‘agree’. Eighty-nine per cent of the respondents had a combined score of ‘strongly agree’ and ‘agree’ to the statement that individual factors and values was one of the factors that influenced the way employees behaved ethically while

only nine per cent were 'neutral' and three per cent of the respondents 'disagreed'. There were no responses 'strongly disagree'.

#### **6.11.4 Laws and regulations of the country**

The modal response for this statement was 'agree'. Eighty six per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that laws and regulations were factors that influenced the way employees behaved ethically while only nine per cent were 'neutral' and four per cent of the respondents 'disagreed'. There were no responses 'strongly disagree'. Persons feared to be cited for abrogation of laws and regulations of the country.

#### **6.11.5 Type of leadership**

The modal response for this statement was 'agree'. Eighty-seven per cent of the respondents agreed to this statement. Doran (2004) stated that if the company wanted positive ethical change, top leadership must serve as role models. Mason (2008) in agreeing to this statement stated that the cause of ethical failure in an organisation could be traced to its culture and the failure on the part of leadership to actively pursue ethical practices.

#### **6.11.6 Internal disciplinary procedures**

Most companies used the internal disciplinary procedures as a means of maintaining order in the organisations. The modal response for this statement was 'agree'. Ninety-per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that internal disciplinary procedures was one of the factors that influenced the way employees behaved ethically while only seven per cent were 'neutral' and three per cent of the respondents 'strongly disagree'. There were no responses 'disagree'.

#### **6.11.7 External forces – political system**

Political interference as stated above has been cited as a reason why the construction industry was involved in unethical practices. The modal response for this statement was 'agree'. Eighty-one per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that the political system in the country was one of the factors that influenced

the way employees behaved ethically while 17 per cent were 'neutral' and one per cent of the respondents 'disagreed'. There were no responses 'strongly disagree'.

#### **6.11.8 External forces - societal norms**

The modal response for this statement was 'agree'. Eighty-four per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that societal norms were some of the factors that influenced the way employees behaved ethically while 13 per cent were 'neutral' and only three per cent of the respondents 'disagreed'. There were no responses 'strongly disagree'.

#### **6.11.9 External forces – economic conditions**

The modal response for this statement was 'agree'. Eighty-one per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that economic conditions was one of the factors that influenced the way employees behaved ethically while 17 per cent were 'neutral' and only one per cent of the respondents 'disagreed'. There were no responses 'strongly disagree'.

#### **6.11.10 External forces - family obligations**

The modal response for this statement was 'agree'. Sixty-three per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that family obligations was one of the factors that influenced the way employees behaved ethically while 27 per cent were 'neutral' and 10 per cent of the respondents had a combined score 'strongly disagree' and 'disagree'.

The respondents agreed to all the factors above, that they influence a person to behave ethically in an organisation. Organisation culture and presence of a Code of Ethics are important for a person to behave ethically. Bommer et al. (1987) stated that work environment strongly influenced the way an employee behaved ethically or otherwise. Many organisations have formal policies that prohibit unethical conduct and prescribe punishment for it.

The internal leadership of the organisation also provide guidance and act as role models in guiding the organisation in ethical practices. Clear internal disciplinary procedures are also important in deterring unethical conduct. Bommer et al. (1987) stated that fear of punishment was the main reason why rules were followed by employees. External forces also influence the way a person acted ethically in an organisation. Jones (1991) stated that social consensus of moral issue was critical for an individual to act ethically. Bommer et al. (1987) noted that Laws are values and mores of society that have the force of moral authority as most individuals feel compelled to refrain from an action which was specifically prohibited by law. Respondents also agreed that external forces such as economic conditions, political influence and family obligations also had an effect on how individuals behaved ethically.

## **6.12 Individual influences affecting employees to act ethically**

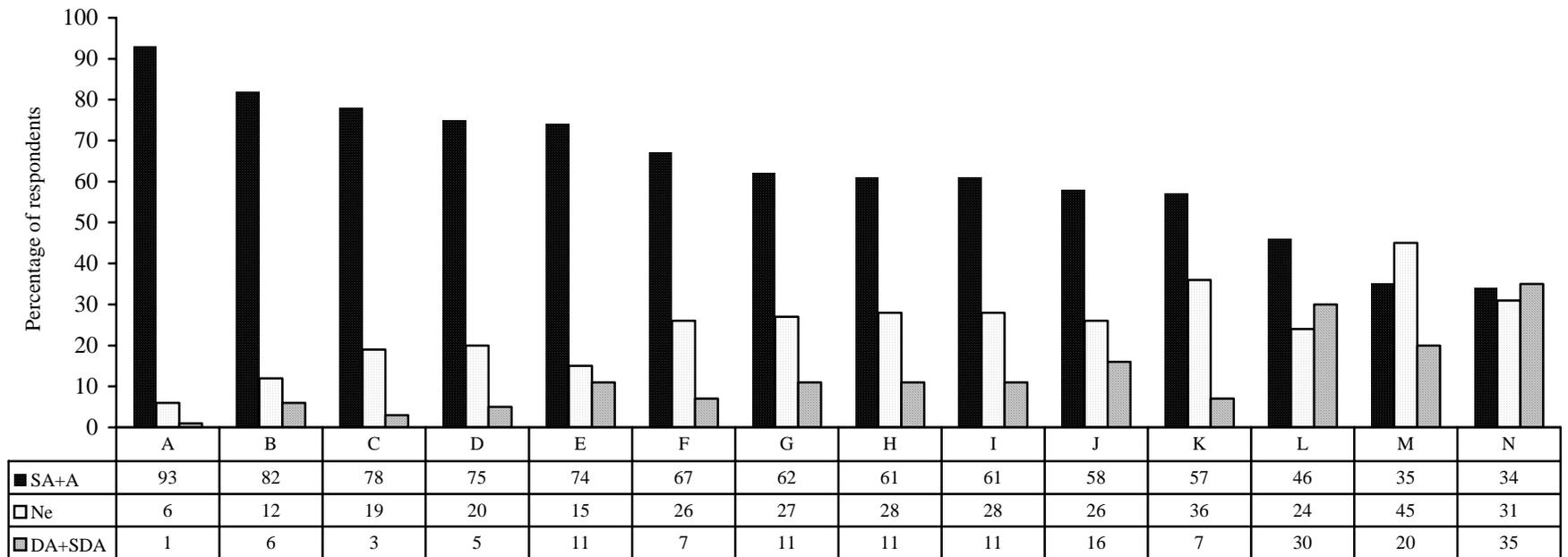
Figure 6.14 depicts what individual influences affect employees to act ethically in an organisation.

### **6.12.1 Individual moral maturity**

The modal response for this statement was ‘strongly agree’. Ninety-three per cent of the respondents had a combined score of ‘strongly agree’ and ‘agree’ to the statement that individual moral maturity was one of the factors that affected employees to act ethically in an organisation while only six per cent were ‘neutral’ and one per cent of the respondents ‘disagreed’. There were no responses for ‘strongly disagree’.

### **6.12.2 Ego strengths**

The modal response for this statement was ‘agree’. Eighty-one per cent of the respondents had a combined score of ‘strongly agree’ and ‘agree’ to the statement that ego strength of a person was one of the factors that affected employees to act ethically in an organisation while 12 per cent were ‘neutral’ and only six per cent of the respondents had a combined score of ‘disagreed’ and ‘strongly disagree’.



SA = Strongly Agree

A = Agree

Ne = Neutral

DA= Disagree

SDA = Strongly Disagree

A – Individual moral maturity

C - Work environment, corporate goals, policies and culture

E - Religious beliefs

G - Fear of punishment

I – Status in community or society

K– Family obligations

M – Demographics

B – Ego strengths

D – Life experiences

F – Work experience

H - Socialisation of an individuals

J – Peer pressure

L – Age of a person

N – Gender of a person

**Figure 6.14:** Individual influences affecting employees to act ethically

### **6.12.3 Religious beliefs**

The modal response for this statement was 'strongly agree'. Seventy-three per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that religious beliefs was one of the factors that affected employees to act ethically in an organisation while 15 per cent were 'neutral' and 11 per cent of the respondents had a combined score of 'disagreed' and 'strongly disagree'.

### **6.12.4 Work environment**

The modal response for this statement was 'agree'. Seventy-nine per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that the work environment which included the corporate culture, goals and policies was one of the factors that affected employees to act ethically in an organisation while 19 per cent were 'neutral' and only three per cent of the respondents 'disagreed'. There were no responses for 'strongly disagree'.

### **6.12.5 Life experiences**

The modal response for this statement was 'agree'. Seventy-five per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that life experiences was one of the factors that affected employees to act ethically in an organisation while 20 per cent were 'neutral' and only six per cent of the respondents had a combined score of 'disagreed' and 'strongly disagree'.

### **6.12.6 Work experience**

The modal response for this statement was 'agree'. Sixty-seven per cent of the respondents had a combined score of 'strongly agree' and 'agree' while 27 per cent were 'neutral' and seven per cent of the respondents 'disagreed'. There were no responses for 'strongly disagree'.

### **6.12.7 Fear of punishment**

The modal for this statement was 'agree'. Sixty-two per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that fear of punishment was

one of the factors that affected employees to act ethically in an organisation while 27 per cent were 'neutral' and 11 per cent of the respondents had a combined score of 'disagreed' and 'strongly disagree'.

#### **6.12.8 Status in community or society**

The modal response for this statement was 'agree'. Sixty-one per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that status of a person in the community or society was one of the factors that affected employees to act ethically in an organisation while 28 per cent were 'neutral' and 11 per cent of the respondents 'disagreed'. There were no responses 'strongly disagree'.

#### **6.12.9 Family obligations**

The modal response for this statement was 'agree'. Fifty-seven per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that family obligations was one of the factors that affected employees to act ethically in an organisation while 36 per cent were 'neutral' and only seven per cent of the respondents had a combined score of 'disagreed' and 'strongly disagree'.

#### **6.12.10 Socialisation of an individual**

The modal response for this statement was 'agree'. Sixty-one per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that socialisation of an individual was one of the factors that affected employees to act ethically in an organisation while 28 per cent were 'neutral' and 11 per cent of the respondents had a combined score of 'disagreed' and 'strongly disagree'.

#### **6.12.11 Peer pressure**

The modal response for this statement was 'agree'. Fifty-eight per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that peer pressure was one of the factors that affected employees to act ethically in an organisation while 26 per cent were 'neutral' and 16 per cent of the respondents had a combined score of 'disagreed' and 'strongly disagree'.

More than 50 per cent agreed that individual moral maturity, ego strengths, religious beliefs, work environment, fear of punishment, Status in community or society, family obligations, socialisation of an individual Socialisation of an individual and peer pressure had an affect on an employee to act ethically in an organisation.

However, age of a person had modal response of 'agree' while the median response was 'neutral'. The combined response was 46 per cent for 'strong agree' and 'agree' against that of 'disagree' and strongly disagree' of 31 per cent. Respondents who were 'neutral' were 24 per cent. This showed that more than half of the respondents did not agree to this statement.

Most respondents were also neutral on gender of an individual affecting him or her to behave ethically. The combined scores of 'strongly disagree' and 'disagree' that a person's gender affected them to act ethically were 35 per cent, while 31 per cent were neutral and the combined score of 'strongly agree' and 'agree' was 34 per cent. This also showed that more than half of the respondents did not agree to this statement.

The majority of respondents, 45 per cent, were neutral on demographics affecting an individual to act ethically. However, 35 per cent of the respondents had a combined response of 'strongly agree' and 'agree', while the combined scores for 'strongly disagree' and 'disagree' were 20 per cent. More than half of the respondents did agree that the demographics affected a person to act ethically.

### **6.13 External factors that affect employees to act ethically**

Figure 6.15 depicts the external factors which affected employees to act ethically in an organisation.

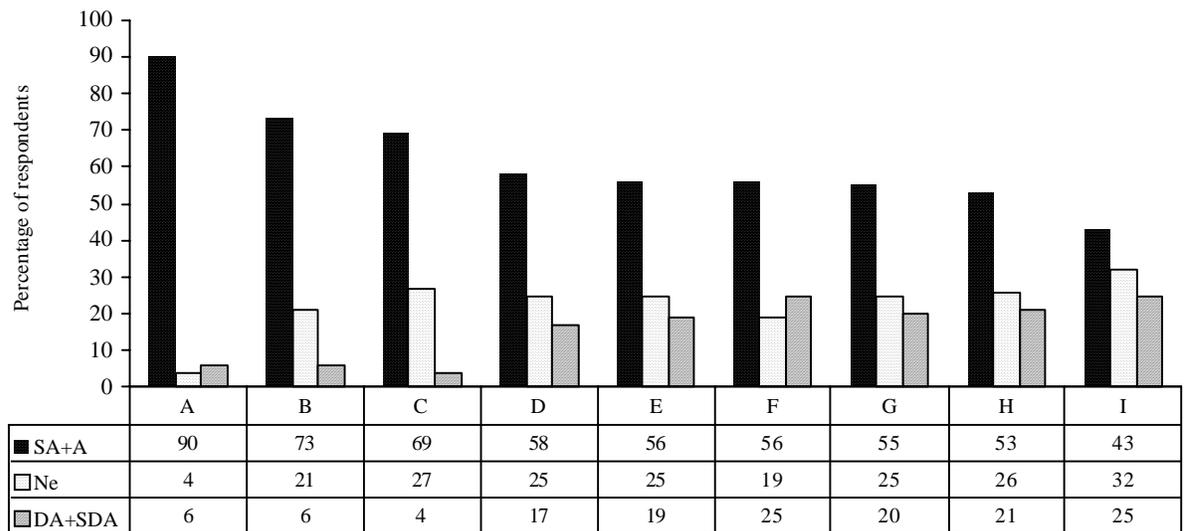
#### **6.13.1 Economic conditions**

Ninety-one per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that economic conditions was one of the external factors that affected

employees to act unethically in an organisation while only four ‘neutral’ and five per cent of the respondents had a combined score for ‘disagreed’ and ‘strongly disagree’.

### 6.13.2 Political and social factors

The modal response for the statement that political and social factors were some of the factors that enabled employees to act unethically was ‘agree’. Seventy-three per cent of the respondents had a combined score of ‘strongly agree’ and ‘agree’ to the statement that political and social factors were some of the external factors that affected employees to act unethically in an organisation while 21 per cent were ‘neutral’ and only six per cent of the respondents ‘disagreed’. There were no responses for ‘strongly disagree’.



SA = Strongly Agree      A = Agree      Ne = Neutral      DA= Disagree      SDA = Strongly Disagree

A – Economic conditions

C - Competition for scarce resources

E - Family obligations

G - Legislative and legal environment

I – Professional codes of conduct

B – Political and social factors

D – Social norms

F – Industry norms and practices

H - Type of judicial system

**Figure 6.15:** External factors that affect employees to act ethically

### 6.13.3 Competition for scarce resources

The modal response for the statement that competition for scarce resources was one of the factors that enabled employees to act unethically was ‘agree’. Sixty-nine per cent of the respondents had a combined score of ‘strongly agree’ and ‘agree’ to the statement that

competition for scarce resources was one of the external factors that affected employees to act unethically in an organisation while 27 per cent were 'neutral' and four per cent of the respondents had a combined score for 'disagreed' and 'strongly disagree'.

#### **6.13.4 Social norms**

The modal response for the statement that social norms was one of the factors that enabled employees to act unethically was 'agree'. Fifty-eight per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that social norms was one of the external factors that affected employees to act ethically or unethically in an organisation while 25 per cent were 'neutral' and 17 per cent of the respondents had a combined score for 'disagreed' and 'strongly disagree'.

#### **6.13.5 Family obligations**

The modal response for the statement that family obligations was one of the factors that enabled employees to act ethically was 'agree'. Fifty-six per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that family obligations was one of the external factors that affected employees to act ethically in an organisation while 25 per cent were 'neutral' and 20 per cent of the respondents had a combined score for 'disagreed' and 'strongly disagree'.

#### **6.13.6 Industry norms and practices**

The modal response for the statement that industry norms and practices was one of the factors that enabled an employees to act ethically was 'agree'. Fifty-six per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that industry norms and practices was one of the external factors that affected employees to act ethically in an organisation while 19 were 'neutral' and 25 per cent of the respondents had a combined score for 'disagreed' and 'strongly disagree'.

#### **6.13.7 Legislation and legal environment**

The modal response for the statement that legislation and legal environment was one of the factors that enabled employees to act ethically was 'agree'. Fifty-five per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that

legislative and legal environment was one of the external factors that affected employees to act ethically in an organisation while 25 per cent were 'neutral' and 20 per cent of the of the respondents 'disagreed'. There were no responses 'strongly disagree'.

#### **6.13.8 Type of judicial system**

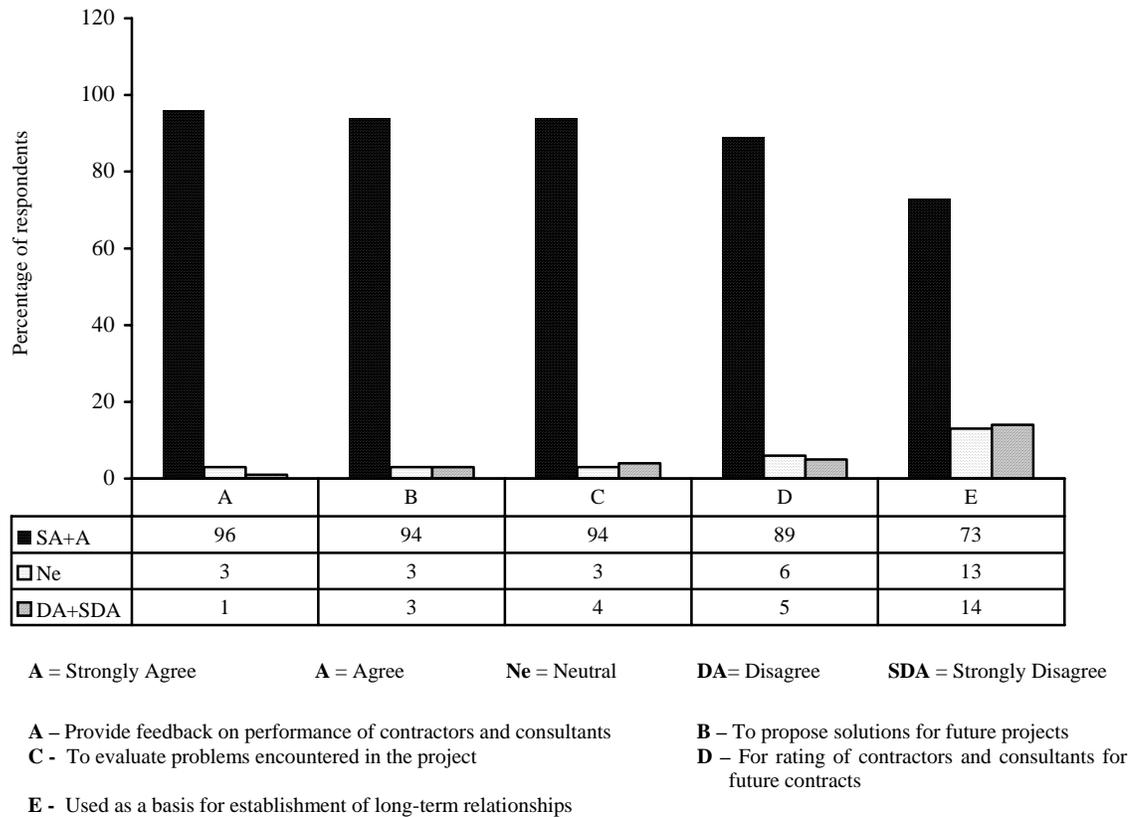
The modal response for the statement that the type of judicial system was one of the factors that enabled an employee to act ethically was 'agree'. Fifty-three per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that type of judicial systems was one of the external factors that affected employees to act ethically in an organisation while 26 per cent were 'neutral' and 21 per cent of the respondents had a combined score for 'disagreed' and 'strongly disagree'.

More than 50 per cent of the respondents agreed that the following external factors affect employees to act ethically in an organisation: economic conditions; political and social factors, competition for scarce resources, societal norms, family obligations, industry norms and practices, legal environment and the type of judicial system.

However, the median response for professional codes of conduct as an external factor that affected employees to act ethically in an organisation was 'neutral' while the modal response was 'agree'. Forty-three per cent of the respondents had a combined score of 'strongly agree' and 'agree' while 32 were 'neutral' and 25 per cent of the respondents had a combined score for 'disagreed' and 'strongly disagree'. Therefore, more than half of the respondents did not agree to this statement.

#### **6.14 Contribution of post contract assessment to ethical behaviour**

Respondents were also asked to state how they thought post contract assessment could contribute to reduction in unethical behaviour. Figure 6.16 is a depiction of the results.



**Figure 6.16:** Contribution of post contract assessment to ethical behaviour

#### 6.14.1 Provide feedback on performance of contractors and consultants

Ninety six per cent of the respondents had a combined score of ‘strongly agree’ and ‘agree’ with a median response of ‘agree’ to the statement that the contribution of post contract assessment to ethical behaviour was to provide feedback on performance of contractors and consultants. The percentage responses for neutral and disagree were negligible. There were no responses for strongly disagree. Feedback on contractors and consultants was important in determining whether they could be considered for future contracts. Contractors and consultants with unethical conduct are weeded out using this assessment.

#### 6.14.2 To propose solutions for future projects

Ninety-four per cent of the respondents had a combined score of ‘strongly agree’ and ‘agree’ with a bi-median response of ‘agree’ and ‘strongly agree’ to the statement that the contribution of post contract assessment to ethical behaviour was to propose solutions for

future projects. The percentage responses for neutral and disagree were negligible. There were no responses for strongly disagree. As indicated above, all unethical matters encountered in the project are logged in, alternative solutions weighed and possible solution to eliminated or minimise the unethical matter is implemented.

#### **6.14.3 To evaluate problems encountered in the project**

Ninety-four per cent of the respondents had a combined score of ‘strongly agree’ and ‘agree’ with a median response of ‘strongly agree’ to the statement that the contribution of post contract assessment to ethical behaviour was to evaluate problems encountered in the project. The percentage responses for neutral and disagree were negligible. There were no responses for strongly disagree. As the project is progressing, all unethical practices encountered are logged in, analysed and reviewed. Possible alternatives for resolving the unethical matters are determined together with the best option. This was important to minimise future re-occurrence.

#### **6.14.4 For rating contractors and consultants for future contracts**

Eighty-nine four per cent of the respondents had a combined score of ‘strongly agree’ and ‘agree’ with a median response of ‘agree’ to the statement that the contribution of post contract assessment to ethical behaviour was for rating of contractors and consultants for future contracts. The response of respondents for neutral was six per cent while six per cent of them disagreed. Ethically upright contractors and consultants are rated for future consideration in contracting and tendering.

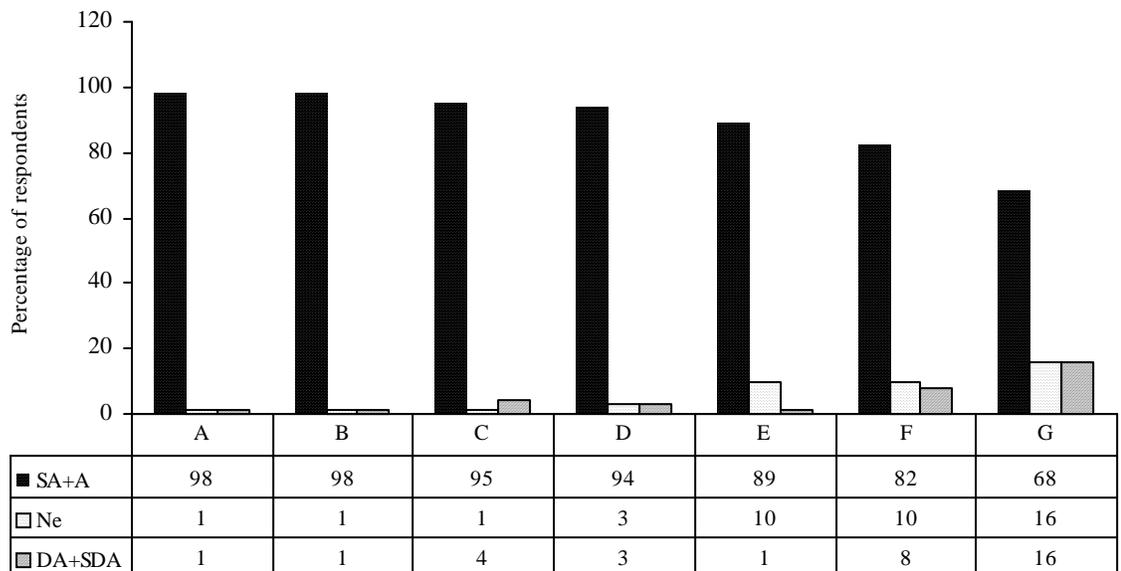
#### **6.14.5 Used as a basis for establishment of long-term relationships**

Seventy-three per cent of the respondents had a combined score of ‘strongly agree’ and ‘agree’ with a median response of ‘agree’ to the statement that the contribution of post contract assessment to ethical behaviour was to be used as a basis for establishment of long-term relationships. The percentage responses for neutral, disagree and strongly disagree were negligible. As stated by Ameh and Odusami (2010), professional ethical lapses often lead to project abandonment and huge economical losses in form of additional cost to the project.

Therefore, post contract assessment to determine contractors and consultants who practice ethics in their work, is a useful tool, to establishing long-term relationships.

### 6.15 Role of National Council of Construction

The respondents were asked to state what role the NCC should play in promoting ethical behaviour in the construction industry in Zambia. Figure 6.16 shows the role of NCC in promoting ethical behaviour. The majority of the respondents strongly agreed to the statements in Figure 6.17. Doran (2004) also stated that 90 per cent of the respondents agreed that in order to help ensure ethical conduct throughout the industry, associations should take up leadership in crafting and enforcing codes of conduct. This role can be played by the NCC in Zambia.



SA = Strongly Agree

A = Agree

Ne = Neutral

DA= Disagree

SDA = Strongly Disagree

A – Sanctioning erring contractors

C - provision and enforcement of code of ethics to contractors

E - Dissemination of information on various projects where the public has an interest

G – Participate in review of tender procedures

B – Strengthen the scrutiny of eligible contractors

D – Education on ethical matters

F – Technical auditing of projects

**Table 6.17:** Role of NCC in promoting ethical behaviour

#### 6.15.1 Sanctioning erring contractors

The modal response to the statement that sanctioning erring contractors was one of the roles that NCC should play in promoting ethical behaviour in the construction industry was

‘strongly agree’. Ninety-seven per cent of the respondents had a combined score of ‘strongly agree’ and ‘agree’ while only one per cent of the respondents were ‘neutral’ and one per cent ‘disagreed’. There were no responses for ‘strongly disagree’. The NCC in 2011 sanctioned and downgraded a contractor from grade-two to grade-six for failure to perform to according to expectation. Most respondents stated that this should be one of the core responsibilities.

#### **6.15.2 Strengthening the scrutiny of eligible contractors**

Ninety-eight per cent of the respondents had a combined score of ‘strongly agree’ and ‘agree’ while only one per cent of the respondents were ‘neutral’ and another one per cent had a combined score of ‘disagreed’ and ‘strongly disagree’. Strengthening scrutiny of contractors would ensure that firms that are not eligible for registration are not registered.

#### **6.15.3 Provision and enforcement of Code of Ethics to contractors**

The modal response to the statement that provision and enforcement of Code of Ethics to contractors was one of the roles NCC should play in promoting ethical behaviour in the construction industry was ‘strongly agree’. Ninety-five per cent of the respondents had a combined score of ‘strongly agree’ and ‘agree’ while only one per cent of the respondents were ‘neutral’ and four per cent of the respondents had a combined score for ‘disagreed’ and ‘strongly disagree’. Currently, the NCC has no Code of Ethics for its contractors. However, most respondents feel this should be one of the core activities of NCC. NCC can provide a template which contractors could use as a guide.

#### **6.15.4 Education on ethical matters**

The modal response to the statement that provision of education to contractors on ethical matters was one of the roles that NCC should play in promoting ethical behaviour in the construction industry was ‘strongly agree’. Ninety-four per cent of the respondents had a combined score of ‘strongly agree’ and ‘agree’ to the statement that NCC should be involved with provision of education on ethical matters to contractors while only three per cent of the respondents were ‘neutral’ and three per cent of the respondents had a combined score for ‘disagreed’ and ‘strongly disagree’. In the earlier results above, the majority of the respondents had indicated that they had never undergone training in ethics conducted either

by NCC or by their employers. Doran (2004) stated that to help ensure ethical conduct throughout the construction industry, training in ethics should be conducted.

#### **6.15.5 Dissemination of information to the public on various projects**

The modal response to the statement that dissemination of information to the public on various projects of interest was one of the roles that NCC should play in promoting ethical behaviour in the construction industry was 'strongly agree'. Eighty-nine per cent of the respondents had a combined score of 'strongly agree' and 'agree' to this statement while only nine per cent of the respondents were 'neutral' and one per cent 'disagreed'. There were no responses for 'strongly disagree'. Dissemination of information of projects of public interest is important in enforcing good practices by the contractors and consultants. This also encourages civil society such as TIZ to provide advocacy on the concerned projects.

#### **6.15.6 Technical auditing of projects**

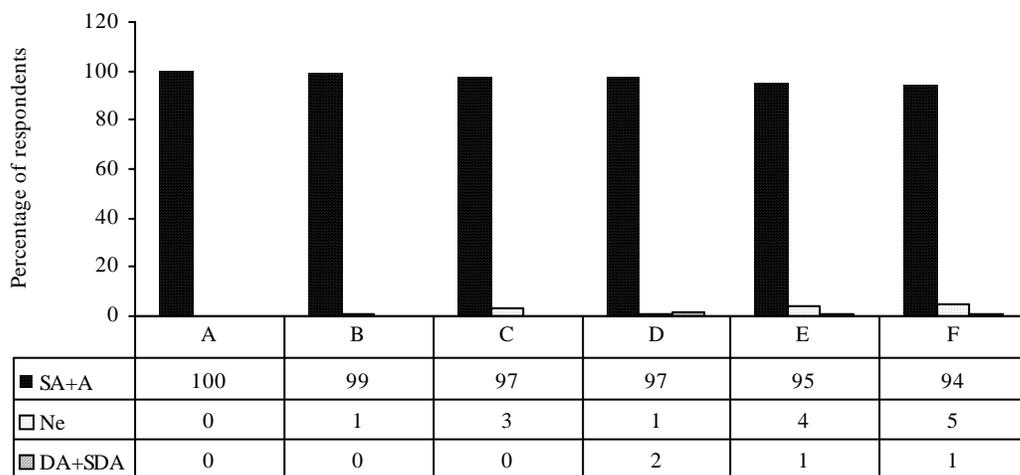
Mwiya (2009) stated that technical auditing could be used as a tool in determining unethical practices on a project. Enforcement of technical auditing on projects therefore could deter unethical practices on the part of contractors and consultants. The modal response for this statement was 'strongly agree'. Eighty-two per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that NCC should be involved in one way or another in technical auditing of projects while nine per cent were 'neutral' and only eight per cent had a combined score for 'disagreed' and 'strongly disagree'.

#### **6.15.7 Participate in general review of tender procedures**

The modal response for this statement was 'strongly agree'. Sixty-eight per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that NCC should participate in general reviews of tender procedures of construction works while 16 per cent of the respondents were 'neutral' and 16 per cent of the respondents had a combined score for 'disagreed' and 'strongly disagree'. As overseer of all contractors, it was important that they also participated in the general review of tender procedures to ensure that they are fair.

## 6.16 Role of leadership in promoting ethical behaviour

Respondents were asked to state what role leadership should play in promoting ethical behaviour in organisations. The majority of the respondents strongly agreed to the statements in Figure 6.18. More than 94 per cent respondents agreed that the role of leadership in promoting ethical behaviour was to serve as role model and lead by example, provide clear vision, develop strategies to ensure ethical behaviour, provides character building of the organisation, ensure that the organisation practices corporate governance, and to formulate, disseminate and enforce the Code of Ethics.



SA = Strongly Agree

A = Agree

Ne = Neutral

DA= Disagree

SDA = Strongly Disagree

A – Provide clear vision

B – Serve as role model and lead by example

C - Develop strategies to ensure ethical behaviour

D – Provide character building of the organisation

E - Ensure that the organisation practices corporate governance

F – Formulate, disseminate and enforce the code of ethics

**Figure 6.18:** Role of leadership in promoting ethical behaviour

### 6.16.1 Provide clear vision

The modal and median response for this statement was ‘strongly agree’. All the respondents scored either ‘strongly agree’ or ‘agree’ to the statement that leaders must provide clear vision in promoting ethical behaviour. There were no respondents for ‘neutral’ and ‘disagreed’ and ‘strongly disagree’. Doran (2004) stated that ethics should start at the top with clear vision articulated by senior management.

### **6.16.2 Serve as role model and lead by example**

The modal response to the statement that the role of leadership in promoting ethical behaviour in an organisation was to serve as a role model and lead by example was 'strongly agree'. Ninety-nine per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that leaders must serve as role models and lead by example in promoting ethical behaviour while only one per cent of the respondents were 'neutral'. There were no respondents for 'disagreed' and 'strongly disagree'. Doran (2004) in agreement, stated that good leadership practices reflect in the whole organisation and that competent leaders act ethically with noble character.

### **6.16.3 Develop strategies to ensure ethical behaviour**

The modal response for this statement was 'strongly agree'. All the respondents had scored either 'strongly agree' or 'agree' to the statement that leaders must develop clear strategies in promoting ethical behaviour. There were no respondents for 'neutral' and 'disagreed' and 'strongly disagree'. Kaptein and Scott (2005) in agreement stated that development of Codes of Ethics and putting compliance programmes are some of the strategies used to combat unethical conduct in organisations.

### **6.16.4 Provide character building of the organisation**

The modal response for this statement was 'strongly agree'. Ninety-seven per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that leaders must provide character to the organisation in promoting ethical behaviour while only one per cent of the respondents were 'neutral' and one per cent 'disagreed'. There were no respondents for 'strongly disagree'. As stated above, Doran (2004) observed that good leadership provides character of the organisation.

### **6.16.5 Ensure that the organisation practices corporate governance**

The modal response for this statement was 'strongly agree'. Ninety-five per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that leaders ensure that the organisation practised good corporate governance in promoting ethical behaviour while only four per cent of the respondents were 'neutral' and one per cent

‘disagreed’. There were no respondents for ‘strongly disagree’. Practicing corporate governance on projects was important in promoting transparency through checks and balances (Shakantu, 2006).

#### **6.16.6 Formulate, disseminate and enforce the Code of Ethics**

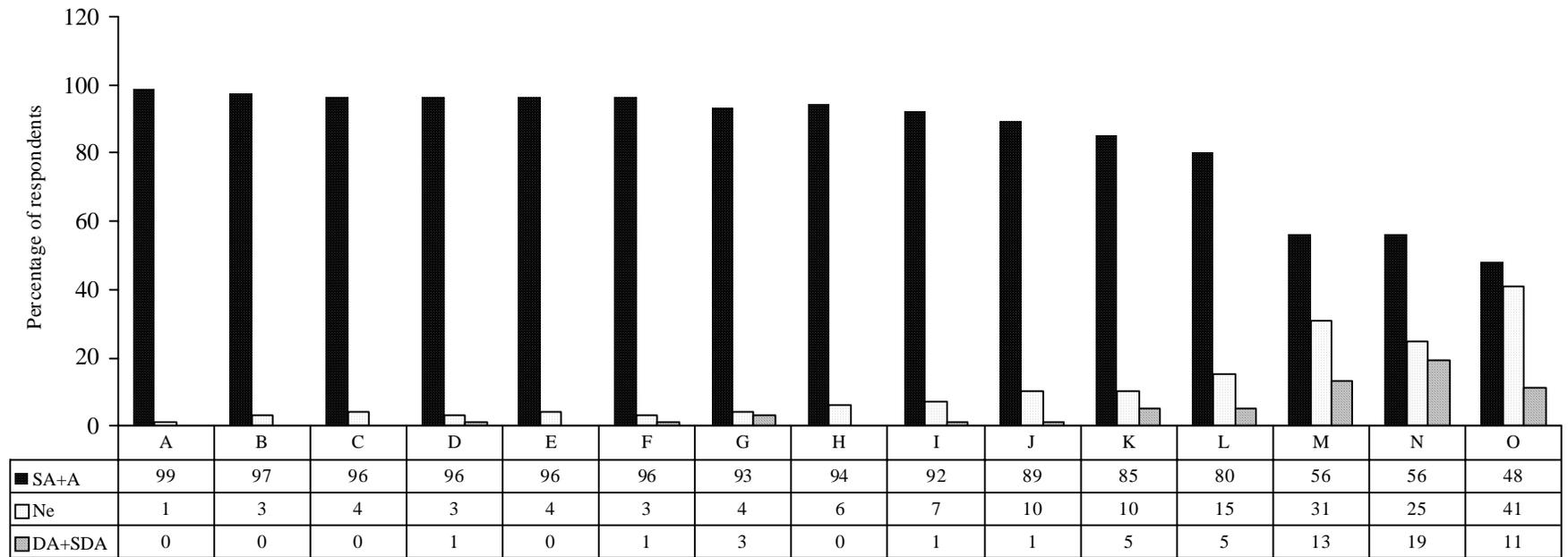
The modal response for this statement was ‘strongly agree’. Ninety-three per cent of the respondents had a combined score of ‘strongly agree’ and ‘agree’ to the statement that leaders must formulate, disseminate and enforce the Code of Ethics in promoting ethical behaviour while only six per cent of the respondents were ‘neutral’ and one per cent ‘disagreed’. There were no respondents for ‘strongly disagree’.

#### **6.17 Strategies and solutions to combat unethical behaviour**

The respondents were asked what they thought were the solutions to unethical behaviour in the industry. Figure 6.19 shows the results of the survey. The majority of the respondents agreed to the statements in the Figure 6.18 below.

##### **6.17.1 Benchmarking best practices in ethics**

Shakantu (2006) stated that promotion of benchmarking of best practice in the industry helped reduce unethical practices as minimum standards are set out for clients to expect. The modal response for this statement was ‘agree’. Ninety-nine per cent of the respondents had a combined score of ‘strongly agree’ and ‘agree’ to the statement that benchmarking best practice was one of the solutions in combating unethical behaviour while only one per cent of the respondents were ‘neutral’. There were no respondents for ‘disagree’ and ‘strongly disagree’.



**SA** = Strongly Agree

**A** = Agree

**Ne** = Neutral

**DA** = Disagree

**SDA** = Strongly Disagree

**A** – Benchmarking best practices in ethics

**C** - Training and education in ethics

**E** - development of honest and ethical organisation culture

**G** - Strengthening work processes

**I** – law and regulation enforcements

**K** – Punishment and cancellation of practicing licence

**M** – Simplifying tender procedures

**O** – More emphasis placed on social responsibility in tender award criteria

**B** – implementation of ethical guidelines

**D** – Good ethical leadership

**F** – Supervision of work processes during project cycle

**H** - Institute regular and random checks

**J** – Industry wide code of ethics

**L** – Indictments and convictions

**N** – Involvement of law enforcement agencies during procurement processes of huge tenders

**Figure 6.19:** Solutions to unethical behaviour

### **6.17.2 Implementation of ethical guidelines**

The modal response for this statement was 'agree'. Ninety-seven per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that implementation of ethical guidelines was one of the solutions in combating unethical behaviour while only three per cent of the respondents were 'neutral'. There were no respondents for 'disagree' and 'strongly disagree'. This is in agreement with Shakantu (2006) who stated that implementation of ethical guidelines through ethical codes of conduct in an organisation was important in guiding employees.

### **6.17.3 Training and education in ethics**

Doran (2004) stated that to help ensure ethical conduct throughout the industry, there should be more training available in ethics. More than 90 per cent of the respondents to the survey by Doran (2004) agreed to this statement. The modal response for this statement in this study was 'agree'. Ninety-six per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that training and education in ethics to employees was one of the solutions in combating unethical behaviour while only four per cent of the respondents were 'neutral'. There were no respondents for 'disagree' and 'strongly disagree'.

### **6.17.4 Good ethical leadership**

Good ethical leadership according to Doran (2004) was important in restoring trust in the organisation. The modal response for this statement was 'strongly agree'. Ninety-six per cent of the respondents had a combined score of 'strongly agree' and 'agree' while only three per cent of the respondents were 'neutral' and one per cent 'strongly disagreed'. There were no respondents for 'disagree'.

### **6.17.5 Development of honest and ethical organisation culture**

Zhou (2006) stated that organisations should inculcate the statements of vision, values, mission and social rituals to set the moral tone to resist unethical practices. The modal response for this statement was 'agree'. Ninety-six per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that development of honest and ethical organisation culture was one of the solution in combating unethical behaviour while only four per cent of the respondents were 'neutral'. There were no respondents for 'disagree' and 'strongly disagree'.

#### **6.17.6 Supervision of work processes during project life cycle**

Mukumbwa (2008) in his research found that despite the elaborate procedures in the selection of consultants; a lot of works designed and supervised by consultants have not been completed to expected quality. Low quality monitoring procedures and failure to enforce specifications contributed to poor quality works. The modal response for this statement was 'agree'. Ninety-six per cent of the respondents had a combined score of 'strongly agree' and 'agree' while only three per cent of the respondents were 'neutral' and one per cent 'disagreed'. There were no respondents for 'strongly disagree'.

#### **6.17.7 Strengthening work processes**

Zhou (2006) stated that making the tendering process more transparent and having strict controls was important in project controls. The bi-modal response for this statement was 'strongly agree' and 'agree'. Ninety-three per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that strengthening work processes was one of the solutions in combating unethical behaviour while only four per cent of the respondents were 'neutral' and three per cent of the respondents had a combined score for 'disagree' and 'strongly disagree'.

#### **6.17.8 Institute regular and random checks**

Zhou (2006) stated that it was important to review the conduct of the officials in the construction industry through regular and random checks. Where corruption or maladministration by individuals is identified, all projects with which that particular official has been associated with should be targeted for detailed review. The modal response for this statement was 'strongly agree'. Ninety-four per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that instituting regular and random checks was one of the solution in combating unethical behaviour while only six per cent of the respondents were 'neutral'. There were no respondents for 'disagree' and 'strongly disagree'.

#### **6.17.9 Law and regulations enforcement**

Bommer et al. (1987) stated that laws and regulations of society have a force of moral authority and that individuals feel compelled to refrain from an action which is specifically prohibited by law. The modal response for this statement was 'strongly agree'. Ninety-two per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that law and

regulation enforcement was one of the solutions in combating unethical behaviour while only seven per cent of the respondents were 'neutral' and one per cent 'disagreed'. There were no respondents for 'strongly disagree'. These results were contrast to those by Doran (2004) where less than 50 per cent agreed that to help ensure ethical compliance in organisations, there should be more regulations

#### **6.17.10 Industry-wide Code of Ethics**

The modal response for this statement was 'agree'. Eighty-nine per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that an industry-wide Code of Ethics was one of the solutions in combating unethical behaviour while 10 per cent of the respondents were 'neutral' and only one per cent 'disagreed'. There were no respondents for 'strongly disagree'. These results were comparable to those by Doran (2004) who observed that 85 of the respondents in the United States of America believed that an industry-wide Code of Ethics was a solution in combating unethical practices in the construction sector. Doran (2004) further stated that an industry-wide Code of Ethics would compel all professions to subscribe to it. Currently, the construction industry in Zambia has no industry-wide Code of Ethics.

#### **6.17.11 Punishment and cancellation of practicing licence**

Ehsan (2009) suggested that cancellation of practicing licences for repeated violation of ethics as a form of punishment. The modal response for this statement was 'strongly agree'. Eighty-five per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that punishment and cancellation of professional practicing licence was one of the solutions in combating unethical behaviour while 10 per cent of the respondents were 'neutral' and five per cent 'disagreed'. There were no respondents for 'strongly disagree'. Mwiya (2009) in her survey indicated that 86 and 89 per cent of the respondents indicated that contractor blacklisting and consultant de-registration respectively were acceptable deterrents in the construction sector in Zambia. In Malaysia, Abdul-Rahman et al. (2011) recommended that making the unethical act a criminal activity was one of the ways in mitigating unethical conduct. Abdul-Rahman et al. (2011) further stated that in order to improve on ethical compliance, penalties imposed should even be stiffened and that the fine should be so high that the guilty person could hardly afford it.

#### **6.17.12 Indictments and convictions**

Shankantu (2006) stated that corruption was a felony and recommended that offenders should be indicted and those found guilty should be convicted. The bi-modal response for this statement was 'strongly agree' and 'agree'. Eighty per cent of the respondents had a combined score of 'strongly agree' and 'agree' while 14 per cent of the respondents were 'neutral' and only six per cent of the respondents had a combined score for 'disagreed' and 'strongly disagree'.

#### **6.17.13 Simplifying tender procedures**

The respondents had a modal response of 'agree' to the statement that simplifying tender procedures was a solution to unethical practices. The combined responses for 'agree' and 'strongly agree' were 56 per cent while 31 per cent were 'neutral' and 13 per cent had a combined score of 'disagreed' and 'strongly disagree'. In the results of interviews conducted in this study, the interviewees also overwhelmingly agreed that simplifying bidding procedures encouraged transparency.

#### **6.17.14 Involvement of law enforcement agencies during procurement process**

The modal response for this statement was 'agree'. Fifty-six per cent of the respondents had a combined score of 'strongly agree' and 'agree' to the statement that involvement of law enforcement agencies during procurement of contracts of high value was one of the solutions in combating unethical behaviour while 25 per cent of the respondents were 'neutral' and 19 per cent of the respondents had a combined score for 'disagreed' and 'strongly disagree'. The results of the interviews also indicated that involvement of certain law enforcement agencies on evaluation of huge tenders may reduce unethical practices.

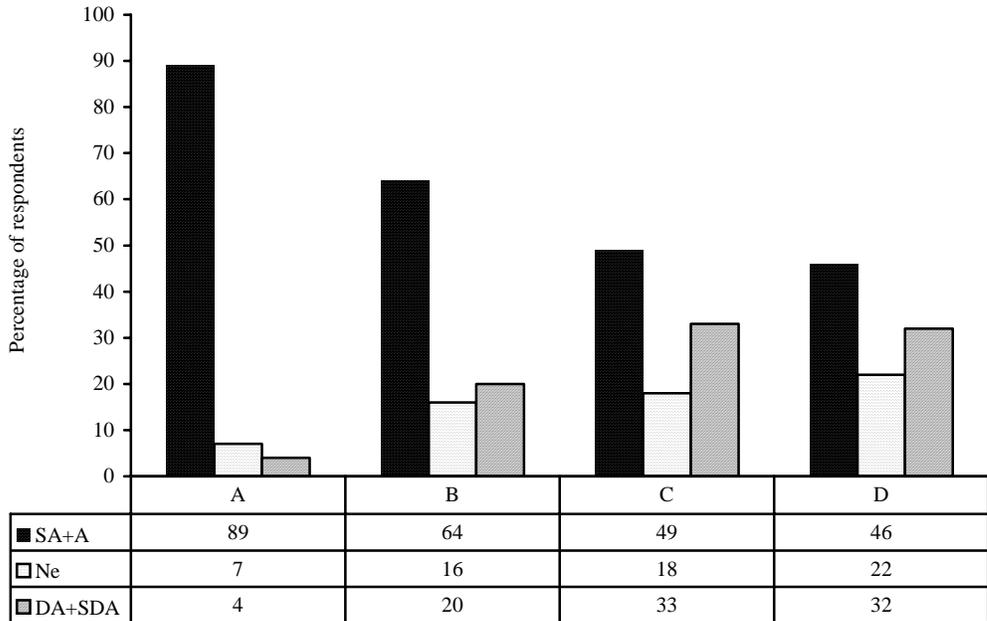
The responses to the statements that more emphasis placed on social responsibility in tender award criteria as a solution to unethical behaviour had both modal and median response of 'neutral'. More than half of the respondents did not agree with this statement.

### **6.18 Corporate governance in the construction industry**

Respondents were asked to state what corporate governance issues they would advocate for in the construction industry to enhance ethical conduct. Figure 6.20 depicts the results.

### 6.18.1 Consultants to supervise contractors

Eighty-nine per cent of the respondents had a combined response of ‘strongly agree’ and ‘agree’. The responses for ‘neutral’, ‘disagree’ and ‘strongly disagree’ were negligible. The modal responses were ‘strongly agree’.



SA = Strongly Agree      A = Agree      Ne = Neutral      DA= Disagree      SDA = Strongly Disagree  
 A – Consultants to supervise contractors      B – Separation of design and construction  
 C - Encourage civil society to take active role in projects      D – Client to supervise consultants

**Figure 6.20:** Corporate governance in the construction industry

### 6.18.2 Separation of design and construction

Sixty-four per cent of the respondents had a combined response of ‘strongly agree’ and ‘agree’, while the response for ‘neutral’ was 16 per cent, 22 per cent for ‘disagree’ and four per cent for ‘strongly disagree’. The modal responses were ‘strongly agree’ and ‘agree’ respectively.

Shakantu (2006) agreed with the results above. He stated that there was need for separation of design from construction of the project. Separation of responsibilities ensured accountability at each and every stage of the construction project.

### **6.18.3 Encourage civil society to take active role in projects**

Only 49 per cent of the respondents had a response of ‘strongly agree’ and ‘agree’, while the response for ‘neutral’ was 18 per cent, 33 per cent for ‘disagree’ and five per cent for ‘strongly disagree’. The bi-modal responses were ‘agree’ and ‘neutral’ respectively. Bowen et al. (2007) stated that civil societies play a role in promoting and entrenching ethical social and business values. However, the majority of the respondents did not agree to this statement encouraging civil society to take an active role in projects could promote good corporate governance.

### **6.18.4 Client to supervise the consultants**

Only 46 per cent of the respondents had a response of ‘strongly agree’ and ‘agree’, while the response for ‘neutral’ was 22 per cent, 32 per cent for ‘disagree’ and eight per cent for ‘strongly disagree’. The modal responses were ‘agree’ and ‘neutral’ respectively.

## **6.19 Measuring and assessing integrity in an organisation**

Respondents were asked whether their organisations had a system of measuring or assessing integrity systems. Seventy-four per cent stated that they did not have while only 18 per cent agreed. When asked if they had a compliance programme, only 21 per cent had one in place while 79 per cent did not have.

Respondents were asked to describe the system of measuring integrity in their organisations. The following were the responses:

- (a) client-based good practices help to keep in-check integrity practices in an organisation;
- (b) continuous performance appraisal;
- (c) well defined job descriptions and reporting systems which brings about assessment of performance and award employees with exceptional conduct;
- (d) feedback system which provides information on applications of solutions and services. All must be compatible with acceptable engineering principles, impartiality and appropriate to the works; and
- (e) an integrity committee was in place which looks at all grievances. The Code of Ethics was also in place.

The respondents who agreed that they had a compliance programme were asked to describe the programme. Their responses were as follows:

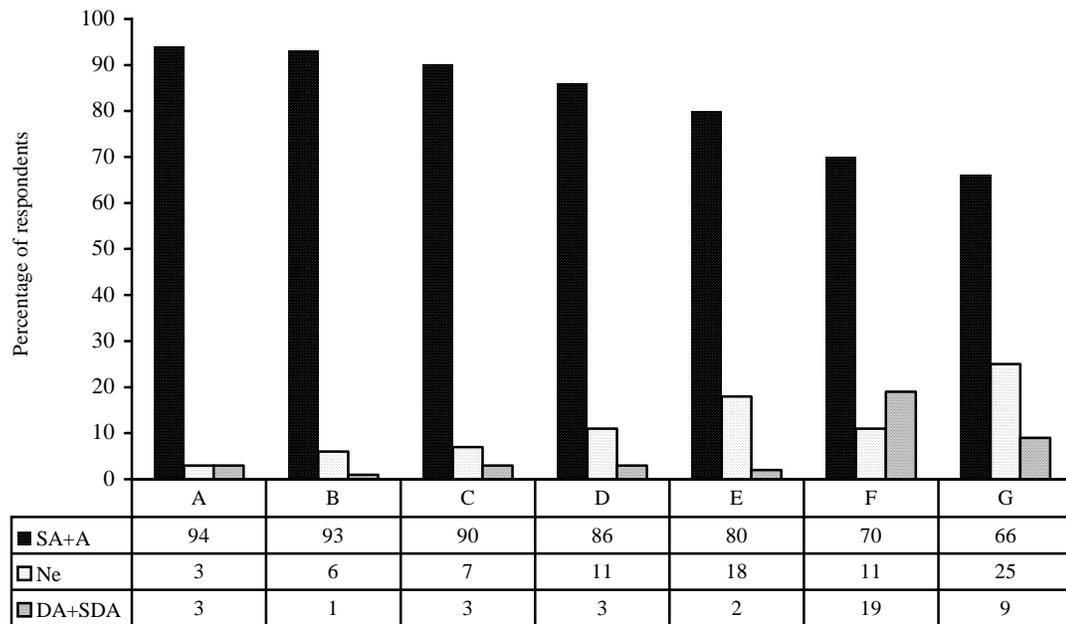
- (a) presence of an internal auditing system. Its role was to go through all contract clauses, certificates, payments and variations;
- (b) senior management of the firm reviewed and approved all decisions made by staff before communicating with clients or contractors
- (c) all projects had to be executed in line with specifications and production needed to comply with set standards.

The respondents were asked what they understood by benchmarking ethical conduct with respect to their organisations. The responses were as follows:

- (a) setting a known ethical standard such as good, non-corrupt, upright and fair management;
- (b) comparing organisation's conduct with others;
- (c) getting a framework to review the conduct of workers in an organisation;
- (d) setting up standards in ethical behaviour or conduct;
- (e) comparing ethical conduct being practiced locally to internationally accepted Codes of Ethics;
- (f) comparison of ethical conduct between similar organisations; and
- (g) benchmarking was a measure of set performance standards which should be attained on a project.

#### **6.19.1 Assessing presence of integrity systems in an organisation**

The respondents were asked to state how they would measure the level of integrity in an organisation. The results are shown in Figure 6.21.



SA = Strongly Agree      A = Agree      Ne = Neutral      DA= Disagree      SDA = Strongly Disagree

A – Existence of quality compliance programmes  
 C - Existence of code of ethics  
 E - Corporate culture  
 G - Corporate infrastructure (structure)

B – Existence of code of conduct  
 D – Existence of benchmarking system with best practice  
 F – Frequency of unethical conduct

**Figure 6.21:** Measuring levels of integrity in organisations

**(a) Existence of quality compliance programmes**

Kaptein and Avelino (2005) stated that a compliance programme include the board and management oversight, employee communication and training, auditing and monitoring plans disciplinary and enforcement mechanisms. Ninety-four per cent of the respondents had a combined response of ‘strongly agree’ and ‘agree’ to the statement that existence of quality compliance programme could be used as a measure of integrity in an organisation. The responses for ‘neutral’ and ‘disagree’ were each at three per cent respectively. There were no responses for ‘strongly disagree’. The modal response was ‘strongly agree’.

**(b) Existence of code of conduct**

The code of conduct prescribes how an employee is expected to conduct him or herself when faced with an ethical dilemma. Ninety-three per cent of the respondents had a combined response of ‘strongly agree’ and ‘agree’ to the statement that existence of code of conduct could be used as a measure of integrity in an organisation. The responses for ‘neutral’ and ‘disagree’ were six per cent and one per cent respectively. There were no responses for ‘strongly disagree’. The modal response was ‘agree’.

**(c) Existence of the Code of Ethics**

Liu et al. (2004) stated that a Code of Ethics consist of simple rules intended to give guidance in the solution of ethical questions which must be answered. Therefore existence of a Code of Ethics may be used as a tool to measure integrity. Ninety per cent of the respondents had a combined response of ‘strongly agree’ and ‘agree’ to the statement that existence of code of ethics could be used as a measure of integrity in an organisation. The responses for ‘neutral’ and ‘disagree’ were seven and three per cent respectively. There were no responses for ‘strongly disagree’. The modal response was ‘agree’.

**(d) Existence of benchmarking system with best practice**

Kaptein and Avelino (2005) recommended benchmarking as solution in combating ethical misconduct. Kaptein and Avelino (2005) further stated that organisations should periodically undertake organisational integrity reviews to benchmark best practice. Eighty-six per cent of the respondents had a combined response of ‘strongly agree’ and ‘agree’ to the statement that existence of benchmarking system with best practice could be used as a measure of integrity in an organisation. The responses for ‘neutral’ and ‘disagree’ were eleven and three per cent respectively. There were no responses for ‘strongly disagree’. The modal response was ‘agree’.

**(e) Corporate culture**

Bommer et al. (1987) stated that organisations have cultures reflected in the attitudes and values, management styles and problem solving behaviour of its employees and management. Behaviours of the board of directors, chief executive officer and senior management signals to the subordinates as to which behaviours are acceptable. Eighty per cent of the respondents had a combined response of ‘strongly agree’ and ‘agree’ to the statement that existence of ethical corporate culture could be used as a measure of integrity in an organisation. The responses for ‘neutral’, and ‘strongly disagree’ were 18 per cent and one per cent respectively. There were no responses for ‘disagree’. The modal response was ‘agree’.

**(f) Frequency of unethical conduct**

Kaptein and Avelino (2005) stated that different methods to assess integrity of an organisation include interviews, surveys and reports on unethical conduct. Measures need to be taken to understand the unethical issues, its root causes and how to deal with them in future if they

re-occurred. Seventy per cent of the respondents had a combined response of ‘strongly agree’ and ‘agree’ to the statement that measuring the frequency of unethical conduct could be used as a measure of integrity in an organisation. The responses for ‘neutral’, ‘disagree’ and ‘strongly disagree’ were eleven, sixteen and three per cent respectively. The modal response was ‘agree’.

**(g) Corporate infrastructure**

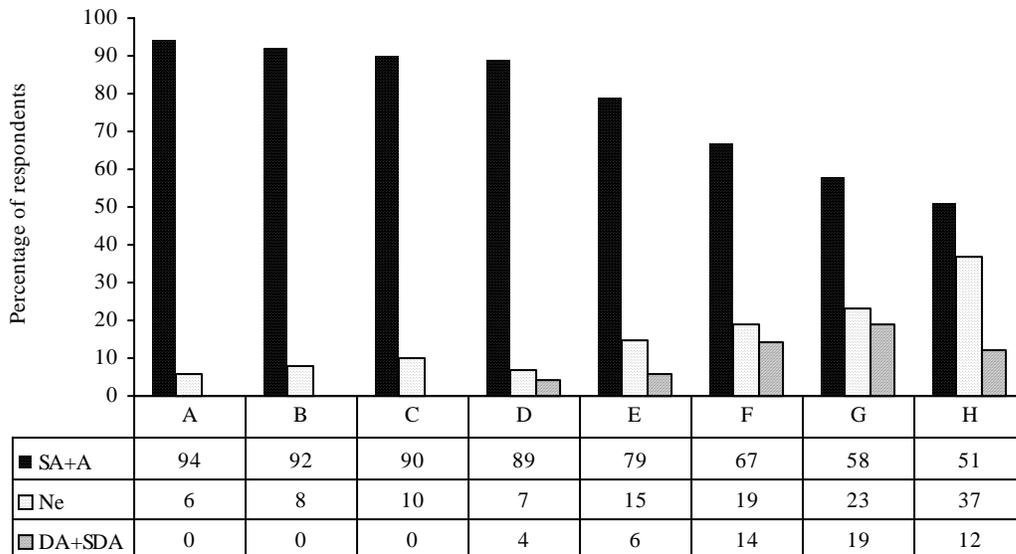
Infrastructure explores the way the organisation structures or organises its ethics and integrity function (Dubisnky and Richter, 2009). It includes the type of structure available and whether ethics management is represented at a higher level. As stated above, representation at higher level signifies that management pays particular attention to ethics. Sixty-six per cent of the respondents had a combined response of ‘strongly agree’ and ‘agree’ to the statement that existence of corporate infrastructure to support ethics could be used as a measure of integrity in an organisation. The responses for ‘neutral’ and ‘disagree’ were twenty five and eight per cent respectively. There were no responses for ‘strongly disagree’. The modal response was ‘agree’.

**6.19.2 How management should measure levels of integrity in an organisation**

The respondents were asked how management could measure the levels of integrity in an organisation. Figure 6.22 shows the results. The majority of the respondents agreed to the statements.

**(a) Reports of unethical behaviour**

Ninety-four per cent of the respondents had a combined response of ‘strongly agree’ and ‘agree’ while the response for ‘neutral’ was six per cent. There were no responses recorded for ‘disagree’ and ‘strongly degree’. The modal response was ‘agree’. Repeated reports of unethical behaviour signals that problems exist and that systems need to be put in place to combat misconduct. Kaptein and Avelino (2005) however stated that management should be suspicious if there are no reports on incidents of unethical conduct in an organisation.



**SA** = Strongly Agree      **A** = Agree      **Ne** = Neutral      **DA** = Disagree      **SDA** = Strongly Disagree  
**A** – Reports of unethical behaviour      **B** – Have internal system of dealing with ethical index  
**C** - Frequency of communication on ethical matters      **D** – Auditor’s reports  
**E** - Levels of education and training provided      **F** – Number of whistleblowers  
**G** - Reports to law enforcement agencies      **H** - Number of self incrimination

**Figure 6.22:** How management measures levels of integrity in an organisation

**(b) Have internal system of dealing with ethical matters**

Izraeli and Schwarz (2000) stated that a compliance or ethics officer at higher level is important in providing oversight and systems to combat unethical practices. Ninety-two per cent of the respondents had a combined response of ‘strongly agree’ and ‘agree’ to the statement that an internal system of dealing with ethical matters could be used by management to measure integrity in an organisation. The response for ‘neutral’ was eight per cent. There were no responses recorded for ‘disagree’ and ‘strongly degree’. The modal response was ‘agree’.

**(c) Frequency of communication on ethical matters**

Dubisnky and Richter (2009) stated that communication as an ethics and integrity initiative should be promoted both internally and externally to provide its stakeholders with key messages on ethical conduct. Communication should also involve a framework for reporting unethical practices, self-incrimination and reports to external agencies such as the ACC. Ninety per cent of the respondents had a combined response of ‘strongly agree’ and ‘agree’ to this statement while the response for ‘neutral’ was ten per cent. There were no responses recorded for ‘disagree’ and ‘strongly degree’. The modal response was ‘agree’.

**(d) Auditor's reports**

Auditors' reports, both the financial and technical highlight the magnitude of unethical conduct. Eighty-nine per cent of the respondents had a combined response of 'strongly agree' and 'agree' to the statement that the Auditor's reports could be used to measure levels of integrity in an organisation. The responses for 'neutral', 'disagree' and 'strongly disagree' were seven, one and three per cent respectively. The modal response was 'agree'.

**(e) Training and education provided in ethics**

Doran (2004) stated that training and education in ethics should be more goal oriented and must be part overall corporate strategy. Seventy-nine per cent of the respondents had a combined response of 'strongly agree' and 'agree'. The responses for 'neutral' and 'disagree' were fifteen and six per cent respectively. There were no responses for 'strongly disagree'. The modal response was 'agree'.

**(f) Number of whistle blowers**

The number of whistle blowers may signal that there were incidences of unethical conduct. Sixty-seven per cent of the respondents had a combined response of 'strongly agree' and 'agree' to the statement that the number of whistle blowers could be used to measure integrity in an organisation. The responses for 'neutral' and 'disagree' were nineteen and fourteen per cent respectively. There were no responses for 'strongly disagree'. The modal response was 'agree'.

**(g) Reports to laws enforcement agencies**

Fifty-eight per cent of the respondents had a combined response of 'strongly agree' and 'agree'. The responses for 'neutral', 'disagree' and 'strongly disagree' were twenty three, seventeen and one per cent respectively. The modal response was 'agree'. Reports to law enforcement agencies about unethical conduct of employees may be used to measure levels of integrity in an organisation. However, most unethical practices such as corruption are never reported as established earlier in this study.

**(h) Number of self incrimination**

Transparency International (2008a) stated that a framework within the organisation to deal with self-incrimination and whistle blowing if put in place could determine levels integrity in an

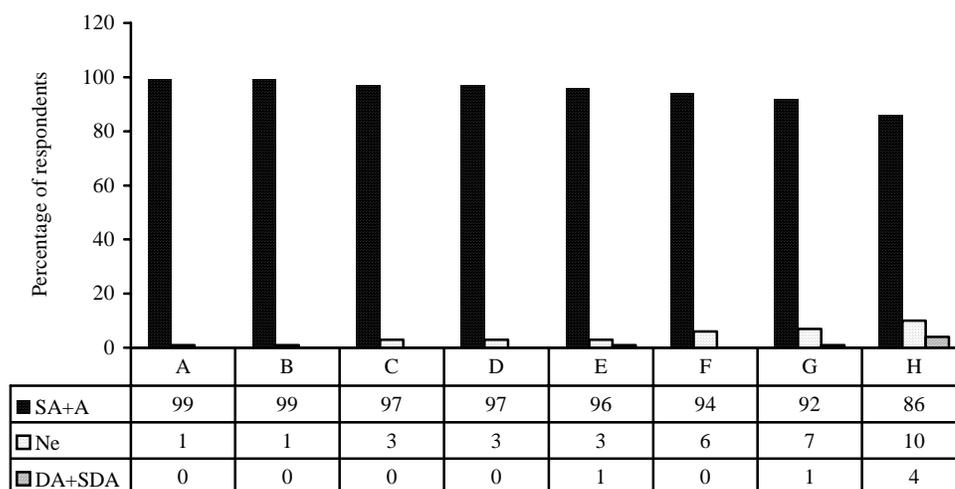
organisation. Fifty-one per cent of the respondents had a combined response of ‘strongly agree’ and ‘agree’. The responses for ‘neutral’, ‘disagree’ and ‘strongly disagree’ were thirty seven, ten and one per cent respectively. The modal response was ‘agree’.

### 6.19.3 Ethics assessment programme

Respondents were asked what they would recommend to be included in the ethics assessment programme of an organisation. Figure 6.23 depicts the results.

#### (a) Clear monitoring procedures and controls

Ninety-nine per cent of the respondents had a combined response of ‘strongly agree’ and ‘agree’ to the statement that clear monitoring procedures and controls should be included in an ethics compliance programme while the response for ‘neutral’ was only one per cent. There were no responses recorded for ‘disagree’ and ‘strongly degree’. The modal response was ‘strongly agree’.



SA = Strongly Agree      A = Agree      Ne = Neutral      DA= Disagree      SDA = Strongly Disagree  
 A – Clear monitoring procedures and controls      B – Clear policies and procedures  
 C - prompt corrective action procedures      D – Training and education in ethics  
 E - Clear communication strategy      F – Top management commitment  
 G - Ethical risk assessment procedures      H - Punitive measures

**Figure 6.23:** Elements of Ethics assessment programme

#### (b) Clear policies and procedures

Ninety-nine per cent of the respondents had a combined response of ‘strongly agree’ and ‘agree’ to the statement that clear policies and procedures should be included in an ethics compliance

programme while the response for 'neutral' was only one per cent. There were no responses recorded for 'disagree' and 'strongly degree'. The modal response was 'strongly agree'.

**(c) Prompt corrective action procedures**

Ninety-seven per cent of the respondents had a combined response of 'strongly agree' and 'agree' to the statement that prompt corrective action procedures should be included in an ethics compliance programme while the response for 'neutral' was only three per cent. There were no responses recorded for 'disagree' and 'strongly degree'. The modal response was 'strongly agree'.

**(d) Training and education in ethics**

Ninety-seven per cent of the respondents had a combined response of 'strongly agree' and 'agree' to the statement that training and education in ethics should be included in a compliance programme for an organisation while the response for 'neutral' was only three per cent. There were no responses recorded for 'disagree' and 'strongly degree'. The modal response was 'strongly agree'.

**(e) Clear communication strategy**

Ninety-five per cent of the respondents had a combined response of 'strongly agree' and 'agree' to the statement that clear communication strategy should be included in an ethics compliance programme while the response for 'neutral' and 'strongly disagree' were three and two per cent respectively. There were no responses recorded for 'disagree'. The modal response was 'strongly agree'.

**(f) Top management commitment**

Ninety-four per cent of the respondents had a combined response of 'strongly agree' and 'agree' to the statement that top management commitment was critical in ensuring that an ethics compliance programme is implemented and enforced while the response for 'neutral' was only six per cent. There were no responses recorded for 'disagree' and 'strongly degree'. The modal response was 'agree'.

**(g) Ethical risk assessment procedures**

Ninety-two per cent of the respondents had a combined response of ‘strongly agree’ and ‘agree’ to the statement that ethical risk assessment procedures should be included in an ethics compliance programme while the response for ‘neutral’ and ‘disagree’ were seven and one per cent respectively. There were no responses recorded for ‘strongly disagree’. The modal response was ‘agree’.

**(h) Punitive measures**

The World Bank punishes contractors that are involved in misconduct. Similarly, other countries that have adopted the World Bank processes punish contractors involved in ethical misconduct. Eighty-six per cent of the respondents had a combined response of ‘strongly agree’ and ‘agree’ while the response for ‘neutral’ and ‘disagree’ were ten and four per cent respectively. There were no responses recorded for ‘strongly disagree’. The modal response was ‘agree’.

**6.20 Summary**

In this chapter, the results of the questionnaire survey are analysed and discussed. Various unethical issues in construction projects were identified. The role of NCC and leadership in the construction sector was also discussed. Solutions to combat unethical practices were also discussed.

In the next chapter, the framework for assessing the presence of integrity systems in construction organisations is presented. The framework is also validated.

## **CHAPTER SEVEN: FRAMEWORK FOR ASSESSMENT OF INTEGRITY SYSTEMS IN CONSTRUCTION ORGANISATIONS AND ITS VALIDATION**

### **7.0 Introduction**

In the previous chapter, data collected by use of a questionnaire survey was analysed and discussed. Various unethical practices encountered on construction projects were discussed.

In this chapter, the framework for assessing the presence of integrity systems in construction organisations is presented. The aim of the study was to develop a framework for assessing the presence of integrity systems in construction organisations. The validation process of the framework is also described.

### **7.1 Development of the framework for assessing the presence of integrity systems in construction organisations**

Development of the framework for assessing the presence of integrity systems in construction organisations was done by taking into consideration the literature review, the results of the interviews and questionnaire survey. The framework comprises the elements or factors that enable construction organisations to determine integrity capabilities. It is aimed at providing construction organisations with a tool for assessing the presence of integrity systems, to help determine and put in place strategies to bridge identified gaps. The need for an effective and structured instrument for assessing the presence of integrity systems in construction organisations cannot be over-emphasised and is important for the purpose of innovation, efficiency and effectiveness (Kululanga, 1999).

From literature review, the results of the interviews and questionnaire survey, it was established that the elements identified below were important in the assessment of the presence of integrity systems in construction organisations.

#### **(a) Organisational strategy**

Ethics should be developed at conception of a construction organisation right through its development and operation. A clear mission, vision, values, strategic objectives and operational plans incorporating ethics is cardinal in ensuring compliance to ethics. A definite and clear

strategy was identified as a starting point in development of ethical compliance in construction organisations. Ethics embedded in organisation strategy forms a bed rock for compliance.

**(b) Top leadership commitment**

Top leadership practices reflect on the whole organisation (Doran, 2004). According to Kaptein and Scott (2005), good leadership served as a role model, led an organisation by example and helped to develop strategies in combating unethical practices. Good leadership was also important in the formulation, dissemination and enforcement of Codes of Ethics for organisations. Type of leadership, according to Dubinsky and Richter (2009) addresses how the organisation is accountable for promotion of ethics and integrity. During the interviews, type of leadership was among the factors identified at organisational level that led employees to act ethically. Fourteen out of 15 interviewees agreed that the type of leadership was one of the factors that led employees to act ethically. In the questionnaire survey, 94 per cent of the respondents also agreed that top leadership commitment to ethical programmes could be used to assess the presence of integrity systems in an organisation.

**(c) Existence of formal structures**

Sixty-six per cent of the respondents to the questionnaire survey agreed that the existence of corporate structures to support ethics could be used to assess the presence of integrity systems in an organisation. Existence of formal structures includes how the ethics function is structured, staffed and resourced. Nine out of 15 of the interviewees also agreed that existence of formal structures to support ethics management could be used to assess the presence of integrity systems in an organisation.

**(d) Existence of an ethical culture**

Organisation culture includes both written and unwritten rules that dictate how work is performed. Existence of ethical culture explores the degree to which an organisation focuses on shaping its ethical conduct through mission, vision, structure and strategy. Bommer et al. (1987) stated that an organisation's culture is reflected in the attitudes and values, management styles and problem solving behaviour of its employees. In the interviews, 13 out of 15 interviewees agreed that organisational culture was one of the factors that led employees to act ethically. Eighty six per cent of the respondents to the questionnaire also agreed that organisational culture could be used to assess the presence of integrity systems in an organisation.

**(e) Code of Ethics**

A Code of Ethics prescribes how employees are expected to conduct themselves when faced with an ethical dilemma (Liu et al., 2004). The results of the interview indicated that 11 out of 15 interviewees agreed that existence of a Code of Ethics in an organisation could be used to assess presence of integrity systems. Ninety three per cent of respondents to the questionnaire survey also agreed to the statement that existence of a Code of Ethics could be used to assess presence of integrity systems in an organisation.

**(f) Compliance programmes**

Kaptein and Avelino (2005) stated that a compliance programme articulated a company's business values, principles and standards. The results of the interviews indicated that 11 out of 15 interviewees agreed that existence of a quality compliance programme could be used to assess presence of integrity systems in an organisation. Ninety four per cent of the questionnaire respondents also agreed that existence of a compliance programme could be used to assess presence of integrity systems in an organisation.

**(g) Training and education in ethics**

Doran (2004) stated that to help ensure ethical compliance in an organisation, there was need for more training in ethics. Ten out of 15 interviewees agreed that provision of training and education in ethics was one of the necessary strategies in the prevention of unethical practices in construction organisations. Ninety seven per cent of the respondents to the questionnaire survey also agreed that the extent of training and education provided in ethics could be used to assess presence of integrity systems in an organisation.

**(h) Communication of ethical issues**

Dubinsky and Richter (2009) stated that the manner of communication of ethical issues both internally and to external stakeholders could be used to assess presence of integrity in an organisation. Results of the interview indicated that 13 out of 15 interviewees agreed that frequent communication of ethical issues to employees was one of the strategies to prevent unethical practices in an organisation. Ninety per cent of questionnaire respondents also agreed that the frequency of communication of ethical issues to employees in an organisation could be used to

assess presence of integrity systems. An organisation needs to have a clear communication strategy on ethical matters.

**(i) Reporting systems of unethical conduct**

The reporting and recording of ethical misconducts could be used to assess presence of integrity systems in an organisation (Dubinsky and Richter, 2009). Kaptein and Avelino (2005) stated that methods to assess presence of integrity systems in an organisation include interviews, surveys and reports on ethical misconduct. The results of the interviews indicated that 14 out of 15 interviewees agreed that reporting systems was one of the strategies that could be used to combat unethical practices. Ninety four per cent of questionnaire respondents agreed that reports of unethical behaviour could be used by management in an organisation to assess presence of integrity systems.

**(j) Disciplinary and reward procedures**

Disciplinary and reward procedures outline how an organisation promotes ethical conduct through performance appraisal. Ethical compliance of employees in an organisation was also linked to compensation. The results of the interviews indicated that 12 out of 15 interviewees agreed that the type of internal disciplinary procedures was one of the factors that led employees to act ethically. Eighty six per cent of the questionnaire respondents also agreed that the type of punitive and reward system put in place could be used to assess presence of integrity systems in an organisation.

**7.2 Structure of the framework for assessing integrity in construction organisations**

The framework for assessing presence of integrity systems in construction organisations was developed based on statement indicators or elements that were linked to scores. The scores provided an overview of the strengths and weaknesses of integrity capabilities of construction organisations. Each element of the framework was sub-divided into five separate scores. Score five (5) was the highest, depicting ethical compliance. Score one (1) was the lowest and indicated lower or non-ethical compliance in a construction organisation. The scores provided a rapid assessment of presence of integrity systems for each element in the framework.

The framework is divided into ten elements. Each element addresses a certain area in the management process aimed at improving ethical compliance in an organisation. All ten elements contribute to the overall ethical well being of a construction organisation. Each element also provides an organisation with an opportunity to determine its strengths and weaknesses. Determination of strengths and weaknesses in ethical compliance using the framework helps in drawing up a gap analysis. Kululanga (1999) stated that general indicators or elements should provide two extremes of achieving or doing a process, namely:

- (a) a good management process is in place, in one extreme; and
- (b) a good management process does not exist, in the opposite extreme.

Between the two extremes, a series of varying degrees of assessing integrity levels are described either top-down or bottom-up.

### **7.3 Auditing of the framework**

An audit is a comprehensive, systematic and regular review of an organisation's activities and results compared against best practice in business (Kululanga, 1999). The process allows an organisation to discern clearly its strengths and weaknesses which culminates in planned interventions in order to effectively address the challenges of the evolving business environment. In his report, Egan (1998) advocated for development of management measuring instruments that should help in assessment of construction organisations' capabilities towards modernising business processes. Understanding the characteristics of the audit and determining the gap are therefore very essential in modern business processes.

#### **7.3.1 Characteristics of audits**

Management audit focuses on results, evaluating the effectiveness and suitability of controls by challenging underlying rules, procedures and methods. Management audits, which are generally performed internally, are compliance oriented and focus on cause-effect analysis. When performed correctly, they are potentially the most useful evaluation methods, because they result in change (Arter, 2000). Auditors are not allowed to make up the rules. They must audit against performance standards that are already in place.

Kululanga (1999) stated that in general, an audit of a management process implies an assessment of practices employed by both profit and non profit making organisations. This is done by comparison of the best known practices and that of an organisation. Such an assessment can be addressed by conducting process and performance audits.

Hammer (2007) stated that a process audit focuses on such questions as whether the individual elements necessary for addressing improvement are in place and the degree to which the best practice is implemented and achieved.

Performance auditing on the other hand generally follows one of three approaches in examining the compliance of the audited entity. The audit may take: a result-oriented approach, which assesses whether pre-defined objectives have been achieved as intended; a problem-oriented approach, which verifies and analyses the causes of a particular problem; a system-oriented approach which examines the proper functioning of management systems: or a combination of the three approaches (ISSAI, 2011). In this study, a framework based on the system-oriented approach was developed.

### **7.3.2 Gap analysis**

Gap analysis provides a basis for examining in more depth those areas that are not being given due attention (Kululanga, 1999). Gap analysis is a technique for determining the steps to be taken in moving from a current state to a desired future-state. It is also called needs analysis or needs assessment.

Gap analysis consists of a listing of characteristic factors such as: attributes, competencies, performance levels of the present situation; cross-listing factors required to achieve the future objectives; and then highlighting the gaps that exist and need to be filled.

## **7.4 Framework for assessing presence of integrity systems in construction organisations**

The framework for assessing presence of integrity systems in construction organisations was developed by taking into consideration the elements identified in Section 7.1. The framework is depicted in Table 7.1 below.

Table 7.1: Framework for assessing presence of integrity systems in construction organisations

Score	Vision and goals	Type of leadership	Existence of formal structures	Existence of ethical culture
5	<ul style="list-style-type: none"> <li>- vision and goals clearly articulate commitment for ethical actions</li> <li>- ethical goals are reasonable, clear, measurable and achievable</li> <li>- organisation is frequently used as a benchmark in construction industry for integrity</li> </ul>	<ul style="list-style-type: none"> <li>- leadership held accountable on ethical matters</li> <li>- managing ethically considered essential to leadership competency</li> <li>- emphasis on ethics in strategy formulation and implementation</li> </ul>	<ul style="list-style-type: none"> <li>- member of staff dealing with ethics appointed at senior management level</li> <li>- ethics officer serves as an independent and confidential ethics advisor</li> <li>- ethics and integrity fully integrated into organisational operations</li> </ul>	<ul style="list-style-type: none"> <li>- ethics, integrity, trust and fairness practiced by all employees</li> <li>- integrity role models easily identified</li> <li>- annual reports indicate commitment to ethical behaviour.</li> </ul>
4	<ul style="list-style-type: none"> <li>- employees provided with clear Integrity policies, regulations and rules expected of them</li> <li>- upholding integrity principles over seeking profit is the guiding rule</li> <li>- ethical standards are set and employees are evaluated against them</li> <li>- continued success of organisation attributed to ethical leadership and actions.</li> </ul>	<ul style="list-style-type: none"> <li>- ethical awareness and demonstration by leaders</li> <li>- integration of ethical conduct into organisational culture</li> <li>- training and coaching in ethics by leaders</li> <li>- ethics incorporated into selection, performance evaluation and promotion decisions</li> </ul>	<ul style="list-style-type: none"> <li>- senior executive leads ethics function, supported by professionals in ethics</li> <li>- ethics officer reports regularly to management</li> <li>- the company reports on ethical compliance programmes included in its annual activity plans and reports</li> </ul>	<ul style="list-style-type: none"> <li>- there are positive role models among leadership</li> <li>- good ethical conduct visible in organisation</li> <li>- employees free to speak, whistle blow for any ethical misconduct</li> </ul>
3	<ul style="list-style-type: none"> <li>- ethical conduct is seen as a requirement for organisational and individual performance</li> <li>- organisation has identified and defined its core ethical values, communicates them regularly</li> <li>- ethical values and conduct is connected to organisational success</li> </ul>	<ul style="list-style-type: none"> <li>- managers promote ethical conduct as part of their accountabilities and responsibilities</li> <li>- some leaders are champions of ethics</li> <li>- leaders view ethics and integrity as management level function.</li> </ul>	<ul style="list-style-type: none"> <li>- senior ethics manager reports to top executive in management team</li> <li>- senior ethics manager has organisational wide responsibilities</li> <li>- programmes on ethics included in the budget</li> </ul>	<ul style="list-style-type: none"> <li>- culture of organisation relatively open allow free discussions of ethical matters</li> <li>- history and ethics traditions of organisation are well known</li> <li>- leaders articulate ethics in values, goals and mission</li> </ul>
2	<ul style="list-style-type: none"> <li>- ethics narrowly defined to formal internal rules</li> <li>- ethics is viewed as necessary evil that is tolerated because it is incorrect to fail to mention it</li> <li>- No intentions to imbed ethics in organisational practices</li> </ul>	<ul style="list-style-type: none"> <li>- Ethics and integrity viewed as a function of human resources or legal.</li> <li>- manager accept some responsibilities for ethics</li> <li>- no procedures for dealing with ethical situations</li> <li>- leadership need written notes to discuss ethics and integrity</li> </ul>	<ul style="list-style-type: none"> <li>- ethics performed as additional, secondary duties of mid level staff</li> <li>- organisational ethics not recognised as unique discipline requiring specialised skills, knowledge and experience</li> </ul>	<ul style="list-style-type: none"> <li>- low profile on ethics by employees</li> <li>- its not safe to talk about ethical misconduct in the organisation</li> <li>- gap between ethical communications and actions</li> <li>- culture remains one of compliance to rules and regulations</li> </ul>
1	<ul style="list-style-type: none"> <li>- no ethical visions, goals, policies, guidelines</li> <li>- ethics and integrity neither recognised no discussed</li> </ul>	<ul style="list-style-type: none"> <li>- No visible leadership involvement in ethics</li> </ul>	<ul style="list-style-type: none"> <li>- no structure present for ethics</li> <li>- no individual responsible for ethics and integrity management.</li> </ul>	<ul style="list-style-type: none"> <li>- existence of mistrusting culture</li> <li>- no relationship between organisational culture and ethics</li> </ul>

## **7.5 Validation of framework for assessing integrity systems**

Having developed the framework, it was essential that it be validated. Validation implies that something is assessed to be valid and that the adjudication is conducted by a person or body competent to judge (Muya, 1999). The competence of the adjudicator has to be specific to that which is being judged. Macal (2005) stated that model verification and validation are essential parts of the model development process for it to be accepted and used to support decision making. Martini and Henaff (2010) also stated that validation of a model focuses on whether it is adequate for the purpose it is to be used. They further stated that validation includes evaluations of the model's theoretical soundness and mathematical integrity. Macal (2005) stated that validation exercises amount to a series of attempts to invalidate the model. Presumably, once a model is shown to be invalid, it is salvageable with further work. This results in a model with higher degree of credibility and confidence. Technically, the end result of the validation process is not a validated model, but rather a model that has passed all the validation tests (Macal, 2005).

Church (1983) argued that the concept of validation, judgement and standards is neither based on empirical nor theoretical evidence. Empirically, anyone conducting the process of validation is unlikely to properly account for the basis of their judgement or define the relevant standards they used. Theoretically, there would be no privileged access to presupposed knowledge and values by which a pure and unchallenged judgement might be made. Muya (1999) stated that although the concept of validation appears to be undermined by weaknesses stated above, it was nevertheless an accepted form of critique. The arguments above recognise the philosophical weaknesses which underlie the process of validation. Church (1993) nevertheless stated that validation still remained the accepted form of expert seal of approval in cases where subjective judgement might have no other alternative.

Seven questionnaires were prepared and hand delivered to senior officers of organisations involved in or have an interest in construction industry integrity. The organisations were: the Anti-corruption Commission; Transparent International Zambia; Buildings Department in the Ministry of Transport, Works, Supply and Communications; Road Development Agency; Lusaka City Council; National Road Fund Agency; and National Council for Construction. These represented the main stakeholders of the construction industry. National Council for Construction was the overseer and regulator of all contractors in the country. The

Anti-Corruption Commission and Transparency International Zambia were involved in ensuring a corrupt free construction industry. Lusaka City Council, Road Development Agency, Buildings Department and National Road Fund Agency are some of main financiers of construction projects.

### **7.5.1 Validation of results**

The seven respondents to validate the framework for assessing presence of integrity systems in construction organisations were asked to state the functionality, user-friendliness and usefulness of the framework. They were further asked whether they had used or come across a framework for assessing presence of integrity systems in construction organisations. The results of the validation process are presented below.

#### **(a) Experience with integrity measuring frameworks**

The seven respondents were asked to state whether they had previously “come across” a framework for measuring integrity in construction organisations. Six of the respondents disagreed and one agreed. The respondent that agreed stated that she had come across a framework for assessing levels of integrity in construction organisations on the internet, though she was not clear on its provisions. When asked a follow-up question to state the company that employed the framework, or the site on the internet where it was found, the respondent could not provide an answer.

These result indicated that six out seven of the respondents had never had any experience with seen any framework for assessing presence of integrity systems in the construction organisations. A gap therefore existed in the assessment of integrity systems in construction organisations.

#### **(b) Usefulness and usability of the framework**

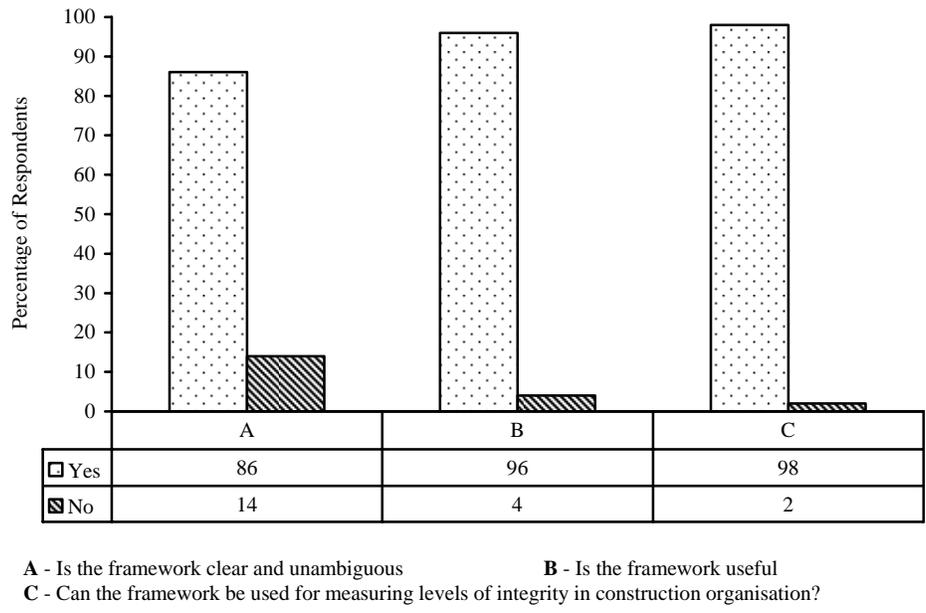
The respondents were asked to state whether the framework could be applied in the construction industry and whether it was useful. All the respondents agreed that the framework could be applied in the construction industry. All respondents also agreed that the framework was useful. Kululanga (1999) stated that usability included the degree to which users are able to use the tool without assistance from academics or consultants. Usability also addresses the application to various groups in the same industry.

**(c) Improvement of ethical compliance in the construction industry**

The seven respondents were also asked to state whether the framework could be used to improve ethical compliance in construction organisations. All of the seven respondents agreed.

**7.5.2 Industry view of the framework for assessing integrity systems**

A follow-up question was prepared to establish industry-wide view of the framework. The follow-up question was sent to 70 professionals in the construction industry. Forty eight professionals responded to the follow-up question. The follow-up question was to establish whether the framework was clear and unambiguous; useful; and could be used for assessing presence of integrity systems in construction organisations. The results are depicted in Figure 7.1.



**Figure 7.1:** General results on framework for assessing integrity systems

Eighty six per cent of the respondents stated that the framework was clear and unambiguous; 96 per cent stated that it was useful; while 98 per cent agreed that it could be used to assess presence of integrity systems in construction organisations. From these results, the respondents agreed that the framework was clear and unambiguous, useful and could be used to assess presence of integrity systems in construction organisations.

### **7.5.3 Other comments on the framework**

The respondents were asked to provide any other comments with respect to the framework for assessing presence of integrity systems in construction organisations. They stated that the framework:

- (a) was comprehensive and could improve ethical compliance in construction organisations;
- (b) needed to be simplified and popularised in all sub-sectors of the construction industry including small scale organisations; and
- (c) was more suitable, especially for big construction organisations and regulators in the construction sector.

### **7.6 Summary**

The framework for assessing presence of integrity systems in construction organisations was developed and validated in this chapter. The industry-wide view of the framework was also established. Respondents stated that the framework was clear and unambiguous, useful and could be used to assess levels of integrity in construction organisations.

In the next chapter, an assessment of integrity metrics and three case studies in construction organisations in Zambia are analysed and discussed.

# CHAPTER EIGHT: DISCUSSION OF INTEGRITY METRICS AND CASE STUDIES

## 8.1 Introduction

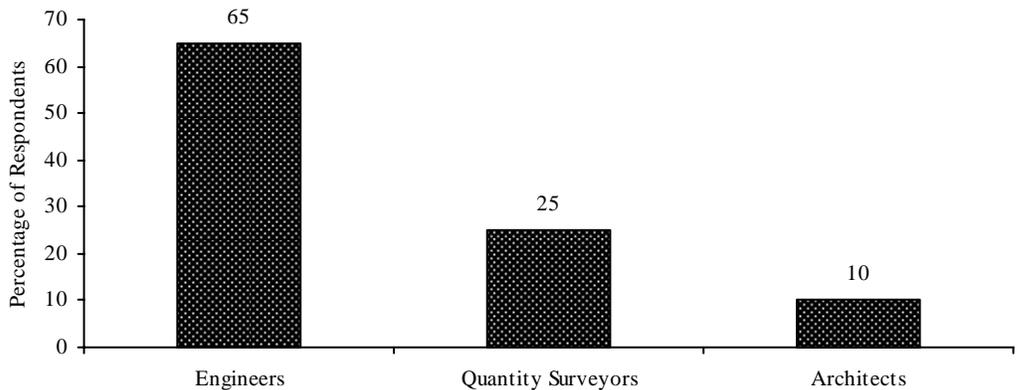
In the previous Chapter, a framework for assessing presence of integrity systems in construction organisations was developed and validated. In this chapter, the assessment of integrity metrics and three case studies in construction organisations in Zambia are analysed and discussed.

A questionnaire, based on the framework for assessing the presence of integrity systems in construction organisations was prepared. Seventy five copies of the questionnaire were distributed to the following: contractors; client organisations; engineering, architectural and quantity surveying consulting firms. Forty eight organisations completed the questionnaires.

The respondents were asked to indicate the presence of identified integrity metrics in their organisations. The results are shown in Figure 8.4. Figures 8.1 to 8.3 provide information about the professions, experience and organisations the respondents worked for.

### 8.1.1 Type of professions of respondents

The main professions in the construction industry in Zambia at the time of the study were architects, engineers and quantity surveyors. Figure 8.1 shows the professions of respondents to the questionnaire on the framework for assessing presence of integrity systems in construction organisations. From the results, 65 per cent of the respondents were engineers, 25 per cent quantity surveyors and 10 per cent architects. Generally in Zambia, engineers form the bulk of all technical professions in the construction industry.



**Figure 8.1:** Professions of respondents

### 8.1.2 Experience of respondents

The years of experience of the 48 respondents to the questionnaire are shown in Figure 8.2. The years of experience were grouped from 0 to 5; 6 to 10; and above ten years of experience. From Figure 7.2, 79 per cent of the respondents had over 10 years of experience. This showed that most of the respondents were sufficiently experienced to comprehend issues of integrity in their organisations.

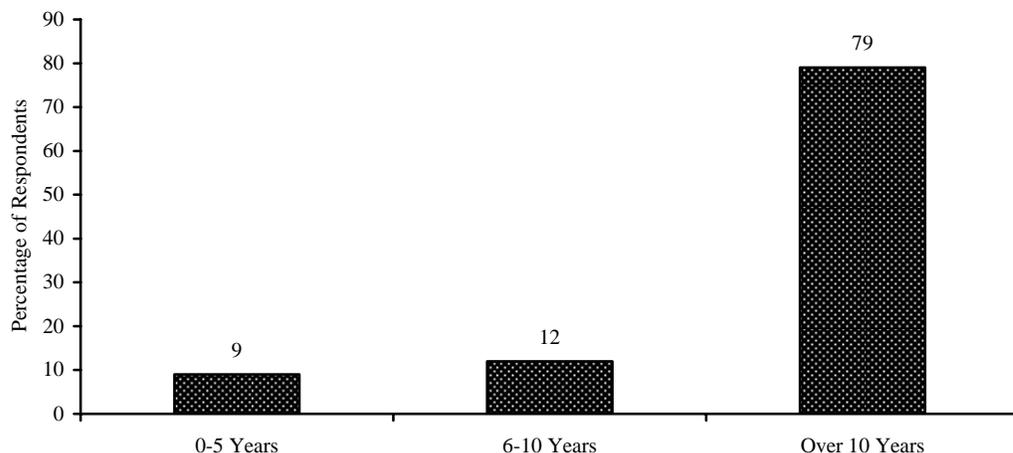


Figure 8.2: Years of experience of respondents

### 8.1.3 Types of organisations respondents worked for

The type of organisations that respondents worked for are shown in Figure 8.3. These were some of the major players in the construction industry in Zambia. Donor agencies did not respond to the questionnaire because of the bureaucratic procedures in approving a person to participate in the study.

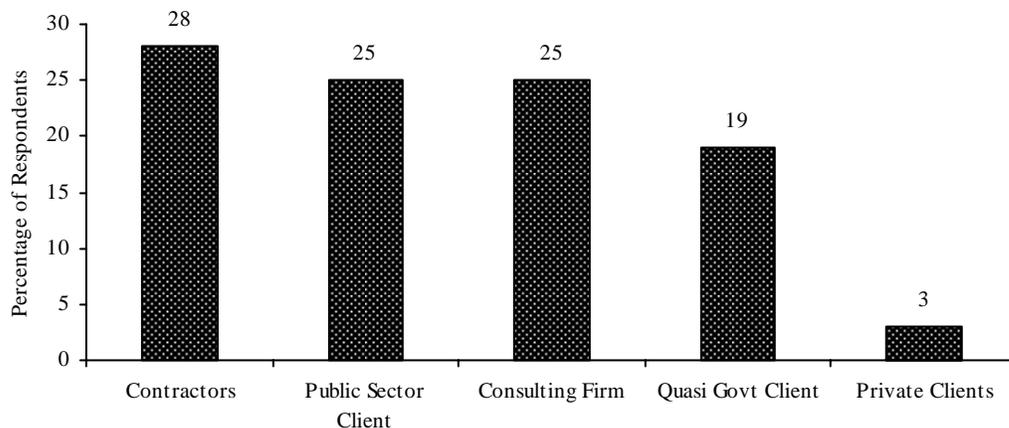


Figure 8.3: Organisations which respondents belonged to questionnaire

## **8.2 Assessment of presence of integrity systems in construction organisations in Zambia**

The framework for assessing presence of integrity systems in construction organisations has ten elements, namely:

- organisational strategy;
- top leadership commitment;
- existence of formal structures;
- existence of ethical culture;
- Code of Ethics;
- compliance programmes;
- training and education in ethics;
- communication of ethical issues;
- reporting systems of unethical conduct; and
- disciplinary and reward procedures.

Each of the elements had aspects necessary for assessing presence of integrity systems. These aspects had scores ranging from (1) to (5). The score of (5) is the highest and indicated high levels of ethical compliance in an organisation. A score of one (1) was the lowest and indicated very low or non ethical compliance in an organisation

The construction industry in Zambia, as stated earlier, comprises five sectors, namely: design; assembly; manufacturing; supply and clientele (Mwiya, 2009). The design sector is referred to as consultancy, while assembly sector include contractors and sub contractors. The clientele include project sponsors such as the government, private companies and donor agencies that fund construction projects. The manufacturing sector which includes producers of construction materials, plant and machinery was not considered in this study.

An analysis was undertaken to compare and contrast the results of the questionnaire on the framework for assessing presence integrity systems in construction organisations among contractors, clients and consultants. The responses are depicted in Figure 8.4.

### **8.2.1 Organisational strategy**

Bryson (1988) stated that vision clarifies what the organisation should look like and how it should behave as it fulfils its mission. The vision gives direction and purpose for an organisation. The vision is broad, encompassing and far-reaching. Goals and strategic objectives on the other hand are the roadmap and are manageable stepping stones to achieving the mission and make the vision a reality. Having well developed goals and strategic objectives help to maintain focus and perspective and establish priorities in combating ethical misconduct in an organisation.

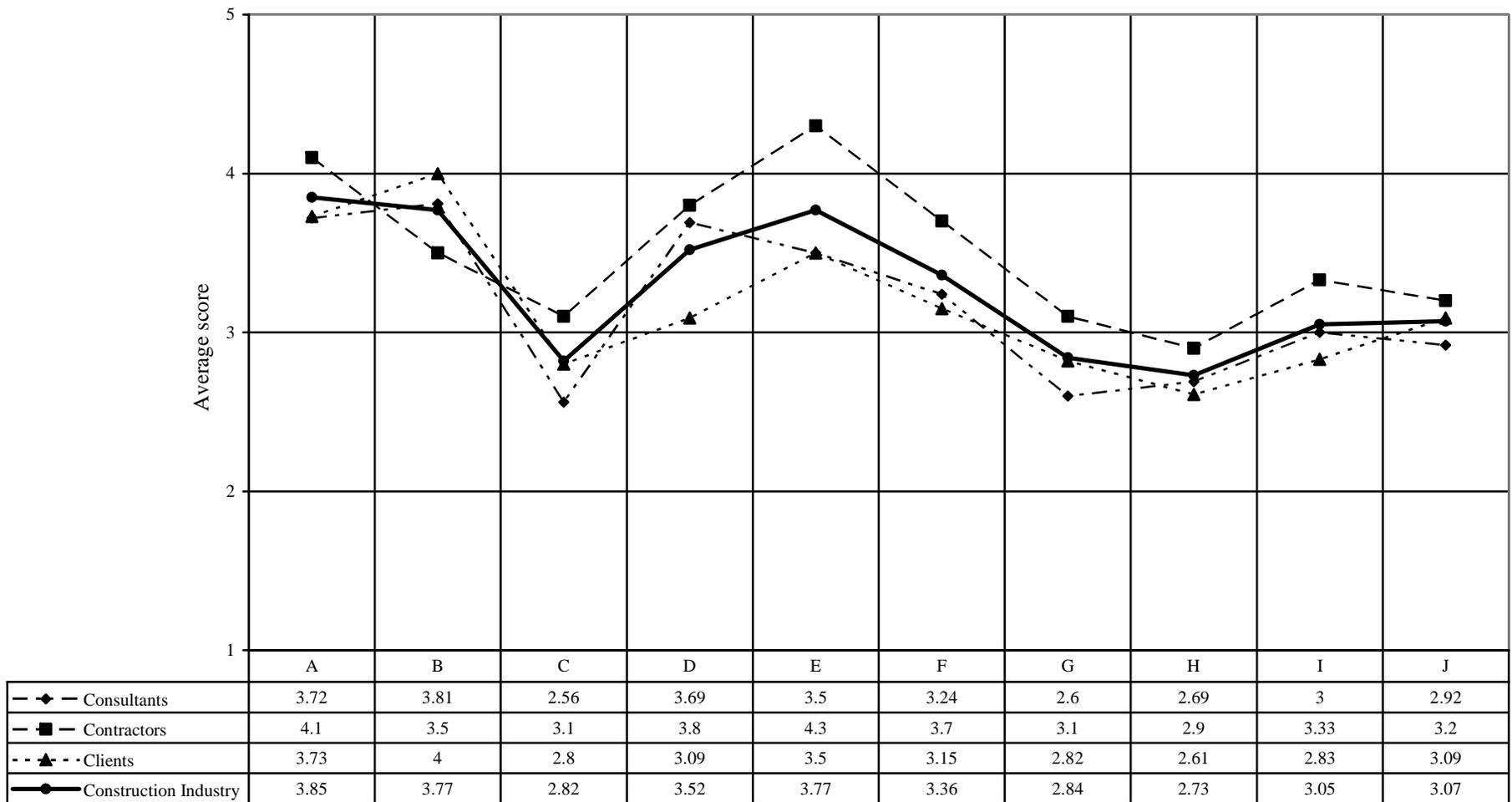
Using the framework, the results of the questionnaire survey with respect to organisational strategy of the organisation indicated that 84 per cent of consulting firms scored 3, 4 and 5 compared to 100 per cent for contractors and clients.

The results in Figure 8.4 also indicate that consulting firms had an average score of 3.72 compared to 4.10 for contractors and 3.73 for clients. The average construction industry score was 3.85. These results indicated that the majority of construction organisations in the survey scored above average and incorporated ethics in their organisational strategy. If construction organisations had well articulated strategy which encompassed ethics, it was expected that the ethical misconducts witnessed could have been low. However, the opposite is the truth. As stated above, unethical practices were prevalent in all the phases of the construction industry.

### **8.2.2 Top leadership commitment**

Leadership is important in steering an organisation to ethical compliant status. Cuilla (2005) stated that justice, fairness and the greatest collective good should be more than a leader's values and beliefs. Cuilla (2005) further stated that sometimes, leaders are just evil beyond belief and followers are too frightened and intimidated to do anything, but are obliged to follow. Good leadership must have capacity to responsibly use power, carry out moral obligations to followers, make sound decisions and serve their organisations well.

Abdul-Rahman et al. (2010) stated that more than half of the respondents to a survey agreed that leadership serves as a role model to enhance professionalism. Leaders act as role models in the way they act to employees and this has greater impact on a company.



A – Organisational strategy      B – Top leadership commitment      C – Existence of formal structures      D – Existence of ethical culture      E – Code of Ethics  
 F – Compliance programmes      G – Training and education      H – Communication of ethical issues      I – Reporting systems      J – Disciplinary and reward procedures

**Figure 8.4:** Assessment of integrity systems in construction organisations in Zambia

Using the framework, 88 per cent of the consultants scored 3, 4 and 5 compared to 90 per cent for contractors and 91 per cent for clients. The average score for consulting firms was 3.81, compared 3.50 for contractors and 3.73 for clients. The industry average score was 3.77.

These results indicated that at a minimum, most firms in the construction sector in Zambia had managers and leaders who promoted ethical conduct in their organisations. The results from the interviews and questionnaire survey are in contrast to this assertion. In the interviews and questionnaire survey, it was established that unethical practices are committed at all phases of construction projects. Management in many construction organisations abide by contract obligations and other regulations set out in tender documents. Such regulations include a clause under the ZPPA guidelines, that compels bidders not to have associated in the past, directly or indirectly with a firm or its affiliates which have been engaged to provide consulting services for the preparation of the design, specifications and tender documents for the proposed works. Many construction organisations comply with such provisions. It would appear they refer to compliance to such contract obligations and tender regulations as being ethically compliant.

### **8.2.3 Existence of formal structures**

Existence of formal structures pointed to the way the organisation organises its ethics and integrity function so that it can carry out its goals effectively (Dubinsky and Richter, 2009). Using the framework, 56 per cent of the respondents in consulting firms scored 1 and 2 compared to 60 per cent of the clients. However only 30 per cent of the contractors scored 1 and no respondents scored 2. The consolidated results in Figure 8.4 showed that respondents from consulting firms scored an average of 2.56, compared to 3.10 for contractors and 2.80 for client organisations. The average industry score was 2.82.

These results indicated that in many of the sampled construction organisations, ethics was performed as a secondary responsibility and not recognised as a unique discipline requiring specialised skills, knowledge and experience. In most of these organisations, no individual was appointed to be responsible for integrity compliance. Some organisations such as ZRA, a client construction organisation, had an Integrity Committee that met from time to time to look at ethical issues. However, even at ZRA, no employee had been specifically employed to carry out ethics functions.

#### **8.2.4 Existence of ethical culture**

Respondents were asked to state the presence of integrity systems in their organisations with respect to the type of culture that existed in their companies or institutions. None of the respondents in firms for consultants and contractors scored 1 and 2 while 36 per cent of the respondents from client organisations scored 2. None of the respondents from client firms scored 1. The majority of respondents from consulting firms, contractors and client organisations scored 3, 4 and 5. The average score among consulting firms was 3.69, while for contractors it was 3.8 and 3.09 for client organisation. The industry wide average score was 3.52.

These results indicated that at the basic minimum, the culture in the majority of the construction organisations was open to allow free discussion of ethical matters. The history and ethics traditions of these organisations were well known to respective respondents and that leaders articulated ethics in their values, goals and mission. Allowing employees to freely discuss ethical issues in the company bring about self scrutiny. Self scrutiny in turn enables the firm to identify unethical practices. Resolving these unethical practices enables the organisation to be ethically compliant. However, these results are not tallying with those from the interview and questionnaire survey where it was established that unethical practices were prevalent in all phases of construction projects.

#### **8.2.5 Code of Ethics**

The respondents were asked to indicate existence of Code of Ethics in their organisations. The results indicated that 50 per cent of consultants scored 4 and 5, compared to 90 per cent of the contractors and 67 per cent of clients. The average score among contractors, consulting firms and client organisations was 4.3, 3.50 and 3.5 respectively. The meaning of these results is that at a basic minimum, many construction organisations had a Code of Ethics in place and this was made available to every employee.

This contradicts with the results in Section 6.9 which suggested that unethical practices were prevalent in all the phases of construction projects. It was expected that if the majority of the construction organisations had Codes of Ethics in place, unethical practices in the industry would have been minimal or would be avoided completely.

### **8.2.6 Compliance programmes**

Respondents were asked to state the presence of integrity systems in their organisations with regard to compliance programmes. Respondents from contractors scored either 04 or 05. Employees of contractors were therefore expected to be knowledgeable in methods of resolving ethical conflicts. Contractors were also expected to have in place monitoring and control procedures. The results for consulting firms indicated that 60 per cent scored 3, 4 and 5 compared to 70 per cent for client organisations.

The average score for consulting firms was 3.24, compared to 3.70 for contractors and 3.15 for client organisations. The average industry score was 3.36.

These results suggested that the majority of these organisations had compliance programmes in place. The results also suggested that the majority of organisations also had policies, guidelines and rules on ethical conduct in place and that these were regularly updated. As stated earlier, these results are in contrast with those from interviews and questionnaire survey where it was established that the construction sector was prone to unethical practices.

These results are also in contrast to those by Doran (2004). In the survey conducted by Doran (2004), 58 per cent of the respondents never discussed ethics programmes in meetings or negotiations or they just did not know if the contractors they worked with had ethics programmes. Only one per cent of the contractors were aware about such programmes. Thirty per cent of the respondents had ethics programmes that were formal, disseminated to all employees and enforced by top management. Eleven per cent had no ethics programmes at all. There was, therefore, a large gap between the values employees placed on ethics and what they actually did in practice.

### **8.2.7 Training and education in ethics**

Training and education include the provision of ethics-related training and skill building throughout the working life of staff members and the degree to which these initiatives are integrated into other organisation-wide commitments. Using the framework, respondents were asked to indicate the levels of training and education provided to employees in their organisations. Fifty six per cent of the respondents from consulting firms scored 1 and 2 compared to 54 per cent of client firms. This is in agreement with the previous results that indicated that provision of training and education in ethics was low in many construction organisations. Fifty per cent of the contractors scored 4 and 5 while the other 50 per cent scored 1, 2 and 3. The average score for

consulting firms was 2.60, while the average for contractors was 3.10 and 2.82 was for client organisations. The average industry score was 2.84.

These results suggested that contractors provided more training and education in ethics than consulting firms and client organisations. However, the results in Section 6.9 indicated that contractors were prone to the following unethical practices which were prevalent in all construction project phases:

- exaggeration of experience and academic qualifications during tendering;
- collusion with other contractors or consultants or client organisations;
- bribery and corruption;
- fabrication of test results at the expense of quality;
- unreasonable variations;
- poor quality works; and
- ignoring defective work, among others.

If the majority of contractors provided training and education to employees, it was expected that these unethical practices would have been minimised or eliminated.

### **8.2.8 Communication of ethical issues**

Communication addresses how the organisation defines its stakeholders and gears its key messages on ethical compliance to its audiences. Using the framework, respondents were asked to state the extent to which their organisations communicated with employees about ethical issues. The results indicated that 80 per cent of the respondents from contractors scored 1, 2 and 3 compared to 78 for consulting firms and 77 per cent client organisations. The average scores were 2.69 for consulting firms, 2.90 for contractors and 2.61 for client organisations. The industry average score was 2.73.

These results suggested that the practice of communication of ethical issues to employees in most construction organisation was low or none existent. This was also echoed by Doran (2004) who stated that the majority of construction organisations in the United States never discussed ethics.

### **8.2.9 Reporting systems of unethical conduct**

Reporting systems explore the methods and protection offered to individuals who wish to make their organisations aware of possible unethical behaviour, misconduct, or illegal actions. It includes making both confidential and anonymous reports and the systems used by organisations to protect whistleblowers from retaliation or retribution. Using the framework, respondents were asked to indicate the presence of reporting systems of ethical misconduct of employees or other stakeholders in their organisations. The results indicated that 50 per cent of the consultants scored 1 and 2 while the other 50 per cent scored 3, 4 and 5. This showed that reporting systems in half of the consulting firms were reasonably well-developed. Fifty six per cent of the respondents from contractors scored 2. Eighty four per cent of the respondents in client organisations scored 3 and 4. The average scores were 3.00 for consulting firms, 3.33 for contractors and 2.83 for client organisations. The industry average score was 3.05. These results indicated that the reporting systems were fairly developed in most of the construction organisations in Zambia.

### **8.2.10 Disciplinary and rewards procedures**

Disciplinary and rewards procedures address actions that promote ethical behaviour. It also addresses disciplinary actions taken to limit or punish unethical work conduct. Disciplinary and reward procedures also address how the organisation promotes ethical conduct through its performance appraisal process. It also looks at how an organisation linked ethical conduct to compensation and other types of non-monetary benefits. Using the framework, respondents were asked to state the presence of rewards and disciplinary procedures in place in their organisations. The results indicated that the average scores were 2.92 for consulting firms, 3.20 for contractors and 3.09 for client organisations. The average score for the industry was 3.04. These results indicated that the disciplinary and reward procedures were fairly developed in construction organisations in Zambia.

## **8.3 Correlation of factors in the framework for assessing integrity**

Field (2005) defined correlation as a measure of relationship between variables. A correlation is a measure of linear relationship between variables. The correlation coefficient measures the strength and direction of a linear association between two variables. The correlation analysis was done among the ten elements in the framework for assessing presence of integrity systems in

construction organisations using the Statistical Package for the Social Sciences SPSS version 10. The purpose of undertaking a correlation exercise was to determine the relationships among the elements. The results are shown in Table 8.1. Correlation was positively significant among all elements at  $p < 0.05$ . These results indicated that there was a positive relationship between and among variables. Although these results show a relationship, Higgins (2005) stated that they do not reveal whether one variable actually causes changes in another. When two variables are correlated, it meant that when one of them changes, the other seems to change in a predictable way. A positive correlation therefore, meant that an improvement in one variable will more likely have a positive effect on the other variables (Croassman, 2011). Kubinger et al. (2007) nevertheless stated that  $p < 0.05$  unequivocally interpreted that variables had either a negative or positive dependency.

Higgins (2005) stated that in order to infer correlation results in the sample to the general population, the critical value of correlation coefficient needs to be determined. This was established by calculating the number of pairs in the data and determining the correlation values of pairs that were equal to or bigger than the critical value.

Using the framework, the number of pairs for each variable is eight. At  $p < 0.05$ , two tailed test, the critical value of correlation coefficient is 0.63. From Table 8.1 although all variables had positive correlation at  $p < 0.05$ , only 10 pairs as indicated in Table 8.2 could be inferred to the general population.

Another correlation was done between the type of construction organisations which were consulting firms, contractors and client organisations and the ten variables in the framework. It was established that there was no correlation between the type of construction organisation and the ten variables in the framework. This meant that the type of organisation did not have any influence on the ten variables.

**Table 8.1:** Correlations among variables of the framework for assessing presence of integrity systems

		<b>N1</b>	<b>N2</b>	<b>N3</b>	<b>N4</b>	<b>N5</b>	<b>N6</b>	<b>N7</b>	<b>N8</b>	<b>N9</b>	<b>N10</b>
<b>N1</b>	Pearson Correlation	1.000	0.565**	0.532**	0.381**	0.630**	0.645**	0.544**	0.562**	0.609**	0.356*
	Sig. (2-tailed)	0.000	0.000	0.000	0.009	0.000	0.000	0.000	0.000	0.000	0.016
	N	46	46	46	46	46	45	45	45	45	45
<b>N2</b>	Pearson Correlation	0.565**	1.000	0.592**	0.513**	0.610**	0.564**	0.474**	0.556**	0.660**	0.489**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.001
	N	46	46	46	46	46	45	45	45	45	45
<b>N3</b>	Pearson Correlation	0.532**	0.592**	1.000	0.566**	0.585**	0.585**	0.568**	0.714**	0.777**	0.330*
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.027
	N	46	46	46	46	46	45	45	45	45	45
<b>N4</b>	Pearson Correlation	0.381**	0.513**	0.566**	1.000	0.512**	0.450**	0.419**	0.526**	0.533**	0.449**
	Sig. (2-tailed)	0.009	0.000	0.000	0.000	0.000	0.002	0.004	0.000	0.000	0.002
	N	46	46	46	46	46	45	45	45	45	45
<b>N5</b>	Pearson Correlation	0.630**	0.610**	0.585**	0.512**	1.000	0.766**	0.588**	0.598**	0.708**	0.552**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	N	46	46	46	46	46	45	45	45	45	45
<b>N6</b>	Pearson Correlation	0.645**	0.564**	0.585**	0.450**	0.766**	1.000	0.656**	0.590**	0.752**	0.407**
	Sig. (2-tailed)	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.006
	N	45	45	45	45	45	45	45	45	45	45
<b>N7</b>	Pearson Correlation	0.544**	0.474**	0.568**	0.419**	0.588**	0.656**	1.000	0.540**	0.564**	0.566**
	Sig. (2-tailed)	0.000	0.001	0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.000
	N	45	45	45	45	45	45	45	45	45	45
<b>N8</b>	Pearson Correlation	0.562**	0.556**	0.714**	0.526**	0.598**	0.590**	0.540**	1.000	0.822**	.489**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
	N	45	45	45	45	45	45	45	45	45	45
<b>N9</b>	Pearson Correlation	0.609**	0.660**	0.777**	0.533**	0.708**	0.752**	0.564**	0.822**	1.000	0.561**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	N	45	45	45	45	45	45	45	45	45	45
<b>N10</b>	Pearson Correlation	0.356**	0.489**	0.330**	0.449**	0.552**	0.407**	0.566**	0.489**	0.561**	1.000
	Sig. (2-tailed)	0.016	0.001	0.027	0.002	0.000	0.006	0.000	0.001	0.000	0.000
	N	45	45	45	45	45	45	45	45	45	45

\*\* Correlation is significant at the 0.05 level

N – Number of observations

Where:

**N1** – Organisational strategy      **N2** – Top leadership commitment      **N3** – Formal structures      **N4** – Culture      **N5** – Code of ethics  
**N6** – Compliance programmes      **N7** – Training and Education      **N8** – Communications      **N9** – Reporting systems  
**N10** – Disciplinary and reward procedures

**Table 8.2:** Critical Values of Pearson correlation of variables in framework

(at  $p < 0.05$ ,  $n=8$ , two tailed test)

V a r i a b l e s		CC	Where:	
N1	N5	0.630	CC: correlation coefficient	
N1	N6	0.645	<b>N1</b> – Organisational strategy	<b>N2</b> – Top leadership commitment
N2	N9	0.660	<b>N3</b> – Formal structures	<b>N4</b> – Culture
N3	N9	0.777	<b>N5</b> – Code of ethics	<b>N6</b> – Compliance programmes
N3	N8	0.714	<b>N7</b> – Training and Education	<b>N8</b> – Communications
N5	N6	0.766	<b>N9</b> – Reporting systems	
N5	N9	0.708	<b>N10</b> – Disciplinary and reward procedures	
N6	N9	0.752		
N6	N7	0.656		
N8	N9	0.822		

#### 8.4 Case studies

Case studies were conducted to verify the authenticity of the results of the questionnaire survey for assessing presence of integrity systems in construction organisations. The objective was to check whether respondents were truthful in provision of information to the questionnaire survey by getting baseline information on the three organisations surveyed earlier. The sample for the case studies was from the list of respondent firms to the questionnaire for assessing the presence integrity systems. The list was clustered into three, representing contractors, consulting firms and client organisations. One organisation was then randomly selected from each cluster.

Three companies were randomly selected from each cluster of previously surveyed organisations. For the purpose of maintaining anonymity, the firms in the case studies are identified as A, B and C. Baseline information was obtained from these three construction organisations on availability of documentation on the ten variables in the framework.

##### 8.4.1 Firm A

Firm A was a client organisation. It was involved in the construction of road infrastructure in Zambia. It has seven directorates. The firm has more than 325 employees in various disciplines. It had a budget spend of US\$906.1million. Firm A had scored 3 for organisational strategy. The organisation had well written vision and goals, but the strategic

plan was in draft form. In the vision statement, the following words were included 'honest, integrity, transparency and accountability'.

On top leadership commitment to ethics, Firm A scored 3. Score 3 meant that the organisation had champions of ethics and that leaders viewed ethics and integrity as a function of management. At the time of the case study, the creation of an Integrity Committee had just been approved by government. The Integrity Committee was to be headed by the Senior Manager Planning. Commitment to ethics by top leadership was therefore visible through these actions.

Firm A scored 1 with regard to existence of formal structures in the organisation to support ethics. This was also reflected when an inspection of the organisational structure for Firm A were scrutinised. It was established that no formal structures to address ethics in the organisation were in place.

It was difficult to establish the type of culture in the organisation. However, it was reported that mistrust existed between management and junior staff. It was also reported that generally, all staff were free to discuss matters including those of ethical nature. Firm A scored 3 with regard to the existence of ethical culture. This type of culture, according to the framework, was open to free flow of discussions on ethical matters. It could be said that the scores reflected what was existing in the organisation.

The respondent from Firm A scored 4 with regard to the existence of the Code of Ethics in the organisation. Score 4 meant that the organisation had a Code of Ethics in place and that it was reviewed regularly. Score 4 also meant that ethical conduct was visible and included in annual reports. This was in contrast with what was practice in the organisation. The Code of Ethics was just in draft form. The immediate past Board chairman of Firm A was also the Chief Executive Officer of a major consultancy company. The same consultancy company was undertaking some of the major projects with Firm A. This had prompted the Engineering Institution of Zambia to request the government to revoke the Board Chairman's

appointment. However, the appointment was never revoked. This was a clear case of conflict of interest.

On existence of compliance programmes, Firm A scored 4. Score 4 indicated that employees were knowledgeable about ethical compliance programmes. Score 4 also meant that manuals for complying with quality and ethics were in place. However, compliance programmes or manuals were not in place at the time of study.

Firm A scored 1 on provision of training and education in ethics. This was correctly reflected in the results for the questionnaire as it was established that provision of training or education to employees in ethics was low in the organisation.

Evidence on the ground suggested that there was no communication strategy in place. Though the firm had an active website, no information on ethics was posted there. This was properly captured in the questionnaire for assessing integrity systems. Firm A scored 1 on the provision of communication in ethics to members of staff.

Firm A scored 2 on the existence of reporting systems of unethical practices in the organisation. Score 2 meant that the organisation had guidelines for reporting and resolution of unethical conduct. At the time of case study, the whistleblower policy was in place. This was only implemented with intervention from donor agencies that fund some of the major projects. However, this policy was inactive, and no champion was available in Firm A to enforce it. There were no systems for recording unethical conducts in the organisation.

On existence of disciplinary and reward procedures, Firm A scored 3. Score 3 meant that the organisation had explicit disciplinary and reward procedures in place. During the case study, it was established that Firm A had only disciplinary procedures in place. The disciplinary procedures were used to address acts against company policy. It was not specific to ethical misconduct. However, the reward policy for ethical conduct was not in place.

From the results above, six out of 10 answers to the questionnaire for assessing presence of integrity systems were authenticated in Firm A. This meant that four out of 10 answers could not be confirmed with existing documentation in the organisation. These were: reporting systems of unethical practices; Code of Ethics; compliance programmes; and reward procedures. There was no evidence of these being in place at the time of case study.

#### **8.4.2 Firm B**

Firm B was a contractor. It was involved in the construction of roads and other civil engineering projects. It operates in over 20 countries with a labour force of 12000. In Zambia it has 20 professional staff and over 400 other employees. Firm B scored 5 on existence of organisational strategy. Score 5 meant that the company set the high ethical standards in setting the mission, vision, values and strategic objectives. In its strategy, Firm B included integrity, excellence and people well-being. These were confirmed by the researcher from the Firm B's annual reports.

On top leadership commitment to ethics, Firm B scored 4. Top leadership commitment to ethics was evident in the way Firm B handled ethics. A Code of Ethics was in place and disseminated to all employees. Top leadership commitment could also be ascertained from absence of adverse reports of unethical nature in the press. It could be assumed that the leadership was pro-active and dealt with any unethical matters before they were recorded in the media.

Firm B scored 4 with respect to existence of structures in the organisation to support ethics. Such structures were not in place in Zambia. However in South Africa, where the firm had its headquarters, a Committee to handle ethical matters was in place according to information available on Firm B's website. Management also held briefings with staff according to the recording in the diary kept by one of the site managers.

The respondent from Firm B scored 5 on the existence of strong culture with regard to ethics in the organisation. It was difficult to determine the type of culture at Firm B except for the

verbal assurance by one of the managers that employees were free to discuss ethical issues without any hindrance.

On existence of Code of Ethics, Firm B scored 5. Firm B had a Code of Ethics which was disseminated to all employees on all sites. Ethics was also included in the 2011 annual report where it was stated that the '*Code of Ethics is rigorously enforced throughout all the company sites. Transgressions are reported to management directly or through the Group's anonymous tip-off line*'. Firm B had also stated in its 2011 report that it had a formal conflict of interest policy.

Firm B also scored 5 on existence of compliance programmes in the organisation. Score 5 meant that the organisation had established benchmarks for best practice and had monitoring and control procedures in place. The researcher was told that manuals were available for monitoring projects in an ethical manner. However, these were not made available.

On provision of training and education in ethics, Firm B scored 4. In the 2011 report, Firm B had a training budget of US\$4.74 million and part of this was used for training in ethics. Firm B also had an academy where induction and training programmes were conducted. This information was available on the website.

The respondent for Firm scored 4 with regard to provision of communication to staff on ethics. Score 4 meant that the organisation had an accessible website; ethics is included in annual work plans and reports; and had outreach programmes. Evidence of outreach programmes was not available. However, ethics was included in the 2011 annual report. Evidence of dissemination of ethical information through briefings was also made available.

Firm B stated in its annual report that it had a hotline for reporting unethical practices. It also stated that it had a whistleblower policy on its website. Firm B scored 4 on the existence of reporting system of unethical practices in the organisation.

The respondent from Firm B scored 4 on the existence of disciplinary and reward procedures. Firm B did not have an ethics reward policy as workers were expected to always act ethically. However, it had a disciplinary code that encompassed unethical conduct.

From the results above, seven out of 10 of the answers to the questionnaire on the presence of integrity systems were authenticated. It was difficult to verify the type of culture in the organisation. There were no compliance programmes and formal structures at the Zambian site office. Evidence on availability of the compliance programmes and formal structure was not made available.

### **8.4.3 Firm C**

Firm C was a consultancy firm providing quantity surveying services. It has four professional quantity surveyors and four administrative staff. Most of the consultancy work done in Zambia. It had a yearly annual turnover of about K100million mostly in construction of building. Firm C scored 5 on the existence of an organisational strategy. Firm C did not have a written organisational strategy in place.

On top leadership commitment, Firm C scored 5. It was difficult to establish the type of top leadership in the organisation. There were no records or reports to establish the type of leadership that existed in the firm. It appeared that the Managing Consultant was the ultimate decision maker in the firm. Other members always referred all matters of ethical nature to the Managing Consultant. The Managing Consultant also played the role of mentor to juniors.

The respondent for Firm C scored 5 with regard to the existence of structures to support ethics in the organisation. There were no structures available to deal with ethics in the organisation at the time of case study.

Firm C scored 4 with regard to the existence of ethical culture in the organisation. It was difficult to establish the type of culture that existed in the firm in the absence of records. However, it was established through interaction that employees were free to discuss issues of ethical nature.

On existence of Code of Ethics, Firm C scored 5. The firm did not have a Code of Ethics. Neither did they have compliance programmes in place. The respondent for Firm C scored 5 to the questionnaire on the framework for assessing presence of integrity systems with respect to the presence of a compliance programme in the organisation.

Firm C scored 5 on provision of training and education in ethics. However, no evidence of training and education to employees on ethics was available.

Firm C did not have a communications strategy to disseminate ethical information to employees. The respondent had scored 5 for this element. It was stated that the firm communicated ethical matters through a memorandum and round table meetings. However evidence of memoranda or minutes was not made available to the researcher. The firm had no website.

There was no evidence of records of a register of unethical conduct in the firm despite the respondent scoring 5 on this element. The firm did not have written disciplinary and reward procedures. The respondent scored 5 for existence of disciplinary and reward procedures.

From the results above, only four out of 10 of the answers to the questionnaire on the presence of integrity systems were authenticated. Six of the answers could not be verified with information available in the organisation. These were the organisational strategy; structures; training and education; communication system to employees and external stakeholders; recording systems; and disciplinary and reward procedures.

## **8.5 Discussion of overall results of case studies**

From these results, six out 10 of the answers by the respondent from Firm A were authenticated compared to seven in Firm B. However, only four out of 10 answers on the questionnaire on presence of integrity systems from Firm C were authenticated with baseline information available. This showed that when self administered questionnaires are used, some firms provided false information to portray a good image. The sensitive nature of the subject matter of ethics could have also contributed to respondents not giving truthful

information. According to Mwiya (1999), the subject of unethical practices was considered sensitive and that information was normally concealed. Organisations were therefore not willing to subject themselves to scrutiny on processes and procedures that they have put in place.

The results above also showed that there was a gap between the value people placed on ethics and what they actually did in practice. All companies surveyed desired to be seen to be ethical, but not all of them practiced ethics. In his study, Doran (2004) stated that only 16 per cent of the respondents would never hire or work with a contractor they considered to be unethical. From the results by Doran (2004), it could be concluded that ethical considerations were not one of the criteria for procurement of consultants or contractors. Other results from Doran (2004) indicated that 32 per cent of client organisations would rarely work with unethical contractors unless under pressure; 24 per cent stated that they might work with the unethical contractor if circumstances dictated; and 24 per cent stated they certainly could work with an unethical contractor.

The framework was, however, useful in establishing presence of integrity systems in construction organisations. For it to be implemented, the elements in the framework needed to be checked physically with evidence at company premises than through self administered questionnaires.

## **8.6 Summary**

In this chapter, the assessment of integrity metrics in construction organisations in Zambia were analysed and discussed. Three case studies were also conducted, analysed and discussed. The purpose of the case studies was to validate the information provided during the questionnaire survey for the assessment of integrity metrics in construction organisation using the framework. The results indicated that many firms did not provide correct information when self administered questionnaires are used to collect data.

In the next chapter, the general results are discussed. Conclusions and recommendations are also presented.

## **CHAPTER NINE: CONCLUSIONS AND RECOMMENDATIONS**

### **9.1 Introduction**

In the previous chapter, the assessment of integrity metrics in construction organisations and results of three case studies were discussed. In this chapter, conclusions, recommendations, limitations to the study and suggestions for further work are presented.

The aim of the study was to develop a framework for measuring levels of integrity in construction organisations. The specific objectives of the study were to: identify unethical practices prevalent in the construction industry in Zambia; assess the prevalence of unethical practices in different phases of construction projects; and establish the factors that enhance integrity in construction organisations. The aim and objectives of the study were achieved through: literature review; interviews with 15 interviewees that had 10 to 35 years of experience in the construction sector; and a questionnaire survey with 74 respondents from construction organisations. A framework for assessing the presence of integrity systems in construction organisations was developed and validated. A survey of integrity metrics in 48 construction organisations was conducted. Three case studies to validate the presence of integrity metrics in the 48 sampled construction organisations were also undertaken.

### **9.2 Conclusions**

The interview questions were designed on the basis of the information drawn from the literature review. The questionnaire survey was designed based on the information in the literature review and the results of the interview. The conclusions drawn from the findings of the interviews, the questionnaire survey and case studies in relation to the objectives of the study are presented in the next sections.

#### **9.2.1 Unethical practices in the construction industry in Zambia**

It was established in this study that unethical practices were prevalent in all phases of construction projects in Zambia. Unethical practices were prevalent at project conception, design and tendering; supervision and construction; and at project closure and

commissioning stages. The main unethical practices identified in this study are summarised below.

**(a) Corruption**

All interviewees in the study stated that corruption was prevalent in the construction industry in Zambia. Corruption was one of the main unethical practices in the construction industry in Zambia and the world-over (Transparency International, 2005a). More than 70 percent of the respondents to the questionnaire survey also agreed that corruption undermined managerial efficiency; re-directed national resources to individual personal interests; increased the cost of projects; resulted in poor quality works; distorted prices in the market; curbed economic growth and sustainable development; undermined legal and judicial systems; caused delays in the construction process; resulted in high number of uncompleted projects; deterred investment; and resulted in delays in obtaining permits from public agencies. From these results, corruption appeared to be the biggest obstacle in the procurement of construction projects in Zambia.

**(b) Political interference**

Unethical acts on projects often signal a failure in management or leadership know-how to get the job done ethically. Leadership practices reflect on the whole organisation or nation. In the interviews, political leadership ranked first as the main reason why corruption flourished in the construction industry. Fourteen out of 15 interviewees agreed to this assertion. Eighty five per cent of the respondents to the questionnaire survey stated that political interference forced participants in projects to engage in unethical practices. Ninety percent of the respondents also agreed that the interference of politicians on officers undertaking procurement of public works was one of the reasons the industry was prone to unethical practices. It was observed that most professionals were scared to challenge politicians whenever they held different views on procurement of public works. It was also established from the interviews that some appointments at controlling officer level were political and were made for the sole purpose of influencing contract awards. There was a noted strong tendency among construction organisations, both consultants and contractors, to align

themselves to the political party in power and provide resources to support it in order to be awarded more contracts.

**(c) Exaggeration of experience and academic qualifications of bidders when tendering**

It was established in this study that most bidders tended to exaggerate the experience and academic qualifications of technical staff when tendering for works. This tended to adversely affect the quality of the work output. This was common both among consulting firms and contractors.

**(d) Collusion among bidders**

Collusion takes place when businesses that would otherwise be expected to compete secretly conspire to raise prices or lower the quality of goods or services for purchasers who wish to acquire products or services through a tendering process. It was established, through interviews of experts and respondents to the questionnaire survey that the vice was rampant for works contracted through a limited bidding process. Collusion tended to distort market prices in the industry.

**(e) Abuse of provisional sums in tender documents**

Provisional sums are included in tender documents as a safeguard for unforeseen circumstances that may have cost implications. In this study, 66 percent of the respondents agreed that there was abuse of provisional sums. Fictitious work is often created to siphon the provisional sums.

**(f) Certification of poor quality works**

It was established in this study that certification of poor quality works was rampant in the construction industry in Zambia. This has been one of the main unethical practices in the industry in Zambia. This practice has also been highlighted in the Auditor General's reports almost on a yearly basis. Clients in these cases do not get value for money.

**(g) Fabrication of test results**

Fabrication of test results was common among contractors. Some contractors fabricate test results to show that works were done according to required specifications. For example, they would fabricate results that the strength of concrete used was above the specified quality. This has a tendency of compromising the quality of works. This vice was noted to be rampant because the responsibility of testing the quality of materials has been left to contractors. Contractors end up providing favourable certificates of the quality of materials to avoid being penalised. In good practice, this is the responsibility of supervising consultants.

**(h) Other unethical practices**

Other unethical practices in the construction industry in Zambia identified included: compromise of quality of goods, works or services; leaking of Engineers' estimates; conflict of interest; unfair tendering processes; lack of confidentiality; fraud; legal loopholes in tender processes; abuse of single sourcing; over-stating of scope and over-designing of projects; failure to enforce quality standards and specifications; lack of integrity; covering-up of poor quality works; dishonesty and unfair conduct; and negligence of duty.

**9.2.2 Stiff competition**

It was established in the study that competition was quite high in the bidding process for construction projects. Eleven out of the 15 interviewees stated that competition was one of the reasons why the industry was prone to unethical practices. Eighty nine percent of the respondents to the questionnaire survey also identified stiff competition as one of the reasons the industry was prone to unethical practices. Most construction projects have high tender sums. Contractors and consultants were, therefore, determined to do anything to win projects even if it meant committing unethical practices such as bribery.

**9.2.3 Training and education in ethics**

It was noted in this study that provision of training and education in ethics in the construction industry was low. The results to the questionnaire on the framework for assessing the presence of integrity systems in construction organisations also indicated that the industry-

score was below average. These results suggested that the provision of training and education in ethics in construction organisations in Zambia was low if not none existent.

#### **9.2.4 Existence of formal ethics structures**

The results of the questionnaire survey based on the framework for assessing the presence of integrity systems in construction organisations indicated that 53 percent of construction organisations performed programmes in ethics as a secondary responsibility. Ethics was not recognised as a unique discipline requiring specialised skills, knowledge and experience. Many constructions organisations, therefore, did not have structures or individuals responsible for ethics programmes. Provision of an ethics officer in an organisation is cardinal in the promotion and coordination of corporate integrity programmes. An ethics officer could serve as a champion of integrity and enforcement of compliance programmes for an organisation.

### **9.3 Contribution to the body of knowledge**

The aim of the study was to develop a framework for assessing the presence of integrity systems in construction organisations. This was in line with Egan (1998) who advocated for the development of management measuring instruments that should help in the assessment of construction organisations' capabilities as one of the solutions towards modernising business processes of companies in the industry. The contribution of this study to the body of knowledge lies in the development of the framework for assessing the presence of integrity systems in construction organisations. The framework was developed from identified best practices from literature review, interviews and the questionnaire survey. The framework provides construction organisations with a tool for assessing the presence of integrity systems, determining the weaknesses and put in place strategies to bridge identified gaps. The framework, if implemented by construction organisations, can contribute to minimising incidences of unethical practices. Implementation of the framework can also be used as a reference point for external institutions to establish construction organisations' commitment to integrity.

#### **9.4 Implications of the research**

This study has a number of implications for both theory and practice. The concept of assessment of integrity systems in construction organisations requires further theory development. Often, integrity has been synonymous with corruption-free in many construction organisations. However, as established in this study, various other unethical practices other than corruption are prevalent in the construction industry. The study provided a step towards theory development in the assessment of integrity systems in construction organisations.

#### **9.5 Recommendations**

Various unethical practices were identified in the study. To enhance ethical compliance in construction organisations, the recommendations below have been advanced from the study.

##### **9.5.1 Framework for assessing integrity systems in construction organisations**

The study established that the construction industry in Zambia is prone to unethical practices. A framework was developed for assessing the presence of integrity systems in construction organisations. The framework identified and presented key ethical elements. The framework if implemented in construction organisations in Zambia, can lead to lower incidences of unethical practices. It is therefore recommended that the framework for assessing the presence of integrity systems be implemented in construction organisations. The framework, however, was only tested in Zambia. It is being proposed that the framework be tested in other countries to determine its universal usability in all construction markets of the world.

##### **9.5.2 Benchmarking best practice in construction**

It was observed in this study that benchmarking best practice was important in combating ethical misconduct. Organisations should periodically undertake organisational integrity reviews to benchmark best practice. An identified example was the UK where an Anti-bribery Act was enacted in 2010. The Act explicitly makes provisions of what constitutes bribery. It has formed an important part of the network of global rules pertaining to corruption and set out key principles for an anti-corruption culture. The Act applies to UK companies operating within and outside that country. Firms are required to put in place

adequate bribery prevention procedures. Based on the Act, BS10500, a British Standard, was implemented as a step towards ethical compliance. BS 10500 provides certification to organisations that put in place controls against bribery. In a similar manner, it is being recommended that a certification system using the framework for assessing the presence of integrity systems in construction organisations be implemented in Zambia to improve ethical compliance. Such certification can be used as a reference point by other organisations to determine integrity systems put in place by construction firms. It is also being recommended that a piece of legislation similar to the UK Anti-bribery act be enacted in Zambia as one step towards combating bribery and corruption.

### **9.5.3 Role of the National Council for Construction**

It was noted through literature review that corruption and other unethical practices were more prevalent among contractors than consulting firms and client organisations (Shakantu and Chiocha, 2009). There is, therefore, need to pay particular attention to contractors. The NCC has been mandated by law to register and regulate contractors in Zambia. It is recommended that NCC as a regulator should ensure contractors become ethically-compliant through provision of training and education in ethics. NCC should also intensify the sanctioning of erring contractors.

### **9.5.4 Training and education in ethics**

It was established in this study that training and education in ethics in the construction industry was low. Only 43 percent of the respondents to the questionnaire survey had undergone training and education in ethics. Construction organisations scored below average on provision of training and education using the framework for assessing the presence of integrity systems. It is being recommended that a deliberate and concerted effort be put in place in the provision of training and education in ethics in learning institutions, by professional bodies and in construction organisations.

### **9.5.5 Methods of investigating ethics in construction organisations**

It was observed in the case studies that some respondents to self-administered questionnaires were not providing truthful answers despite being assured of anonymity. This could have

been because of the sensitive nature of the subject matter. It would appear that many respondents wanted to be seen to be ethically compliant in their operations even though they were not. It therefore, appears that a self-administered questionnaire survey may not be the best method of investigating the subject of ethics. It is being recommended that to study ethics in construction organisations, collection of baseline data at company premises via case studies is more appropriate as opposed to a self-administered questionnaire survey.

#### **9.5.6 Other recommendations**

- (a) It was established in this study that corruption was one of main unethical practices in all the phases of the construction project. Dealing with corruption in the construction sector should be accorded utmost attention by construction organisations, government and other interest groups such as the ACC, TIZ, NCC, EIZ, SIZ and the ZIA. Corruption could be minimised by putting in place legislation, enforcement procedures, systems and controls in place.
- (b) Political interference in procurement of construction projects was observed to be too high in Zambia. There is, therefore, need to clearly define the role of politics in construction projects. The role of political leadership in government should be to legislate and provide policy direction on infrastructural development and not to be involved in direct contracting.
- (c) Results from the interview and questionnaire survey indicated that many consulting firms and contractors exaggerated their experience and academic qualifications when tendering for works and this tended to adversely affect the quality of work. To counter this vice, strict measures need to be put in place when evaluating the tenders to verify the academic qualifications and experience of technical staff.
- (d) It was also noted during the interviews and questionnaire survey that there was rampant abuse of provisional sums. Participants to construction projects often created fictitious works within the project with the intention to siphon money. To counter this vice, as much as possible, all proposed works need to be measured and incorporated in the bills of quantities. The approval of works using provisional sums need to be

enhanced to include many levels of scrutiny.

## **9.6 Limitations and suggestions for further work**

Ethics is a sensitive subject. It was difficult to access certain respondents for them to participate in the study. This was common among donor agencies that have long processes of approval for an individual from such organisations to participate in a study of this nature. Donor agencies are some of the main sponsors of construction projects in Zambia. The sensitive nature of the study also led some respondents to provide false answers as established in the case studies. Only contractors in Grades 1 to 3 participated in the study. This is because Grades 1 to 3 contractors are of national character and are able to compete for tenders nationally. It was also expected that these would have encountered most of the unethical practices in the construction. However, a study of unethical practices prevalent among contractors in Grades 4-6 need to be explored. Further research would be required to be undertaken to target contractors in Grades 1 to 3.

This study was only conducted in Zambia. Generalisation of the results may only be to Zambia. There is need, therefore, to replicate the study in other countries to establish the universality of the findings from this study.

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## **APPENDIX A**

### **Semi-structured interviews**

- 1     Covering letter
- 1     Questions for semi-structured interviews
- 3     List of sampled interviews



**THE UNIVERSITY OF ZAMBIA**  
**SCHOOL OF ENGINEERING**  
Department of Civil and Environmental Engineering

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Dear Sir/Madam

**RE: ETHICS IN THE CONSTRUCTION INDUSTRY IN ZAMBIA – STRUCTURED INTERVIEWS**

I am a student at the University of Zambia studying for a PhD in construction management. I am currently undertaking research on ethics in the construction industry in Zambia. Find attached a structured interview questionnaire. The research is purely for academic purposes and no one will be penalised for giving any answer. You are therefore not required to include your personal details or company name.

The research is being supervised by Dr. Mundia Muya of the Department of Civil and Environmental Engineering, School of Engineering. The study is aimed at providing a greater understanding of ethical issues in the construction industry in Zambia. The focus is to develop a model for assessing presence of integrity systems in construction organisations.

I will therefore, be grateful, if you could be available for an interview at your earliest convenient time. The interview will be based on the attached questions. Other questions to clarify some questions will also be posed.

Yours faithfully

Mukumbwa Brian

**Research Student (PhD)**

Email: mukumbwabrian@yahoo.co.uk

Contact Nos. : Cell 097-7486126, Phone 01-290486

## QUESTIONS FOR SEMI-STRUCTURED INTERVIEWS

**1.0** General Information: This section is designed to obtain general information

1.1 Indicate position in organisation (*tick*): **Senior Manager**  **Middle Manager**  **Other**

1.2 Indicate what type, your organisation is, from among the given categories below

	<i>Tick</i>
Construction company	
Consulting firm	
Donor Agency	
Public Sector organisation	
Quasi government organisation	
Private company/organisation	
Other (state)	

**2.0** Do you think there is corruption and other unethical practices in the construction industry in Zambia?

**Yes**

**No**

If Yes, could the reasons why the construction industry in Zambia is more prone to unethical issues be due to:

	<b>Agree</b>	<b>Do Not Agree</b>	<b>Don't Know</b>
Fragmented nature of the industry			
The industry is project based			
Low entry barriers			
Nomadic nature of labour force			
Legal loopholes in procurement procedures			
Bureaucratic nature of procurement			
Competition to get projects is high			
Effect of politics on public works			
Contracts are usually huge and lucrative			
<b>Other, state them:</b>			

**3.0** Which of the following unethical issues have you ever witnessed or noticed someone get involved in:

	<b>Agree</b>	<b>Don't Agree</b>	<b>Do not know</b>
Compromise on quality of goods or works			
Unfair tendering process			
Lack of confidentiality			
Conflict of interest			
Corruption and bribery			
Fraud			
Collusion			
False representation of facts			
Leaking project base cost			
Ambiguous variations			
Concealing systematic errors			
<b>Other, state them:</b>			

4.0 Do you think we have enough Laws, regulations and procedures to deal with unethical issues in the construction industry? **Yes**  **No**

If Yes, state them:.....  
 .....  
 .....

State any improvements:.....  
 .....  
 .....

5.0 What are the main unethical practices you are aware of in the construction industry in Zambia:

(a) at project conception .....  
 .....  
 .....

(b) at tendering stage .....  
 .....  
 .....

(c) during construction and supervision .....  
 .....  
 .....

(d) at project closure and commissioning .....  
 .....  
 .....

6.0 What, in your view, are the effects of corruption and other unethical issues in the construction industry on Zambia as a country?

	<b>Agree</b>	<b>Do Not agree</b>	<b>Don't Know</b>
Undermines managerial efficiency			
Re-direct resources to individual interests instead of social causes			
Deters investment			
Curbs economical growth and sustainable development			
Distorts prices in the market			
Undermines legal and judicial systems			
Deliberate delays in the project procurement process			
Leads to costly projects			
Leads to substandard works			
Courses delays in obtaining permits from public agencies			
<b>Others, state them:</b>			

7.0 Does politics have an affect on ethical behaviour of professionals in the construction industry? **Yes**  **No**

If Yes, state how:.....

8.0 Do you belong to a professional body? Yes  No

9.0 Do you have a professional code of ethics? Yes  No

10.0 Have you read and understood the code of ethics? Yes  No

11.0 Do you practice what is in the code of ethics? Yes  No

12.0 What are the obstacles to practicing the Code of Ethics of your professional body?.....  
.....

13.0 Do you think a professional code of ethic can contribute to ethical behaviour? Yes  No

14.0 What factors at an individual level affect a person to act in an ethical manner? (*Tick*)

	Agree	Do Not Agree	Don't Know
Ego strengths			
Religion			
Age (life experiences)			
Work experience			
Socialisation			
Peer pressure			
Demographics			
Family			
Status			
Gender			
Work environment (corporate goals, policies & culture)			
Fear of punishment			
<b>OTHERS, state them:</b>			

15.0 What factors at organisational level affect a person/s to act in an ethical manner? (*tick*)

	Agree	Do Not Agree	Don't Know
Organisation culture			
Organisation code of ethics			
Individual local factors (values)			
Laws and regulations of the country			
External forces			
leadership			
Internal disciplinary procedures			
<b>OTHERS, state them:</b>			

16.0 What external factors to an organisation affect a person/s to act in an ethical manner? (*tick*)

	Agree	Do Not Agree	Don't Know
Economic conditions			
Scarce resources			
Competition			
Political and social factors			
Legislation (legal environment)			
Type of judicial system			
Social norms			
Professional codes of conduct			
Family obligations			
Fear of punishment			
<b>OTHERS, state them:</b>			

17.0 What is the role of leadership in ethics in an organisation?.....  
 .....  
 .....

18.0 How would you prevent unethical practices in the construction industry in Zambia?.....  
 .....  
 .....

19.0 What strategies can be employed to combat unethical issues in the construction industry in Zambia?  
 .....  
 .....  
 .....

20.0 What do you think is the role of the NCC in promoting ethical conduct in the construction industry in Zambia?.....  
 .....  
 .....

21.0 How can you measure the state of integrity in an organisation? (*tick*)

	Agree	Do Not Agree	Don't Know
Existence of the code of ethics			
Existence of code of conduct			
Existence of quality compliance programmes			
Corporate culture			
Frequency of unethical conduct			
Corporate infrastructure (structure)			
Existence of benchmarking system with best practice			
<b>OTHERS, state them:</b>			

22.0 What measures can an organisation employ to detect unethical behaviour?

	Agree	Do Not Agree	Don't Know
Reports of unethical matters			
Number of whistle blowers			
Number of self incrimination			
Reports to laws enforcement agencies			
Auditor's reports			
Levels of education and training provided			
Frequency of communication on ethical matters			
Internal system of dealing with ethical matters			
<b>OTHERS, state them:</b>			

23.0 What other inadequacies do you see in the construction sector that promotes unethical behaviour?

.....

.....

.....

## **LIST OF INTERVIEWEES**

- (1) The Director – Transparency International
- (2) Senior Investigation Officer – Anti-corruption Commission
- (3) Director – RDA
- (4) The Director – Buildings Department, Ministry of Transport, Communications, Works and Supply
- (5) The Director Administration – Zambia Revenue Authority
- (6) The Director – Zambia Public Procurement Authority
- (7) Representative, Surveyors Institute of Zambia
- (8) Representative, the Engineering Institution of Zambia
- (9) Representative, the Zambia Institute of Architects
- (10) The Contractor - roads
- (11) The Contractor - buildings
- (12) The World Bank representative
- (13) Director – Lusaka Water and Sewerage Company
- (14) The Director of Engineering – Lusaka City Council
- (15) Director, National Council for Construction

**APPENDIX B**  
**Questionnaire survey**

- 1 Covering letter
- 2 Semi-structured questionnaire



**THE UNIVERSITY OF ZAMBIA**  
**SCHOOL OF ENGINEERING**  
Department of Civil and Environmental Engineering

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Dear Sir/Madam

**RE: ETHICS IN THE CONSTRUCTION INDUSTRY IN ZAMBIA**

This letter accompanies a national survey on ethical issues in the construction industry in Zambia. It is part of my PhD research on ethics in the construction industry in Zambia. The study commenced in July 2010 and will continue up to July 2012. The study is being supervised by Dr. Mundia Muya of the Department of Civil and Environmental Engineering, School of Engineering, University of Zambia. The study is aimed at providing a greater understanding of ethical issues in the construction industry in Zambia. The focus is to develop a model for assessing integrity systems in construction organisations.

The purpose of writing is to request you to complete the attached questionnaire. The survey will be used purely for academic purpose only and all information collected will be held in the strictest confidence. The study is intended to be anonymous, so your name is not required. However, you may provide your contact telephone number in case there may be need for follow-up clarifications.

Yours faithfully,

Mukumbwa Brian

**PhD Research Student**

Email: mukumbwabrian@yahoo.co.uk

Contact Nos. : Cell 0977-486126/0955-743185



2.3 Why do you think the construction industry is prone to unethical behaviours: *(please tick applicable)*.

	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
Legal loopholes in tender processes					
Bureaucratic nature of procurement					
Competition to get projects is high					
Effect of politics on public works					
<b>Other, state them:</b>					

2.4 What unethical issues are prevalent in the construction industry?

	Agree	Disagree	Neutral
Collusive tendering			
Bribery			
Negligence of duty			
Fraud			
Dishonesty and unfairness			
Conflict of interest:			
- consultants using their position for financial gain			
- clients awarding contracts to companies in which they hold interest			
- awarding contracts to former employees and friends			
- maintaining impartiality when representing clients			
Lack of confidentiality			
Breaches of environmental ethics			
Bid rigging			
False presentation of information			
Tailor made specifications			
Arbitrary changes to contract information			
<b>OTHERS, state them:</b>			

2.5 What unethical issues have you experienced, witnessed and are very prevalent in the construction industry in Zambia *(please tick applicable)*.

	Strongly agree	Agree	Neutral	Dis-agree	Strongly Disagree
<b>Project conception and tendering</b>					
Copyright issues with regard to abuse of people's drawings especially by engineers and architects					
Overstating the scope and over-designing					
Insertion of unfair clauses in bid documents with the aim of excluding potential bidders from participating					
Uncompetitive tendering					
Inclusion of unreasonable provisional sums in the tender due to inadequate take-offs					
Political interference					
Abuse of single sourcing					
Lack of confidentiality					
Conflict of interest					

Concept of lobbying for projects					
Biasness in tender evaluation					
Collusion among bidders					
Bribery and corruption					
Tempering with tender documents during evaluation to favour a preferred bidder					
Leaking engineers' estimate					
Exaggerating experience and academic qualifications					
One sided contracts					
<b>OTHERS, state them:</b>					
<b>Project supervision and construction</b>					
Certification of poor quality works					
Fabrication of test results at the expense of quality					
Unreasonable variations during implementation					
Bribery and corruption					
Collusion of contractor with consultants					
Collusion of contractor with client representatives					
False certification of works					
Concealing (systematic) errors					
Deliberate delay in payments to induce corruption and bribes					
Certifying work not done					
Ambiguous variations and fluctuations					
Failure to appropriately advise the client					
Fraud - <i>tempering with signed contract</i>					
- <i>altering contract documents</i>					
- <i>covering up poor workmanship</i>					
Negligence of duty					
Dishonesty and unfair conduct					
Unfair reward for work done					
Lack of integrity					
Adversarial relationships between consultants and contractors					
Recruitment of poorly qualified and inexperienced consultants					
Failure to enforce specifications and standards					
Low quality monitoring procedures					
Delays and slow decision making					
Constant change of project specifications					
Violation of environmental ethics					
<b>OTHERS, state them:</b>					
<b>Project closure and commissioning</b>					
Ignoring defective work done					
Falsifying final accounts					
Premature commissioning of works due to political influence					
Concealing errors					
Covering up project failure					
Saving other consultant's necks for poor performance					
<b>OTHERS, state them:</b>					

2.6 How does corruption in the construction industry affect Zambia as a country (please tick applicable).

	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
Undermines managerial efficiency					
Re-direct resources to individual interests					
Deters investment					
Curbs economical growth and sustainable development					
Distorts prices in the market					
Undermines legal and judicial systems					
High rate of uncompleted projects					
Delays in the construction process					
Increases cost of projects					
Encourages shoddy works					
Delays in obtaining permits from public agencies					
<b>OTHERS, state them:</b>					

2.7 What factors influence ethical behaviour in organisations? (please tick applicable).

	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
Organisation culture					
Organisation code of ethics					
Individual local factors and values					
Laws and regulations of the country					
External forces - <i>societal norms</i>					
- <i>economic conditions</i>					
- <i>political system</i>					
- <i>family obligations</i>					
Type of leadership					
Internal disciplinary procedures					
<b>OTHERS, state them:</b>					

2.8 What individual influences affect employees to act in an ethical manner? (please tick applicable).

	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
Ego strengths					
Religious beliefs					
Individual moral maturity					
Age and life experiences					
Work experience					
Socialisation					
Peer pressure					
Demographics					
Family obligations					
Status in community or society					
Gender of an individual					
Work environment (corporate goals, policies & culture)					
Fear of punishment					
<b>OTHERS, state them:</b>					

2.9 What external factors affect employees to act in an ethical manner? *(please tick applicable)*.

	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
Economic conditions					
Competition for scarce resources					
Political and social factors					
Legislation (legal environment)					
Type of judicial system					
Social norms					
Professional codes of conduct					
Family obligations					
Industry norms and practices					
<b>OTHERS, state them:</b>					

3.10 How do you think Post Contract assessment can contribute to reduction in ethical behaviour? *(please tick applicable)*.

	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
To evaluate problems encountered in the project					
To propose solutions for future projects					
For rating of contractors and consultants for future contracts					
Provide feedback on performance of contractors and consultants					
Used as a basis for establishment of long-term relationships					
<b>OTHER state:</b>					

### 3.0 Role of National Council of Construction (NCC)

3.1 What should be the role of NCC in promoting ethical behaviour in the construction industry *(please tick applicable)*.

	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
Provision and enforcement of code of ethics to contractors					
Education on ethical matters					
Sanctioning erring contractors					
Dissemination of information to the public on various projects where the public has an interest					
Strengthen the scrutiny of eligible contractors					
Technical auditing of projects					
Participate in review of tender procedures					
<b>OTHERS, state them:</b>					

#### 4.0 Leadership in Ethics

4.1 How does leadership contribute to good ethical behaviour (*please tick applicable*).

	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
Provide clear vision					
Serve as role model and lead by example					
Provides character building of the organisation					
Develop strategies to ensure ethical behaviour					
Formulate, disseminate and enforce the code of ethics					
Ensure that the organisation practices corporate governance					
<b>OTHERS, state them:</b>					

#### 5.0 Solutions to unethical behaviour

5.1 What do you think are the solutions to unethical behaviour in organisations (*please tick applicable*).

	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
Industry wide code of ethics					
Training and education in ethics					
Good ethical leadership					
Punishment and cancellation of practicing licence					
Implementation of ethical guidelines					
Benchmarking best practices in ethics					
Indictments and convictions					
Law and regulations enforcement					
Strengthening work processes					
Development of honest and ethical organisation culture					
Institute regular and random checks					
Supervision of work process during project life cycle					
Involvement of law enforcement agencies during procurement process of huge tenders					
Simplifying tender procedures					
More emphasis placed social responsibility in tender award criteria					
<b>OTHERS, state them:</b>					

#### 6.0 Corporate governance in the construction industry

6.1 What corporate governance issues would you advocate for the construction industry (*please tick applicable*).

	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
Separation of design and construction					
Client to supervise the consultants					
Consultants to supervise contractors					
Encourage civil society to take active role in projects					
<b>OTHERS, state them:</b>					

**7.0 Measuring and assessing integrity in an organisation**

7.1 Do you have a system of measuring integrity within your organisation? Yes  No

If YES, describe it:.....

.....  
 .....

7.2 Do you have a conduct and compliance programme in your organisation? Yes  No

If YES, describe it

.....  
 .....

7.3 What do you understand by benchmarking ethical conduct:.....

.....

7.4 How would you measure the level of integrity in an organisation (*please tick applicable*).

	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
Existence of the code of ethics					
Existence of code of conduct					
Existence of quality compliance programmes					
Corporate culture					
Frequency of unethical conduct					
Corporate infrastructure (structure)					
Existence of benchmarking system with best practice					
<b>OTHERS, state them:</b>					

7.5 How should management measure levels of integrity in organisation (*please tick applicable*).

	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
Reports of unethical behaviour					
Number of whistle blowers					
Number of self incrimination					
Reports to laws enforcement agencies					
Auditor's reports					
Levels of education and training provided					
Frequency of communication on ethical matters					
Have internal system of dealing with ethical matters					
<b>OTHERS, state them:</b>					

7.6 What would you recommend to be included in the ethics assessment programme of an organisation?  
 (please tick applicable).

	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
Ethical risk assessment procedures					
Top management commitment					
Clear policies and procedures					
Clear communication strategy					
Training and education in ethics					
Clear monitoring procedures and controls					
Prompt corrective action procedures					
Punitive measures					
<b>OTHERS, state them:</b>					

7.7 What other views do you have about unethical practices in the construction industry in Zambia:.....

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## **APPENDIX C**

### **Questionnaire survey for validation of framework**

- 2      Covering letter
- 3      Semi-structured questionnaire
- 4      List of respondents to questionnaire



**THE UNIVERSITY OF ZAMBIA**  
**SCHOOL OF ENGINEERING**  
Department of Civil and Environmental Engineering

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26<sup>th</sup> March, 2012  
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Dear sir/madam,

**Framework for assessing presence of integrity systems in construction organisations**

I am a postgraduate student pursuing a PhD in construction management at the University of Zambia, School of Engineering, Department of Civil and Environmental Engineering. The purpose of writing this letter is to request you to fill-in the questionnaire based on the Framework for assessing presence of integrity systems in construction organisations. The questionnaire is attached.

The framework has ten elements. These are: Organisational strategy; Top leadership commitment; Existence of formal structures; Existence of ethical culture; Code of Ethics; Compliance programmes; Training and education in ethics; Communication of ethical issues; Reporting systems of unethical conduct; and Disciplinary and reward procedures.

**Each of these elements should be evaluated on a score of (1) to (5). The score of (5) is the highest score, which indicates high levels of ethical compliance in an organisation. One (1) is the lowest score, which indicate lower or non ethical compliance in an organisation. Kindly score each element on the Framework to reflect the levels of ethical practice in your organisation. Please tick appropriately on the questionnaire.**

The survey will be used for academic purpose only and all information collected will be held in the strictest confidence. The study is intended to be anonymous, so your name is not required.

Yours faithfully,

Mukumbwa Brian  
**PhD Research Student**  
Email: mukumbwabrian@yahoo.co.uk  
Contact Nos. : Cell 097-7486126

## Questionnaire survey for validation of framework

This questionnaire is intended to validate the **functionality, user-friendliness** and **usefulness** of the attached Framework for measuring integrity in construction organisations. The Framework is aimed at improving ethical compliance in construction organisations. Kindly study the proposed model and answer the accompanying questions by ticking/writing in the spaces provided.

1. Name of company/organisation: \_\_\_\_\_
2. Position of respondent in company/organisation: \_\_\_\_\_
3. Years of experience: \_\_\_\_\_
4. Have you previously come across a framework for assessing presence of integrity systems in construction organisations?

**Yes**            **No**  
           

If 'Yes', briefly explain: \_\_\_\_\_

5. Do you think the framework is user-friendly?            **Yes**    **No**

If 'No', state the reasons why? \_\_\_\_\_

6. Can the framework for assessing presence of integrity systems be applied in the construction industry in Zambia?

**Yes**    **No**  
   

If 'No', state the reasons why? \_\_\_\_\_

\_\_\_\_\_

7. Do you think this Framework can be used to improve ethical compliance in construction organisations?

**Yes**    **No**  
   

If 'No', state the reasons why? \_\_\_\_\_

\_\_\_\_\_

8. Do you have any other comments with respect to the Framework? \_\_\_\_\_

\_\_\_\_\_

### **List of respondents to the validation questionnaire**

- 1 Anti-Corruption Commission
- 2 Transparent International Zambia
- 3 The Chief Architect, Buildings Department, Ministry of Transport, Works, Supply and Communications
- 4 Road Development Agency
- 5 Lusaka City Council
- 6 National Road Fund Agency
- 7 National Council for Construction.

## **APPENDIX D**

### **Questionnaire survey to establish industry-view of framework**

- 1        Covering letter
- 2        Semi-structured questionnaire
- 3        List of respondents to questionnaire



**THE UNIVERSITY OF ZAMBIA**  
**SCHOOL OF ENGINEERING**  
Department of Civil and Environmental Engineering

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Dear sir/madam,

**Framework for assessing presence of integrity systems in construction organisations**

I am a postgraduate student pursuing a PhD in construction management at the University of Zambia, School of Engineering, Department of Civil and Environmental Engineering. The purpose of writing this letter is to request you to fill-in the questionnaire based on the Framework for assessing presence of integrity systems in construction organisations. The questionnaire is attached. This is a country-wide assessment of presence of integrity systems in construction organisations in Zambia.

The framework has ten elements. These are: Organisational strategy; Top leadership commitment; Existence of formal structures; Existence of ethical culture; Code of Ethics; Compliance programmes; Training and education in ethics; Communication of ethical issues; Reporting systems of unethical conduct; and Disciplinary and reward procedures.

**Each of these elements should be evaluated on a score of (1) to (5). The score of (5) is the highest score, which indicates high levels of ethical compliance in an organisation. One (1) is the lowest score, which indicate lower or non ethical compliance in an organisation. Kindly score each element on the Framework to reflect the levels of ethical practice in your organisation. Please tick appropriately on the questionnaire.**

The survey will be used for academic purpose only and all information collected will be held in the strictest confidence. The study is intended to be anonymous, so your name is not required.

Yours faithfully,

Mukumbwa Brian  
**PhD Research Student**  
Email: mukumbwabrian@yahoo.co.uk  
Contact Nos. : Cell 097-7486126

## Questionnaire survey to establish industry-view of framework

**1.0 General information** *(tick appropriate)*

(a) Profession Architect  Engineer  Quantity Surveyor   
 Other(*indicate*):.....

(b) Years of experience 0-5yrs  6-10yrs  Over 10 yrs

(c) State type of organisation you work for (*please tick*):

- Construction company
- Public sector construction client
- Consulting firm
- Quasi government construction client
- Private sector construction client
- Other (state):.....

**2.0 Kindly assess the levels of compliance of your organisation with respect to ethics using the framework for assessing presence of integrity systems that is attached. (by ticking in the box).**

Score	Organisational strategy	Top leadership commitment	Existence of formal structures	Existence of strong ethical culture	Code of Ethics
5					
4					
3					
2					
1					
Score	Compliance programmes	Training and education programmes in ethics	Communications of ethical issues to employees	Reporting system of unethical conduct	Disciplinary and Rewards Procedures
5					
4					
3					
2					
1					

**3.0 With respect to the attached Framework, please answer the following questions.**

- (a) Is the framework clear and unambiguous?      Yes       No
- (b) Is the framework useful?      Yes       No
- (c) Can the framework be used for measuring levels of integrity in construction organisations? Yes No

**3.1 What challenges does your organisation face in implementing ethical practices?**

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**3.2 What other views do you have regarding the Framework?**

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**List of sample population to the framework for assessing presence of integrity systems in construction organisations**

No	Name of organisation		
	<b>Architects</b>		<b>Clients</b>
1	Bemidak	1	Zambia Sugar
2	National Housing Authority	2	Food Reserve Agency
3	Archline Building Consultants	3	Ministry of education
4	GES Architects	4	Buildings Department
5	gZ Architects	5	Nkana Water & Sewer.
6	Mpinga Mulongoti	6	Road Development Agency
7	Ndilila and Ndilila Associates	7	Mulungushi University
8	Shelter designs	08	Lusaka Water and Sewerage Company
9	Mwangala Mwenda	9	Zambia Revenue Authority
10	Spectrum	10	Mopani Copper Mines Ltd
11	Harmani Associates	11	ZESCO
12	D Bwali Associates	12	Lusaka City Council
13	Afospace Architects	13	Zanaco
14	Design workshop	14	National Pension Scheme Authority
	<b>Engineers</b>		<b>Contractors</b>
1	Civil Struts Consulting Engineers	1	Behrens Ltd
2	Scott Wilson Piesold (Z) ltd	2	Tomorrow Investments Ltd
3	Buildings Department	3	Sinyati construction
4	RM Consultants	4	Millers construction Ltd
5	Engineering Institution of Zambia	5	Astro Works ltd
6	BICON Zambia	6	Drake & Gorham (Z) Ltd
7	ZMCK Consulting Engineers	7	Dockland Construction
8	Ngandu Consulting Ltd	8	Appollo Enterprises
9	North Atlantic Engineering Consultants	9	ZCON Construction Company
10	Kiran Musonda Associates	10	Fair Face Enterprises
11	DH Engineering Consultants	11	Nemerit Enterprises Ltd
12	Utilink Zambia	12	Hua Jiang Investments Ltd
13	UWP Consulting Engineers	13	Group Five (Z) Ltd
14	COWI Zambia	14	Wade Adams Piling & Foundations Ltd
	<b>Quantity Surveyors</b>		
1	MNL Associates		
2	Buildings Department		
3	Adam Hood Quantity Surveyors		
4	Anderson and Anderson		
5	Peter Richards and Partners		
6	City works consult		
7	Colmak Associates		
8	AMK Surveying Consultants		
9	National Housing Authority		
10	HB Chalwa and associates		
11	G.K Associates		
12	CZM Consult Quantity Surveyors		
13	SELD Integrated Solutions		
14	Mwitumwa and Associates		

## **APPENDIX E**

### **Workshops, seminars and conferences attended during the study period**

- 1 Code of Ethics for Engineering Institution of Zambia, 10<sup>th</sup> March 2012, Mulungushi International Conference Centre. Organised by the Engineering Institution of Zambia
- 2 Relevance of Engineering in Sustainable Wealth Creation, 13<sup>th</sup> April, 2012, held at Sun International Hotel, in Livingstone organised by the Engineering Institution of Zambia.

**APPENDIX F**  
**Papers published**

Mukumbwa, B. and M. Muya (2012). **Unethical practices in the construction industry in Zambia.** *Engineering Institution of Zambia, 2012 Symposium, Relevance of Engineering in Sustainable Wealth Creation*, pp. 58-68.

Mukumbwa, B. and M. Muya (2012). **Ethics in the construction industry in Zambia.** *International Journal of Construction Management*, Vol. 13, No. 2, pp.43-65.

Mukumbwa, B. and M. Muya (2012). **Corruption in the construction industry in Zambia.** *OSSREA Zambia Chapter Academic Proceedings 2012*, pp. 16-35.

Muya M. And B. Mukumbwa (2013). **Integrity systems in construction organisations in Zambia.** *International Journal of Architecture, Engineering and Construction*, Vol. 2, No. 2, pp. 106-119.