

**AN ANALYSIS OF THE EFFECT OF THE
BOTSWANA BUREAU OF STANDARDS
CERTIFICATION ON BUYER DECISION ON
PRE-CAST CONCRETE PRODUCTS IN
GABORONE, BOTSWANA**

By

Denny Mweetwa (BBA)

NORTH WEST UNIVERSITY



A33641200163465C

JANUARY 2005

**AN ANALYSIS OF THE EFFECT OF THE
BOTSWANA BUREAU OF STANDARDS
CERTIFICATION ON BUYER DECISION ON
PRE-CAST CONCRETE PRODUCTS IN GABORONE
BOTSWANA**

by

DENNY MWEETWA

610985967

LIBRARY
MAFIKENG CAMPUS
Call No. TH 624.183414
2005-04-07 MWE
Acc. No.: 11484494
NORTH-WEST UNIVERSITY

i 11484494

Submitted in partial fulfilment of the requirements for the

DEGREE OF MASTERS IN BUSINESS ADMINISTRATION at

**The Graduate School of Business and Government
Leadership in the Faculty of Commerce and Administration
at**

North West University

SUPERVISOR: Professor W.P.J Van Rensburg

DECLARATION

I declare that: **'AN ANALYSIS OF THE EFFECTS OF THE BOTSWANA BUREAU OF STANDARDS CERTIFICATION ON BUYER DECISION ON PRE-CAST CONCRETE PRODUCTS IN GABORONE BOTSWANA**, is my own work that all sources used or quoted have been indicated and acknowledged by means of complete references, and that this dissertation was not previously submitted by me or anybody for a degree at another institution.



Denny Mweetwa

January 2005

DEDICATION

**With deep love, I dedicate this dissertation to my wife Clare,
my two sons; Aristo and Anvil for their patience and support
throughout my studies.**

ACKNOWLEDGEMENTS

My dissertation and studies would have not been successful without help from many people some of whom I may fail to remember. My heartfelt gratitude goes to my supervisor Professor W.P.J Van Rensburg for his careful review of my manuscripts. Particularly I thank Mr. Fred Sakalunda for guiding me through my thinking process. My acknowledgement will be incomplete without the following:

- Candice Morkel for her patience, encouragement and guidance in my dissertation
- The Director of Pioneer Products, Mr Micheal Goldberg for affording me chance to study, write exams and an opportunity to develop myself as person.
- The Botswana Bureau of Standards (BOBS) members of staff who were so kind to provide me with literature about their institution
- Dr Thiba and C.M Mweetwa for their patience in proof reading and editing my research
- All my colleagues who spared their precious time to help me complete this dissertation
- All the concrete products consumers who were so kind to respond to my questionnaire

Praise is to my almighty Lord God for availing these people to me who contributed to my completion of my research. May God richly bless them all

Abstract

For a pre-cast concrete manufacturing company to obtain a Botswana Bureau of Standards (BOBS) certification time, money and effort have to be spent and yet it is not known whether the consumers will use the BOBS certification as a buying decision factor. The Botswana Bureau of Standards certified pre-cast concrete manufacturing companies have to comply with rigorous inspections to ensure that standards are maintained.

Competition in the concrete manufacturing industry is contested by certified companies and uncertified companies and yet the market is shared amongst these players.

This dissertation will endeavour to analysis the effects of Botswana Bureau of Standards certification on buyer decision on pre-cast concrete products in Gaborone Botswana. Therefore, the research findings will establish whether BOBS certification can be used as marketing tool.

A sample of forty was drawn from the population in Gaborone to represent the whole of Botswana. Data was collected using both semi-structured and structured questionnaires. Responses were sorted according to similarities and then interpreted.

Results in this research indicated that BOB certification influences concrete consumers' decisions. It was also indicated that BOB certification is actually a marketing tool that sways positively concrete products buyers' decisions.

Therefore, it was recommended that concrete manufacturers should exploit this marketing tool to gain a larger market share. Those concrete products manufacturers whose products are not certified should consider this marketing tool in their marketing strategy in order to remain competitive. BOBS must also launch a massive public awareness to popularise the use of the certification by the manufacturers. Lastly, It is recommended that the Botswana Government must continue supporting BOBS to improve quality standards in the country.

TABLE OF CONTENTS

CHAPTER 1

ORIENTATION

1.1.1	Introduction	1
1.1.1.2	Background of the Pre-cast Concrete Manufacturing Industry	2
1.1.1.3	Industry Product Life Cycle	4
1.1.1.4	Description of the Pre-cast Products Consumers	4
1.1.2.1	Quality	5
1.1.2.2	Quality Cost Structure	6
1.1.3.	The Botswana Bureau of Standards (BOBS)	6
1.1.3.1	Advantages of The BOBS Certification	8
1.1.3.2	Certification	8
1.1.3.3	Product Certification and Testing	9
1.1.4	Certification as a Marketing Tool	10
1.2.	Statement of Problem	10
1.3	Importance of Study	11
1.3.1	Benefits to the Concrete Manufacturing Companies	11
1.3.2	Benefits to the Botswana Bureau of Standards	12
1.4	Scope of the Study	12
1.4.1	Choice of the Research Geographical Area	13
1.4.2	Theoretical Field of Study	13
1.5	Objectives of the Study	13
1.6	Organisation of the Report	14

CHAPTER 2

LITERATURE REVIEW

2.1 Marketing	15
2.1.1 Marketing Programmes	16
2.1.2 Marketing Mix Decisions	17
2.1.3 Product Classification	18
2.1.4 Promotion	19
2.1.5 Pricing	20
2.1.6 Placing	20
2.1.7 People	21
2.2 Consumer Behaviour	21
2.2.1 Buying Behaviour	23
2.2.2 Complex Buying Behaviour	23
2.2.3 Dissonance –Reducing Buyer Behaviour	23
2.2.4 Habitual Buying Behaviour	24
2.2.5 Variety –Seeking Buyer Behaviour	24
2.2.6. Buying Decisions Stages	24
2.3 Implementing Total Quality Marketing	25
2.4 Standardisation	30
2.4.1 Objectives of the Botswana Bureau of Standards (BOBS)	31
2.4.2 Context of Product Certification	31
2.4.3 Objectives of Product Certification	32
2.4.4 Uses of Product Certification	32
2.5 Conclusion	34

CHAPTER 3

DEFINING THE PROBLEM AND RESEARCH QUESTIONS

3.1 Introduction	35
3.2 Rationale of the Problem	35
3.2.1 The Case of Pioneer Products	36
3.2.2 Certification as a Marketing Tool	37
3.3 Definition of the Problem	38
3.3.1 Primary Problem	38
3.3.2 Secondary Problem	38
3.4 Formulation of Research Questions	39
3.5 Conclusion	40

CHAPTER 4

RESEARCH DESIGN AND ANALYSIS

4.1 Introduction	41
4.1.1 Population	41
4.2.1 Architectures	42
4.2.2 Structural Engineers	42
4.2.3 Quantity Surveyors and Estimators	42
4.2.4 Government Buying Departments	43
4.2.5 Construction Companies	43
4.2.6 Private Developers	43
4.3 Sampling Techniques	44
4.4 Measuring Instruments	45
4.5 Methods of Data Analysis	45
4.6 Conclusion	46

CHAPTER 5

RESULTS AND INTERPRETATION

5.1 Introduction	47
5.2 Data Analysis	48
5.3 Interpretation	66
5.4 Conclusion	71

CHAPTER 6

DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction	72
6.2 Discussions	73
6.3 Conclusions	80
6.4 Recommendations	81
6.4.1 Recommendations to the Concrete Manufacturing	81
6.4.2 Recommendations to BOBS	83
6.4.3 Recommendations to The Government	83
6.4.4 Recommendations to Consumers	84
6.4.5 Further Research – other uses of BOBS Certification	84

BIBLIOGRAPHY	85
---------------------	----

ANNEXURES

ANNEXURE A

Introduction letter to the respondents	Addendum A	88
--	------------	----

ANNEXURE B

Questionnaire

Addendum B

89

LIST OF FIGURES

FIGURES	TITLE	PAGE
Fig 5.2.1	Gender	48
Fig 5.2.2	Role in the construction industry	49
Fig 5.2.3	Respondents' profession	50
Fig 5.2.4	Respondents' income	51
Fig 5.2.5	Use of concrete products in the construction projects	52
Fig 5.2.6	Concrete products quality assurance	53
Fig 5.2.7	Reasons for not using concrete products	54
Fig 5.2.8	Reasons for using certified products	54
Fig 5.2.9	Respondents' supplier of concrete products	54
Fig 5.2.10	Organisation that certifies respondents' concrete products	55
Fig 5.2.11	Display of certification marks on the concrete products	56
Fig 5.2.12	Obtaining Information about standard quality	57
Fig 5.2.13	Priority factor considered when buying concrete products	58
Fig 5.2.14	BOBS certification compared against price advantage	59
Fig 5.2.15	BOBS certification compared against lower quality	60
Fig 5.2.16	BOBS certification compared against concrete products Deliveries to construction sites	61
Fig 5.2.17	BOBS certification compared against promotion	62
Fig 5.2.18	BOBS certification compared against time of delivery	63
Fig 5.2.19	BOBS certification compared against availability of information	64
Fig 5.2.20	BOBS certification against distance from the construction site	65
Fig 5.2.21	Comments on other buyer decisions on concrete products	66

LIST OF TABLES

NUMBER	PAGE
TABLE5.2.1 Gender	48
TABLE5.2.2 Role in the construction industry	49
TABLE5.2.3 Respondents' profession	50
TABLE5.2.4 Respondents' income	51
TABLE5.2.5 Use of concrete products in the construction projects	52
TABLE 5.2.6 Concrete products quality assurance	53
TABLE5.2.10 Organisation that certifies respondents' concrete products	55
TABLE5.2.11 Display of certification marks on the concrete products	56
TABLE5.2.12 Obtaining Information about standard quality	57
TABLE5.2.13 Priority factor considered when buying concrete products	58
TABLE5.2.14 BOBS certification compared against price advantage	59
TABLE5.2.15 BOBS certification compared against lower quality	60
TABLE5.2.16 BOBS certification compared against concrete products deliveries to construction sites	61
TABLE5.2.17 BOBS certification compared against promotion	62
TABLE5.2.18 BOBS certification compared against time of delivery	63
TABLE5.2.19 BOBS certification compared against availability of information	64
TABLE5.2.20 BOBS certification against distance from the construction site	65

CHAPTER 1

ORIENTATION

INTRODUCTION

Concrete manufacturing companies have to go through a cumbersome process to obtain a Botswana Bureau of Standards (BOBS) certification as a lot of time, money and effort have to be spent. However, it is not known whether the consumers will perceive a certified product as one that provides higher benefits than one that is not certified. It is not certain whether standard mark certification influence pre-cast consumer buying decisions in Gaborone, Botswana. A pre-cast product that is certified is associated with higher cost of control and failure cost than one not certified. BOBS certified companies have to comply with rigorous regular inspections (that increase costs) to ensure that the standards are maintained. In the pre-cast concrete manufacturing industry there are certified and uncertified companies that compete for the same market and there is no evidence that consumers will use the standard certification in their buying decisions to purchase a certified product or not. The problem with certification is that it is not definite whether certification will create positive customer perception so as to attract potential consumers to buy the certified product when other factors are held constant. However, it is definite that a certified product has higher quality costs than one that is not certified. Both fixed and variable quality costs are higher in a certified company.

This research endeavoured to establish whether in Gaborone a pre-cast concrete manufacturing company's product attractiveness increased to customers by merely being certified by the Botswana Bureau of Standards than one that is uncertified and incurring less quality costs when other factors are held constant.

1.1.1.2 BACKGROUND OF THE PRE-CAST CONCRETE MANUFACTURING INDUSTRY

The pre - cast concrete manufacturing industry is made up of suppliers of concrete products such as bricks, pavers, roof tiles, lintels, slabs and drainage pipes. The industry's major players in the Southern region of Botswana include Kwena Brick Force (Pty) Ltd, Brick Build (Pty) Ltd, Pioneer Products (Pty) Ltd, Pan African Cement Products (Pty) Ltd, Lobatse Clay Works (Pty) Ltd, Cemetex Lobatse Products (Pty) Ltd, and Khalahari Brick Force (Pty). Considering the population of the Southern Region of Botswana, it is evident that "big players" heavily contest the industry. The industry is growing steadily on a yearly basis because only in Gaborone, four new pre - cast concrete manufacturing companies have been established in a period of three years, in spite of the amount of capital investment required to start operating.

All these pre -cast concrete products are manufactured in order to meet customer needs and wants. However, producing these products is not only enough, as the manufacturers have to prove to the customers that they are producing quality products. Some pre-cast concrete manufacturing companies have taken the trouble to certify their products with the Botswana Bureau of Standards while others have not. Nevertheless, both BOBS certified pre-cast concrete manufacturing companies and uncertified ones work hard to satisfy the same markets.

Concrete product markets are shared amongst the certified and the uncertified producers while placing those ones certified to adhere to regular quality controls and additional costs. It is not mandatory for pre-cast concrete manufacturing companies to get certification with the Botswana Bureau of Standards (BOBS), as it is only sufficient for the companies to obtain a registration certificate and trading license in order to start operating in Botswana.

To test the quality of concrete products some consumers, especially construction companies, ask for test certificates, which are readily provided by the manufacturers who have their own concrete testing laboratories and sometimes demand for test results from independent laboratories. In Gaborone, the capital town of Botswana, there are three independent material testing companies that provide testing services at a fee. All this is done in an effort to obtain quality concrete products from pre-cast concrete manufacturing companies.

Some concrete products consumers, especially private developers, buy without full knowledge of quality requirements and they depend on third parties, especially government institutions such as the Botswana Bureau of Standards and the Consumer Protection Unit to protect them against acquiring less quality concrete products. With this realisation some pre-cast concrete manufacturing companies have resorted to complying with the national standards so as to associate their products with an institution that upholds quality. Once consumers notice a standard mark on a pre-cast concrete product, it signals a message that the supplier is complying with the standards and will continue to adhere to set quality standards enforced by the Botswana Bureau of Standards.

1.1.1.3 INDUSTRY PRODUCT LIFE CYCLE

The pre-cast concrete manufacturing industry is in its growth stage in Botswana because pre-cast concrete products sales have increased despite the influx of new players in the industry. Companies in this industry have similar production processes, as one company from South Africa called Pan Mix dominates in supplying plant and machinery, though few machines come from different equipment suppliers. All major players in the industry have a market share in the ever-booming construction that is striving to meet set dead lines. Profits are ranging from twenty five to thirty percent while ever-rising prices do not adversely affect demand for the products. The industry's annual turn over is approximately one billion Botswana Pula. Construction boom in the country has caused expansion of this industry.

1.1.1.4 DESCRIPTION OF PRE- CAST PRODUCTS CONSUMERS

Pre-cast concrete consumers are comprised of private developers, construction companies and government institutions. Private developers are people who finance the building of houses, commercial structures, churches or schools for their own use or to rent them out. Construction companies' main business is to carry out projects either for private developers or government institutions. The Botswana government finances construction projects and these projects could be completed either by government construction departments or construction companies that are awarded tenders to complete such projects. Building structures are normally meant to last a lifetime and therefore building materials must be of high quality.

1.1.2.1 QUALITY

Pelser (2004:10) defines quality as control that can be sustained systematically by controlling the variables present in the production processes. In order for a product to be considered of high quality it must be fit for use and should meet the following requirements:

- Technological requirement as reflected by acceptable tolerances, set standards and the quality of raw materials used;
- Psychological requirement which indicates whether the product satisfies the customer's requirements with regard to taste, physical appearance and status;
- Reliability and maintainability that respectively are higher and easier in a high quality product;
- Contractual requirements if applicable; and
- Aesthetic requirement that is typically higher in a higher quality product.
(Pelser.2004)

For a pre-cast concrete manufacturing company to maintain a high quality product a cost of quality has to be incurred and these production costs are put into two categories namely: cost of quality control and cost of quality failure. It is anticipated that quality control costs are higher in a Botswana Bureau of Standards certified company, as companies have to adhere to stringent standards controls.

1.1.2.2 QUALITY COST STRUCTURE

Pelser. (Ibid:) defines cost of quality as cost incurred because certain products and processes do not comply with the set standards. The cost of quality is made up of two components, namely cost of control and cost of failure. Cost of control is cost incurred in an effort of removing defective items from the production process. On the other hand cost of failure can be divided into two, namely internal cost failure and external cost failure. Internal cost failure refers to the cost of raw material and labour used in the manufacturing of products that are not suitable for sale and external cost of failure which is the cost associated with the guarantee which must be honoured, products returned to the business by customers, additional discounts and many other costs associated with compensating for inconveniences caused by the defective product. Certified companies have higher control and failure costs because they have to comply to set standards in order to keep the certification and maintain high quality product status. This is in contrast to the uncertified companies that have only their status to lose if they produce substandard products.

Initially certification costs are high as payment for application and tests are incurred when the product is still tested. The costs are even higher especially when the products that a supplier requested to be certified do not comply with the standards and improvements have to be made. Application costs are costs incurred once while quality control and failure costs are recurrent.

1.1.3 BOTSWANA BUREAU OF STANDARDS (BOBS)

The Botswana Bureau of Standards is a parastatal organisation established by Act no 16 of 1995 cited as the Standard Act, (1995) of the Botswana Government. The main duty of this act includes " to promote standardisation and quality assurance in industry and commerce with the aim of improving product quality industrial efficiency and productivity and the promotion of

trade, so as to achieve optimum benefits for the public generally, particularly in the interest of healthy safety and welfare and protection of the consumer”
 Section 3 (2a) The other key duty of the Botswana Bureau of Standards according to section 3 sub section 2j establishes or recognise inspection agencies for the purpose of product and quality system certification, and for such other purposes as may be prescribed.

The main duties of BOBS are to develop and implement Botswana Standards that are equivalent to the international levels. A standard is a document established by consensus and approved by a recognised body that provides for common and repeated use rules, guidelines or characteristics for the activities or their results aimed at the achievement of the optimum degree of order in a given context. (BOBS, 2004). The Botswana Bureau of Standards is a full member of the International Organisation for Standards (ISO) that the organisation subscribed to and accepted the World Trade Organisation and Trade Board code of good practice, adoption and application of standards.

The International Organisation for Standards (ISO) defines standardisation of activity of establishing, with regard to actual or potential problems, provisions for common and repeated use, aimed at the achievement of the optimum degree of order in a given context. It consists of the processes of formulating, issuing and implementing standards (ISO/IEC Guide 2: 1996). This organisation only regulates organisations that are registered with it and it certifies member company products that comply with its set specifications, conditions and regulations. However, Section 10 (2) of the ISO states “any such standard specification may, in the original notice, or in a subsequent notice be declared to be a compulsory standard for the commodity concerned”. In Botswana none of the pre-cast concrete products have been declared standard compulsory while all foodstuffs retailed formally to the public must comply with compulsory food standards.

1.1.3.1 ADVANTAGES OF BOBS CERTIFICATION

To attract suppliers to obtain a Botswana Bureau of Standards' certification a brochure called Certification (2004) was issued by BOBS and spelled out various advantages of certification which include the following:

- Assurance of quality to consumers who buy certified products
- Market advantage over competitors who are not certified
- Wider markets for the certified companies as even international markets accept them.
- Reduction of product liability as a certified product would have satisfied all the minimum requirements as opposed to one that is not.

It is important to state that this research only concentrated on pre-cast concrete products certified by the Botswana Bureau of Standards. Some pre-cast concrete products do not yet have standards such as the hollow core slabs, according to BOBS. The organisation has not found it necessary to implement some standards, as there is no public demand for them or technology to test some products the industries may request for standards.

1.1.3.2 CERTIFICATION

According to the brochure called Certification (2004) issued by the Botswana Bureau of Standards, a definition of certification is given as a written assurance by the third party (Botswana Bureau of Standards) that a product, process or service confirms to specified requirements. Certification supports suppliers claims that their products or services conform to the requirements of an appropriate standard. Thus helps to promote product competitiveness and marketability. A supplier is permitted to affix Botswana Bureau of Standards marks to his product as an indication that: -

- The product complies with the relevant Botswana Standard
 - The system maintains an appropriate quality control system
- (BOBS, 2004)

The supplier is only permitted to use the standard mark after the product has passed rigorous type testing against the relevant standard and the product 's quality control system has been assessed and found adequate. Thereafter, the product 's continued compliance is monitored through factory surveillance.

1.1.3.3 PRODUCT CERTIFICATION AND TESTING

According to Mundembe (2004) a manufacturer whose product satisfies all the requirements of a national standard can apply to the Botswana Bureau of Standards for the product to be certified. The Botswana Bureau of Standards then assesses the company 's manufacturing processes in order to satisfy itself that the processes can produce products of a consistent quality. Samples of the product are then tested using standard test methods to verify its conformance of the product standard. If the manufacturing process and test results are acceptable to the Botswana Bureau of Standards, then manufacturers can then be certified to affix the BOBS certificate mark on the product or indeed in their advertisement. Continuous surveillance of the product follows thereafter, to ensure that the quality of the product continues to satisfy the requirements of the standard.

Products certification significantly simplifies communication among parties involved in a construction project and goes a long way towards ensuring customer satisfaction. For example if the project architect specifies bricks that comply with a particular Botswana Standards on behalf of his client, the contractor can easily satisfy that requirement by purchasing only bricks that have been certified to be confirming to that standard. Purchasers of certified products can also help the Botswana Bureau of Standards by reporting poor products that may be certified.

1.1.4 CERTIFICATION AS A MARKETING TOOL

It is important to emphasise that pre-cast concrete manufacturing companies obtain Botswana Bureau of Standards certificates to prove to their customers that they produce consistent quality products that conform to the national standards. Certified products, not only prove that they are produced under efficient conditions, but also greatly enhance product status and customer confidence that requires considerable investment in both time and money. This certificate mark assures consumer satisfaction and goes further to communicate that quality will be maintained at all times.

Even though pre-cast concrete manufacturing companies do not explicitly obtain a certificate as a marketing tool an in-depth analysis shows that certification marks are displayed as advertisement to attract potential consumers to purchase the particular product regularly. Pre-cast concrete manufacturing companies go to greater length in terms of money, time and effort to obtain The Botswana Bureau of Standards certificates with the prime objective of quality assurance to the consumers.

A product that has attributes which meet customer needs and wants and is Botswana Bureau of Standards certified assures consumers that quality attributes are maintained in its production processes. Therefore, if a Botswana Bureau of Standards certificate mark is used as a message to communicate to the customer about attributes of a product then, it is surely used as a marketing tool.

1.2 STATEMENT OF PROBLEM

This research was meant endeavour to investigate the effects of the Botswana Bureau of Standards certification on buyer decision on pre cast concrete products in Gaborone, Botswana.

1.3 IMPORTANCE OF STUDY

An investigation into this particular problem will benefit society in general, the concrete manufacturing industry, pre-cast concrete consumers and the Botswana Bureau of Standards. The following discussion focuses on the significance of the study to companies and BOBS.

1.3.1 BENEFITS TO THE CONCRETE MANUFACTURING COMPANIES

- To establish whether the Botswana Bureau of Standards certification is a marketing tool so that industry participants could use it to promote their concrete products locally and internationally.
- Pre-cast concrete manufacturing companies will benefit by reviewing their marketing strategies and incorporate certification so as to improve sales and profitability.
- Pre-cast concrete manufacturing companies that are planning to certify their products with the Botswana Bureau of Standards will have an overview of consumers' perception about certified products.
- Certified Products could be branded to create a competitive advantage for pre-cast concrete manufacturing companies. Therefore industry appreciation for Botswana Bureau of Standards certification could create brand benefits.

The Botswana Bureau of Standards is a full member of the International Standard Organisation (ISO) implying that products produced by pre-cast concrete manufacturing companies certified by the institution comply with global standards

1.3.2 BENEFITS TO THE BOTSWANA BUREAU STANDARDS

- One of the Botswana Bureau of Standards (BOBS) objectives is to ensure that quality products are delivered to the public. Therefore this research will be of great assistance to the Botswana Bureau of Standards to establish whether pre-cast concrete products consumers appreciate the organisation's services to the public. The Botswana government has invested a significant amount of money in infrastructure and human resource to ensure that the organisation succeeds in its mission. Lack of knowledge of how the public benefits from the institution's services would then result to the nation's resources being wasted.
- On the other hand this research is considered to be opportune in terms of both timing and option for a pre-cast concrete manufacturer to decide whether to obtain a Botswana Bureau of Standards certificate or not as this government institution is still in its infant stage in the country. This research will test the institution's popularity in terms of its public awareness, integrity and how the public utilises it. Consumer perception about the Botswana Bureau of Standards certification will be tested to see whether the institution's integrity is held highly to attract customers to buy more of a certified product due to a certification.

1.4 SCOPE OF THE STUDY

The geographical parameters of the research and its theoretical field of study are determined by its scope.

1.4.1 CHOICE OF THE RESEARCH GEOGRAPHICAL AREA

This study was conducted in the area of capital city of Botswana namely Gaborone as a sample to represent the country. The population identified for the study were architects, structural engineers, quantity surveyors, government buying personnel, construction companies and private developers. This geographical area was ideal because about ninety percent of the construction activities happen in this area. Construction companies are also concentrated in this area and the city is the most densely populated area of Botswana.

Primary methods of data collection were used in this study that included semi structured and structured questionnaires administered personally (refer to page 45)

1.4.2 THEORETICAL FIELD OF STUDY

The theoretical field of study was based on the field of marketing studies in general and specifically on the product quality influence on consumer buying behaviour. The literature review in Chapter 2 reflects the theoretical framework in detail that covers the price, promotion, product and people of marketing, quality, consumer behaviour, standardisation and quality of products.

1.5 OBJECTIVES OF STUDY

There were four main objectives of the study;

- To find out whether Botswana Bureau of Standards certification can function as a marketing tool for pre-cast cement products manufacturers.
- To recommend ways, in which Botswana Bureau of Standards certification can be used to enhance performance of pre-cast cement manufacturing companies through quality, cost saving, production efficiency and as a competitive tool.

- To provide recommendations to the Botswana Bureau of Standards about how certification can be publicised as a marketing tool.
- To recommend to the government and society the importance of the Botswana Bureau of Standards certification.

1.6 ORGANISATION OF THE REPORT

The research is arranged in the following order:-

Chapter 1: Orientation

Chapter 2: Literature review

- Consulted sources of literature and theoretical foundation are reflected in this chapter.

Chapter 3: Problems and research questions

- This chapter motivates the existence of the research problem namely " the analysis of the effect of the Botswana Bureau of Standards certification on buyer decisions on pre- cast concrete products".

Chapter 4: Research methodology

- This chapter outlines the methods used to collect data for this study

Chapter 5: Research Results

- The data collected for the study is presented and analysed

Chapter 6: Findings, conclusions and recommendations

- Outcomes of the survey are discussed and conclusion drawn from the research. Recommendations and implications are presented in this chapter.

CHAPTER 2

LITERATURE REVIEW

2.1 MARKETING

Pre-cast concrete manufacturing companies certify their products in order to ensure that quality standards of their products (offering) is maintained to build customer confidence in their products. A satisfied customer will be maintained or will pass positive messages to other potential buyers hence help to expand a company's clientele. The survival of a company depends on its existing customers and the ability attract new ones therefore need to practice what is called marketing management. Kotler, (1997:15) defines marketing management as a process of planning and executing the conception, pricing, promoting and distribution of ideas, goods and services to create an exchange that satisfy individual and organisational goals. The author refers to marketing as a social and managerial process by which individuals and groups obtain what they need and want through creating, offering and exchange products of value." This definition of marketing rests on the following core concepts: needs, wants and demands; products (goods, services, and ideas) values, cost and satisfaction; exchange and transactions; relationships and networks; marketers and prospects.

Van Rensburg (2003, page: 10) defines marketing concept as a belief about the proper way to manage a business or an economic system. The marketing concept consists of three logical requirements, namely:

- Examining peoples' needs and wants as the basis of deciding what the business (or economy) will do.

- Selecting the best way to meet the consumer's needs that are targeted by the firm.
- Achieving the organisation's performance objective by meeting customers' needs satisfactorily.

Kotler (1997) states that the concept of marketing is linked with the concept of exchange and hence defines a market as that which consists of all the people sharing a particular need or want who might be willing and able to engage in exchange to satisfy that need or want. The author argues that products or services are offered to satisfy people's needs and wants. Smart marketers try to build up long term, trusting, win-win relationships with valued customers, distributors, dealers and suppliers'. They accomplish this by promising and delivering high quality, goods and services and fair prices to the other parties over time.

In the process of trying to quench their needs and wants people have guiding concepts such as value and satisfaction. According to Kotler (ibid) value is the consumer's estimate of the products' overall capacity to satisfy their needs or wants. Value is the satisfaction of customer needs and wants at the lowest possible cost of acquisition, ownership and use.

2.1.1 MARKETING PROGRAMMES

Products that are manufactured have to be sold to the consumers. To maintain these sales companies devise different kinds of marketing strategies which can be called marketing programmes. In order to implement these programmes marketing managers must make basic decisions on marketing expenditures, marketing mix and marketing allocation. Marketing expenditure is a percentage budget allocated to the marketing activities in relation to the total expenditure of the company.

A marketing budget is further divided among various tools in the marketing mix. Kotler (ibid: page: 92) defines marketing mix as a set of marketing tools that the firm uses to pursue its marketing objectives in the target market. Most writers refer to marketing mix as that which comprises of the four marketing Ps namely the product, price, promotion and place. However, Kotler (ibid) states that there are many marketing mix tools.

When marketers decide on the allocation of the marketing budget to the various products or services, channels, promotion media and sales areas they are exercising marketing allocation. Managers use sales responses functions to allocate funds to each product, price, promotion and place.

2.1.2 MARKETING MIX DECISIONS

Decisions of marketing mix usually evolve around a particular product or service. For pre-cast concrete manufacturing companies to effectively formulate a strategy they must ensure that the product or service has a bundle of characteristics that are the ultimate goal of the buyer. Lancaster (1994:415) states that this opens the possibility of a much more fruitful set of insights into consumer behaviour. Paradoxically, the notion that consumers are interested in the benefits provided by a marketer's product rather than the product itself has always been central to the marketing theory. A product is a collection of benefits generated by the physical product, its design, features, packaging, style and service support which together provide satisfaction to the customer. For marketing it is crucial to see how the product's benefits are perceived by consumers rather than by production experts Doyle (1994).

A further explanation of a product is described as a bundle of attributes and benefits designed to satisfy customer needs. The fact that consumers seek benefits means that they will see products differently Assael (1993). However, Kotler (Ibid) divides the bundles of product attributes into five levels namely core benefits, basic product, expected product, augmented product and potential product. Each level adds more customer value and the five

constitute value hierarchy Kotler (ibid). The most fundamental level is the core benefit that is the basic service or benefit that the customer is really buying. Pre-cast concrete manufacturing companies are considered as benefit providers.

At the second level, pre-cast concrete manufacturing companies have to turn the core benefits into a basic product. Thus a brick includes solid features, rectangular with specific height and breath. At the third level, the pre-cast concrete manufacturing companies prepares an expected product; a set of attributes and conditions that buyers normally expect and agree to when they purchase this product. For example a brick should be rectangular measuring 100mm x 50mm x 90mm made of cement that must be delivered to the construction site without breakages. At the fourth level, the marketer prepares an augmented product that meets the customer's desires beyond their expectations. Pre-cast concrete manufacturing companies can augment their bricks by providing buyers with special bonding cement to be used when building walls.

Kotler, (ibid) argues that the new competition is not between what companies produce in their factories, but between what they add to their factory output in the form of advertising, customer advice, financing, delivery arrangements warehousing and other things that people value. At the fifth level stands the potential product that encompasses all the augmentations and transformations that the product might ultimately undergo in the future. The pre-cast concrete manufacturing companies may change the brick to be made smoother, to interlock and painted for quick wall construction.

2.1.3 PRODUCT CLASSIFICATION

In the subject of marketing there are many ways of product classification. Products may be classified into three groups according to their durability and tangibility. These categories are non-durable goods, durable goods and services.

Products can also be classified on the basis of consumer shopping habits namely convenience, shopping specialty and unsought goods.

The other form of product classification process is how products are used into production process and this classification is known as industrial goods classification that can be classified in terms of how they enter the production process and their relative costliness. Materials and parts, capital items and supplies and business services are the industrial goods classification. Using the industrial goods classification pre-cast concrete manufacturing companies' products can be classified as manufactured material parts. About ninety nine percent of pre-cast concrete products are component materials that are usually fabricated further into building houses, roads, drainage lines and security fences. Kotler(*ibid*, 431)

The most fundamental question in market concern is what is at the heart of its planning role-the product. Above all the marketing function must make sure that the range of the products the organisation offers in the market place is revived, reassessed, re-examined and if necessary revitalised annually .The annual product plan will review the product under its three constituent elements of product performance, quality, packaging and its price.

2.1.4 PROMOTION

Van Rensburg (2003: 54) says that a company has several communication tools that it uses to send information in the form of a message to target audiences. The originator or sponsor of a message is the source and the people in the target audience are the receivers of the information in the message. Each tool is briefly defined and advertising is a paid form of non-personal communication carried by the mass media (for example, radio, newspapers, billboard and magazines) or by the direct mail. Receivers clearly understand that the message is comes directly from the source. Sales promotion is a wide variety of short-term inducement that includes coupons, point of purchase, product display, free gifts, signs, contest, and trade shows. Receivers know that the inducement is coming from the source. Publicity is a non-personal communications primarily in the form of news items carried by

the mass media. The media are not the source and the message's origin is often perceived by receivers to be the media and not the source. Personal selling is a promotional activity that involves paying an individual often called a sales person by the source to deliver messages about the offering.

2.1.5 PRICING

A company that has come up with an idea in the form of service or product and has decided how it will promote its product has to decide how it will price its offering. A pricing strategy is mostly influenced by the requirement for net income and objectives for long-term market control. According to (The Strategic Marketing Plan issued on the internet strategic marketing Plan.htm, 2004) there are three basic strategies one can consider namely skimming strategy, market penetration strategy and comparable pricing strategy. A skimming strategy is used when a company's product has enough differentiating to justify high price and desires quick cash and but has a minimal desire for significant market penetration and control. A market penetration strategy is used if a company intends to penetrate a market by making prices lower than the competitors. A company that uses a comparable pricing strategy is not a market leader in the industry and the industry leader will most likely have created a price expectation in the minds of the marketplace.

2.1.6 PLACING

Placing or distribution of products to consumers is defined by Van Rensburg, (2003: 39) as a network of co-operating organisations that together perform all the activities linking producers of goods and services to end users to accomplish the market task. A company must select the distributing method(s) to use to place the offering into the hands of the customers. Direct sales involve the sale of a product using a direct, in-house sales organisation that does all selling through the Internet, telephone or mail order contact. A wholesale sale involves the sale of a product using intermediaries or middlemen to distribute products or services to the retailers. Self-service retail sales involves the sale of a product using self-service retail methods of

distribution. Lastly a full –service retail sales involves the sale of a product through a full service retail distribution channel.

2.1.7 PEOPLE (CUSTOMER, CLIENTS, CONSUMERS)

People or prospects are defined by Kotler, (1997: 48) as people who have a strong potential interest in the product and the ability to pay for it. The company hopes to convert many of its qualified prospects into first-time customers and to then convert those satisfied first time customers into repeat customers. Some factors to consider include the potential for the market penetration, the willingness to pay higher prices, the amount of time it takes the prospect to make a purchase decision, knowledge of the product and prices of the competitor and the criticality of the prospects' need, attitude about change, the significance of the benefits, barriers that exist to incorporate the offering into daily usage and the credibility of the offering.

2.2.0 CONSUMER BEHAVIOURS

According to Kotler (ibid: 171) the field of consumer behaviour studies how individuals, groups and organisation select, buy, use and dispose of goods, services, ideas, or experiences to satisfy their needs and desires. The author developed a buyer behaviour stimulus –response model. This model consists of characteristics that influence a buyer; these are; culture, social, personal and psychological.

Cultural factors exert the broadest and deepest influence on the consumer behaviour. The roles played by the buyer's culture, subculture and social class are particularly important. Culture influences a buyer's preference for quality or expensive goods. Social classes are relatively homogeneous and enduring divisions in a society which are hierarchically ordered and whose members share similar values, interests and behaviour. Product and brand preference are distinct among social classes and these may include homes, clothing, leisure activities and automobiles. Social factors such as reference groups, family and roles status are some of the additional factors to culture that influence consumer behaviours Kotler (ibid).

Reference groups influence a consumer's behaviour and these include family, friends, neighbours and co-workers with whom a person interacts directly ('face to face ') or indirectly such as religious, professional and trade union groups, which tend to be more formal and require less continuous interaction. These reference groups influence consumers in at least three ways such as new behaviours and lifestyles, attitudes and self-concept and lastly they create pressures for conformity that may affect the person's actual product and brands choices. Kotler (Ibid: 179).

Personal characteristics influence consumers buying decisions and these include the buyer's age and stage in the cycle, occupation, economic circumstances, lifestyle or personality and self-concept. Major psychological factors such as motivation, perception, learning and beliefs and attitudes also influence consumer-buying choices. Needs of person may motivate a consumer to buy a product and these needs may be biogenic, those that arise from a state of tension such as hunger, thirst and discomfort. Other needs are psychogenic; they arise from psychological states of tension such as the need for recognition, esteem or belonging. A motivated person is ready to act. He or she actions are influenced by his/her perception of the situation. Perception is the process by which an individual selects, organises, and interprets information to create a meaningful picture of the world Kotler (ibid: 185). People acquire beliefs and attitudes by doing and learning things, they base there buying process decision on beliefs. Kotler (ibid) defines a belief as a descriptive thought that a person holds about something.

To be successful, marketers have to go beyond the various influences on buyers and develop an understanding of how consumers actually make their buying decisions. Specifically, marketers must identify who makes the buying decisions, the types of buying decisions and the steps in the process. Kotler (ibid:189).

2.2.1 BUYING BEHAVIOUR

Various decision processes are conducted when purchasing items such as toothpaste, a tennis racket, personal computer, a car or concrete products. Complex and expensive purchases are likely to involve more buyer deliberation and more participation. Four types of consumer buying behaviour based on the degree of buyer involvement and the degree of differences among brands are distinguished Assael(1993).

2.2.2 COMPLEX BUYING BEHAVIOUR

Products that are expensive, bought infrequently, risky and highly self – expressive require complex decisions. Typically the buyer does not know much about the product category and has much to learn. For example a person buying concrete products may not know what attributes to look for Kotler (1997) identifies three steps process; first the buyer develops beliefs about the products, secondly she\he develops attitudes about the product and lastly she\he makes a thoughtful purchase choice.

2.2.3 DISSONANCE (REDUCING BUYER BEHAVIOUR)

This is when the buyer sees little differences in the brands while getting highly involved in the purchase. Expensive, infrequent and risk products call for a high involvement causing the buyer to shop around to learn what is available but will buy fairly quickly, perhaps responding primarily to a good price or to a number of purchase conveniences. After purchasing the buyer may regret due to some disquieting features of the product or when latest favourable information about other products is made available to the buyer. This actually causes dissonance on the buyer behaviour Kotler (ibid).

2.2.4 HABITUAL BUYING BEHAVIOUR

Low cost, frequently purchased products demand for low involvement in the purchasing decision. Absence of significant brand differences causes low consumer involvement. Products that are habitually bought under low consumer involvement include salt, sugar and fuel. If a consumer keeps buying the same product it is out of habit not strong brand loyalty.

2.2.5 VARIETY –SEEKING BUYING BEHAVIOUR

Sometimes consumers are faced with a buying situation characterised by low consumer involvement but significant brand difference. In such cases the consumers often do a lot of brand switching.

2.2.6 BUYING DECISION STAGES

Kotler (1997: 192) developed a "stage model" of the typical buying process. The consumer passes through five stages: problem recognition, information search, evaluation of alternatives, purchase decision and post purchase behaviour. Clearly the buying process starts long before the actual purchase and has consequences long after ward.

Problem recognition is a starting point when the buyer identifies a need that signals a difference between his or her actual state and a desired state. Desired needs should rise to threshold levels to become a drive. An aroused consumer commences to search for more information at heightened level or active level depending on the strength of his/her drive, the amount of information available and the ease of obtaining additional information.

A consumer evaluates information to decide which product to buy. There are several decision processes; the most current model is which sees the consumer evaluation process as cognitively oriented. That is, they see the consumer as forming product judgments largely on a conscious and rational basis, Kotler (1997:194).

2.3 IMPLEMENTING TOTAL QUALITY MARKETING

The Botswana Bureau of Standards is an institution that insures that manufacturers in Botswana uphold quality standards. An extract from Kotler (ibid: 54) states that the task of improving product and service quality is executive's top priority. The success of many Japanese companies is due to the exceptional quality of their products. Most companies will no longer accept or tolerate average quality performance. If companies want to stay in the race, let alone be profitable, they have no choice but to adopt total quality management (TQM).

Total quality management (TQM) is an organisation-wide approach to continuously improve the quality of all organisation process, products and services. The drive to produce goods that are superior in world markets has led to some countries and groups of countries to establish prizes that are awarded to companies that exemplify the best quality and improvements such as the following: -

- **Japan:** 1951, Japan became the first country to award a national quality prize, the Deming prize (named after W. Edwards Deming, the American statistician who taught the importance and methodology of quality improvement to post-war Japan). Deming 's work formed the base on which many TQM practices were built.
- **United States:** In the mid-1980s, the United States established the Malcolm Baldrige National Quality Award in honour of the late Secretary of Commerce. The Baldrige award criteria consist of seven measures, each carrying a certain number of award

points; customer focus and satisfaction (with the most points) quality and operational results, management of process quality, human resource development and management, strategic quality planning, information and analysis and senior executive leadership. Xerox, Motorola, Federal Express, IBM, Texas instruments, the Cadillac division of General Motors and Ritz – Carlton are some of the companies that have won a Baldrige Award.

- Europe: Not be left out of the quality awards race, Europe developed the European Quality Award in 1993. The European Foundation established the award for Quality Management and the European Organisation for Quality. Like the Baldrige, it is awarded to companies that have achieved high grades on certain criteria such as Leadership, people management, policy and strategy, resources, processes people satisfaction, customer satisfaction, impact on society, and business results. While Europe was relatively late in developing a quality award, it was the initiator of an exacting set of international quality standards called ISO 9000, which has become a set of generally accepted principles of documenting quality. ISO 9000 provides frame works for showing customers how quality oriented businesses around the world test products, train employees, keep records and fix defects. Earning the ISO 9000 certification involves a quality audit every six months from a registered International Standards Organisation (ISO) assessor.

According to Kotler (1997:54) there is an intimate connection among product and service quality, customer satisfaction and the company profitability. Higher levels of quality result in higher levels of customer satisfaction while supporting higher prices and (often) lower costs. Therefore, quality improvement programmes (QIPs) normally increase profitability. The well known Product Improvement Management systems studies show a high correlation between relative product quality and company profitability.

Many writers have defined quality as fitness for use, conformance to requirements or freedom from variations Kotler (ibid: 55) uses the American society for Quality control definition, which has been adopted worldwide. "Quality is the totality of features and characteristics of a product or service that bear on its ability to satisfy or implied needs". This is a customer-centred definition of quality. The seller has delivered whenever the seller's product or service meets or exceeds the customer expectations. A company that satisfies most of its customers' needs most of the time is called a quality company.

Kotler (ibid) I argues that it is important to distinguish between conformance quality and performance quality (or grade). The author cites this example; a Mercedes Benz provides higher performance quality than a Hyundai: it rides smoother, goes faster and last longer. Yet both a Mercedes and Hyundai can be said to deliver conformance quality if all the units delivered their respective promised quality.

Total quality is the key to value creation and customer satisfaction. Total quality is every one's job, just as marketing is every one's every job. Beckham (1992:3), states that ' Marketers who do not learn the language of quality improvement, manufacturing, and operations will become as obsolete as buggy whips. The days of functional marketing are gone. Companies can no longer afford to think of themselves as market researchers, advertising organisations, direct marketers, strategists, they have to think of themselves as customer satisfiers who are customer advocates focused on the whole processes.

Marketing managers have two responsibilities in a quality-centred company. First, they must participate in formulating strategies and policies designed to help the company win through totality excellence. Second, they must deliver marketing research along side production quality. Each marketing activity – marketing research, sales training, advertising and customer service must be performed to high standards.

Marketers play several roles in helping their companies define and deliver higher quality goods and services to target customers. First they bear the major responsibility for correctly identifying the customers' needs and requirements. Second, they must communicate customer expectations correctly to product designers. Third, they must make sure that the customer orders are filled correctly and on time. Fourth, they must check that the customer has received proper instructions, training and technical assistance in the use of the product. Fifth, they must stay in touch with customers after the sale to ensure that they are satisfied and remain satisfied. Sixth they must gather customer ideas for product and service improvements and convey them to appropriate company departments. When marketers do all this they are making their specific contributions to total quality management and customer satisfaction, Kotler, (ibid).

One implication of total quality management is that marketing people must spend time and effort not only to improve external marketing but also to improve internal marketing. The marketer must complain like the customer complains when the product or the service is not right. Marketers must be the customer's watchdog or guardian, and must constantly hold up the standard of giving the customer the best solution. The marketing memo by Kotler (1997:56) spells out the assumptions that must underlie any total quality programmes: - (and this is) 'A growing number of companies have appointed a vice president of quality to spearhead total quality management efforts. Total quality requires recognising the following premises about quality improvement:

- Customers must perceive quality. Quality work must begin with customers' needs and end with the customer's perceptions. Quality improvements are only meaningful when customers perceive them.

- Quality must be reflected in every company activity, not just in company products. Morgan, (1984:61) of General Electrical said " we are not just concerned with quality of the product, but with the quality of our advertising, services, product literature, delivery, after support, and so on".
- Quality requires total employee commitment. Only companies in which all employees are committed to quality and motivated and trained to deliver quality can deliver quality. Employee teams are intent on satisfying their internal customers as well as external customers.
- Quality requires high quality partners. Only companies whose value chains partners are also committed to quality can deliver quality. Therefore, the quality driven company has a responsibility to find and work with high quality suppliers and distributors.
- Quality can always be improved .The best companies believe in continuous improvement of everything by everyone,' the best way to improve quality is to benchmark the company's performance against the best of class's competitors and strive to emulate them or even leapfrog over them.
- Quality improvement sometimes requires quantum leaps. Although quality should be continuously improved, it sometimes pays for a company to target a quantum improvement. Small improvements are often obtainable through working harder. But larger improvements call for fresh solutions for working smarter.

- Quality does not cost more. Crosby, (1979:1) argues that quality is free. The old idea was that achieving more quality would cost more and slow production. But quality is really improved by learning ways to do things right the first time. Quality is not inspected in; it must be designed in. When things are done right the first time, many costs are eliminated (salvage and repair). Motorola claims that its quality drive saved the company over a billion dollars.
- Quality is necessary but may not be sufficient. Improving a company's quality is absolutely necessary because buyers are becoming more demanding. But higher quality may not confer a winning advantage, especially as competitors increase quality to more or less the same extent. For example Singapore Airlines once enjoyed the reputation as the world's best airline. However, competitors' airlines have recently been attracting a larger share of passengers as they have narrowed the perceived gap between their service quality and Singapore's service delivery.
- A quality drive cannot save a poor product. A quality drive cannot compensate for product deficiencies. Pontiac could not save its Ferrari automobile simply by launching a quality drive since the car lacked a sports engine Kotler (1997:56)

2.4 STANDARDISATION

The Botswana Bureau of Standards has objectives to guide its activities. The internal code of practice document produced by Management of the (BOBS, 2004) spells out the objectives of the organisation.

2.4.1 OBJECTIVES OF THE BOTSWANA BUREAU OF STANDARDS (BOBS): -

The Botswana Bureau of Standards was formed with the primary objectives of formulating Botswana Standards and coordinating quality assurance activities in Botswana, with the mission to improve the quality of life of the citizens of Botswana society at large.

The bureau ensures that:

- Continuous and sustained improvement in the quality of goods and services in Botswana to achieve global competitiveness.
- Greater awareness in society in the right to receive quality goods and services in accordance with expectations.
- Improvements in the quality of the environment and protection of natural resources.
- Protection from potential threats to health and safety arising out of provision of goods and services in the country.

A document called ISO/IEC DGUIDE 67 (ISO, 2003) makes a distinction between product certification scheme and product certification system.

2.4.2 CONTEXT OF PRODUCT CERTIFICATION

The first step in addressing concerns regarding products is generally the creation of standards (or other normative documents) for the products involved. The next step concerns the means by which conformity to standards is assured. Assessed fulfilment of requirements in standards, or other normative documents, is one technique used to resolve any concerns that society has regarding products.

2.4.3 OBJECTIVES OF PRODUCT CERTIFICATION

According to the ISO (2003) product certification would be expected to apply mainly to those societal concerns whose significance calls for the involvement of an independent body. The use of certification bears out this observation as it is generally applied only to significant concerns (for example safety, health or environmental protection). Product certification may also be used by suppliers (manufacturers, retailers, warehouses and other service providers) to improve the acceptability of their products by the markets. Three fundamental purposes of product certification become evident:

- Product certification should address concerns of consumers, users and, more generally, all interested parties by installing confidence regarding fulfilment of requirements;
- Product certification should be used by suppliers to show to the market the third-party involvement;
- Product certification should not require excessive resources that result in costs beyond what society in general is willing to bear.

In general, product certification should instil confidence for those with an interest in fulfilment of the requirement and product certification should provide sufficient value so that suppliers can effectively market products. Product certification is most successful when it delivers the required confidence while utilising the fewest possible resources that is maximising value.

2.4.4 USES OF PRODUCT CERTIFICATION

According to the ISO/IEC DGUIDE 67(ISO, 2003) product certification is used in various ways. For example the government may impose certification

requirements in connection with such matters as communication, food and drugs. Local governmental authorities rely on certification of products to assure that such technical areas as electrical wiring and construction products are suitable for use in building construction. Retailers of consumer goods rely on certification as evidence that aspects such as the safety of electrical appliances have been addressed by a third party, thus giving confidence that the products they place on their shelves for the sale to the public are not likely to bring harm to their customers.

Manufacturers may require certification of items provided by suppliers. In each of these various cases, there are different parties involved, each having its own particular interest. For example, the government has assumed responsibility for regulation and control of those matters that concern the broad public interest and welfare. In many cases, the issues which by their nature extend across national borders. In such cases, it is common for governments to work together to establish basic rules and requirements. Examples include electromagnetic compatibility, (EMC), terminal attachment and aviation.

Governments are also concerned with matters only within their borders, such as highway construction or water supply. In the area of building construction, regulation may be carried out at a national level in some countries and other countries, at levels of province or state, or even by local municipalities. At even more basic levels, retailers and certainly consumers are free to make their own choices. While these examples illustrate an important distinction in the way certification is used, these brief overviews neither serve to explain fully the details of certification in the respective cases, nor constitute the entire universe of ways in which certification is used.

Personal understanding and perception concerning certification are determined by an individual's own experience with and proximity to, a particular area or application of certification. Therefore there may be various approaches to certification. Such an understanding also helps to explain why a single set of rules cannot be universally applied to every application and circumstance of certification, such as the choice and detail of the system itself

or implementation of mutual recognition on a bilateral, multilateral or universal basis. It is necessary to understand who is involved, in what way and for what purpose. Certification by its nature is constraining and if it were not, it would be of no value. Therefore, efforts to address product are a challenge. Yet, parties having a common objective can work together to derive the value of certification without imposing undue burden and constraint (ISO, 2003).

2.5 CONCLUSION

The theoretical perspective of the research was marketing with a major emphasis on quality. A brief discussion of the marketing mix was done based on the product, people, placing and promotion. When consumers make a buying decision they assume certain consumer buying behaviours that were discussed briefly. Implementing total quality marketing discussion was included. Finally the objectives of the Botswana Bureau of Standards and the importance of product certification were looked at.

CHAPTER 3

DEFINING THE PROBLEM AND RESEARCH QUESTIONS

3.1 INTRODUCTION

Pre-cast concrete manufacturing companies certify their products with the Botswana Bureau of Standards as a marketing strategy to influence consumer-buying decisions. It is not known whether this marketing strategy yield positive results. It is a well-known fact that pre and post certification costs are high. It is argued that costs incurred by a company must add value to the well being of the company. This research endeavoured to analyse the effects of the Botswana Bureau of Standards certification on buyer decision on pre-cast concrete products in Gaborone, Botswana.

This chapter focuses on this researchable problem in the pre-cast concrete manufacturing industry. Problem definition is divided into two parts, the primary problem and the secondary problem. Lastly the research questions were formulated from this problem definition.

3.2 RATIONALE TO THE PROBLEM

A concrete manufacturing company that intends to obtain the Botswana Bureau of Standards certification has to spend time, money and effort and yet it is not known whether the consumers will perceive a certified product as one that provides higher benefits than one that is not certified. It is not known whether standard mark certification influence pre-cast consumer buying decisions in Gaborone, Botswana. Certification of pre-cast products is associated with higher costs of control and failure costs than one not certified. The Botswana Bureau of Standards certified companies have to comply with rigorous regular inspections (that increase costs) to ensure that the standards

are maintained. In pre-cast concrete manufacturing industry there are companies which are certified and uncertified that compete for the same market yet it is not clear whether consumers base on the standard certification in their buying decisions to purchase a certified product or not. The problem with certification is that it is not definite whether it creates positive customer perception to attract potential consumers to buy the certified product when other factors are held constant. However, it is definite that a certified product has higher quality costs than the one that is uncertified. Both fixed and variable quality costs are higher in a certified company. To emphasize the existence of this problem Pioneer Products is used as an example of a company that used the Botswana Bureau of Standards certification as a marketing strategy tool.

3.2.1 THE CASE OF PIONEER PRODUCTS (PTY) LTD

Pioneer Products manufactures concrete roof tiles that are certified by the Botswana Bureau of Standards. Pioneer Products has been producing roof tiles for three years and the roof tiles sales volumes have not been impressive according to the directors 'expectation. In the period of 2002 to 2003 roof tiles imported from South Africa such as Marley double roman, Coverland double roman and Lafarge double roman were beating the Pioneer Products double roman roof tile in terms of sales volumes. Pioneer Products Roof tiles were selling at about fifty percent cheaper than the South African Roof Tiles. When the qualities of the product were compared it was noticed that the Pioneer Products roof tiles had a higher strength and visual appeal than the competing products. Repairs of the roof could be done using either roof tiles from Pioneer Products, Coverland, Marley or Lafarge, as the profiles are compatible.

South African roof tiles have been in the Botswana market for more years than Pioneer Products roof tiles and there is a very strong brand loyalty that proved difficult for Pioneer Products to penetrate. Pioneer Products had a success product launch by intense promotion on print and air media, lower prices, free deliveries and presentations to the engineers and architects. These efforts did not yield impressive results, as there was a question of

quality assurance of the product as it was still new on the market. Government buyers even preferred to purchase South African roof tiles as they carried a South African Bureau of Standard approved certification mark. In order to prove to the Botswana market that Pioneer Products roof tiles had quality, the director embarked on certifying them with the Botswana Bureau of Standard. Pioneer Products successfully certified its roof tiles with the Botswana Bureau of Standards, a product that meets its standards number BOS 24 2000. It was not clear whether this helped to boost sales volumes.

This marketing strategy Pioneer Products adopted corresponds with the mission statement of the Botswana Bureau of Standards that states that the Bureau aims to "ensure greater awareness in society of the right quality goods and services in accordance with expectation. Some of the incentives for certification that the Public Relations Department of Botswana Bureau of Standards states to assure suppliers who are certified products is market advantages over competitors who are not certified, wider markets for certified companies as they are accepted by even international markets and reduction of product liability as a certified product would have satisfied all the minimum requirements.

This marketing strategy is common practice by most of the pre-cast concrete manufacturing companies that want to prove to their potential buyers that they provide quality products recognised by a third party, the Botswana Bureau of Standards. However, it is not known whether the buyers use the certification mark in their buying decisions or whether they are influenced by other factors to decide which product to buy.

3.2.2 CERTIFICATION AS A MARKETING TOOL

It is important to emphasis that pre-cast concrete manufacturing companies obtain the Botswana Bureau of Standards certificates to prove to their customers that they produce consistent quality products that conform to the national

standards. Certified products not only prove that they are produced under efficient conditions but also greatly enhance product status and customer confidence that requires considerable investment in both time and money. This certification assures consumer satisfaction and go further to communicate that quality will be maintained at all times as the product is utilised.

Even though pre-cast concrete manufacturing companies do not explicitly obtain certificates as a marketing tool an in-depth analysis shows that certification are displayed as advertisement to attract potential consumers to purchase the particular product regularly. Pre-cast concrete manufacturing companies go to greater length in terms of money, time and effort to obtain the Botswana Bureau of Standards certificates with the prime objective of quality assurance to the consumers. A product that has attributes which meets customer needs and wants and is certified by the Botswana Bureau of Standards assures consumers that quality attributes are maintained in its production process.

3.3 DEFINITION OF THE PROBLEM

3.3.1 PRIMARY PROBLEM

- Analysing the effect of the Botswana Bureau of Standards certification on buyer decision on pre cast concrete products in Gaborone capital city of Botswana.

3.3 2 SECONDARY PROBLEM

- To find out whether Botswana Bureau of Standards certification can be used as a marketing tool.
- To find out whether the respondents appreciate the BOBS certification.
- To find out whether the respondents are aware and appreciate the intentions of quality delivery to the public

3.4 FORMULATION OF RESEARCH QUESTIONS

Research questions helped to analysis the primary problem.

3.4.1 BOBS CERTIFICATION AS A MARKETING TOOL

- The first question was to find out from pre-cast concrete products consumers whether the Botswana Bureau of Standards certification influence consumers' buying decisions of pre-cast concrete products. This research question is important to the pre-cast concrete manufacturing companies who would like to use the Botswana Bureau of Standards certification as a marketing tool. Therefore, this study was meant to shed light on how pre-cast concrete products consumers perceive certified products.

3.4.2 AWARENESS AND PERCEPTION ABOUT BOBS

- The secondary problem was to explore the public knowledge about the Botswana Bureau of Standards. Therefore the second question investigated consumer awareness and perception about the Botswana Bureau of Standards as an institution and its certification.

3.4.3 PRE-CAST CONCRETE CONSUMERS APPRECIATE BOBS CERTIFICATION

- Does the pre-cast concrete consumers appreciate the intentions of quality delivery to the public, is the third secondary problem. How do they use the product certification in making a buying decision of a concrete product? If the public is aware of the institution then it must be aware that one of the Botswana Bureau of Standards objectives is to ensure that quality products are delivered to the public.

3.5 CONCLUSION

This chapter reflects the problem statement by explaining to the reader about the rationale to the problem. Definition of the problem was achieved by dividing the problem into primary and secondary problem. The last part of the chapter focused on the research questions.

CHAPTER 4

RESEARCH DESIGN AND ANALYSIS

4.1 INTRODUCTION

In this research pre-cast concrete product consumer-buying decisions were analysed in Gaborone, capital city of Botswana in relation to the Botswana Bureau of Standards certification. This task was achieved by focusing much of its attention on the population consisting of government buying departments, architects, engineers, quantity surveyors, construction companies and private developers.

This chapter focuses on the following subjects; population, sampling techniques, survey methods and analysis of the data collected.

4.2 POPULATION

This population of the study consisted of groups that included the following:- government buying departments, architects, structural engineers, quantity surveyors, construction companies and private developers in Gaborone, Botswana. Each group plays specialised tasks in the process of completing a construction project. It is assumed therefore, that different opinions are registered from a wider selection of the population. To appreciate different roles played in the construction process by each group the following paragraph will explain how each group influences the buying decision of the pre-cast concrete products.

4.2.1 ARCHITECTS

Architects design various buildings for both government and private developers. Architects design buildings that can be constructed with various building materials; more often they specify pre-cast concrete products to be used in their projects. On their drawings they have an influence on specific pre-cast concrete products to construct with.

4.2.2 STRUCTURAL ENGINEERS

Structural engineers' contribution on the construction project is normally the structural practicality part of it. They examine what the architect has designed to check whether it is feasible and they further design the structural part of the building and recommend and change the design where necessary mostly with greater emphasis on safety. Structural engineer's drawings are normally full of calculations with specifications of building materials to use.

4.2.3 QUANTITY SURVEYORS AND ESTIMATORS

Quantity surveyors and estimators normally estimate the approximate quantity of different raw materials and finally estimate the monetary value of the construction project from what the architects and engineers have designed. Quantity surveyors specify normally potential pre-cast concrete suppliers, as their main interest is to meet the architects and engineers design at a minimum cost. They produce a document called "The bill of quantity".

4.2.4 GOVERNMENT BUYING DEPARTMENTS

Government buying departments purchase building materials for local and central government departments. These departments have short listed suppliers who tender to supply pre-cast concrete products. Professional buyers who have to follow stringent buying procedures conduct buying process.

4.2.5 CONSTRUCTION COMPANIES

Construction companies implement what the architect, structural engineer, and quantity surveyors have planned with the help of guidelines on the architects and engineers' drawings and the bill of quantity. However, construction companies are given the final decision of deciding who the final supplier of raw materials should be.

4.2.6 PRIVATE DEVELOPERS

Individuals who have land for developing usually engage builders but decide who should be their suppliers of pre-cast concrete products. Private developers normally build from architect's drawings without any help or guidance of either engineers or quantity surveyors.

The aim of categorising this research population was to capture the opinions in the buying process that occurs at different levels of the construction projects. Each population category makes different buying decisions.

4.3 SAMPLING TECHNIQUES

According to Kish (1965: 18) "a survey sampling or population sampling deals with methods for selecting and observing a part of the population in order to make inferences about the whole population. A sample has several advantages over complete census that include: economy, speed and timeliness; feasibility; quality and accuracy".

In this research a non-probability sampling technique was used implying that the researcher had the discretion to select the elements and there was no explicitly scientific model which could be used to assess the degree of sampling error. Non-probability sampling has got limitations that include risk of generalising the population but it is inexpensive and convenient, Maaga, (2002).

More specifically a non-probability sampling technique known as haphazard or "fortuitous" was used. Samples of volunteer subjects were included here. A sample size of forty of pre-cast concrete consumers was picked from the construction industry in a geographical area of Gaborone to represent the population of the whole Botswana. However, these samples picked fulfilled the following conditions; that the samples were available and willing to answer the questionnaire, they were within the stipulated population (the geographical area of Gaborone), the sample size was forty, meaning a target of forty questionnaires had to be completed. Further more the relationship between the variables being considered is more significant to the researcher than accurately relating the population, Cozby, (1993: 59).

The sampling process was guided by data required to analyse the answers to the question that was posed at the beginning of the study. This question was stated (in chapter 1 and 3) as follows: Does the Botswana Bureau of Standards certificate have an influence on buyer decision on pre-cast concrete products in Gaborone, Botswana?

4.4 MEASURING INSTRUMENT

To determine whether to use qualitative or quantitative data depends on the paradigm of the subject matter. This decision also determined the type of data collection instrument, the researcher used. Choice of using a non-probability sampling caused the research to use a structured questionnaire and semi-structured interviews to collect data (cf page 13). The data collection tool used was interviews with specific questions as per Annex B. Questions were asked to all the respondents with the purpose of capturing their views. These questions were organised with the intention of answering the investigated research questions. Semi-structured interviews appeared to be a simpler way and non-problematic method of finding things. It demanded the researcher to pay attention in order to gain more information from the interview. The research problem laid a foundation for the questionnaire formulation. The respondents of these questionnaires comprised of the government buying departments, architects, structural engineers, quantity surveyors, construction companies and private developers.

4.5 METHODS OF DATA ANALYSIS

The methods of data analysis techniques were dictated by the nature of the study. This study was a qualitative one and had a relatively small sample size (forty). The observations are independent; measurements do not require measurements so strong as for parametric; the variables under study have an underlying continuity and data collected is nominal and/or ordinal, Maaga, (2002:34). Therefore a qualitative data analysis approach called non-parametric was used as responses obtained were from interviews (cf page 89 questionnaire). A multiple-choice questionnaire and semi-structured questions were used to collect data (annex B). Similar responses were categorised and conceptualised.

4.6.0 CONCLUSION

In an effort to design, collect and analyse data from a population that covers the whole of Botswana comprising the construction industry it was decided that a non-probability sampling be used. A structured questionnaire and semi –structured interviews (annex B of the interviews) were used to collect data because this survey has been classified qualitative in nature. Non-parametric statistical tests of data analysis were applied.

CHAPTER 5

RESULTS AND INTERPRETAION

5.1 INTRODUCTION

Date was collected mainly through a questionnaire with specific objectives of answering the research question. The research aim was to analysis the effects of the Botswana Bureau of Standards certification on buyer decision on pre-cast concrete products in Gaborone capital city of Botswana. The researcher administered forty copies of questionnaire and gave guidance to the respondents on how the questions should be answered. As mentioned in Chapter Four the questionnaire was administered to the private developers, government buying departments, construction companies, structural engineers, quantity surveyors and architects. The respondents ' views and choices of their answers on multiple-choice questions were recorded.

The responses were sorted according to similarities and then interpreted. Strategies to analyse the data in this section were grouping and conceptualising. Chapter Five will therefore be dedicated to the presentation of the results of each question and interpretation of the research finding will follow.

5.2 DATA ANALYSIS

The following tables and figures reflect the data collected for this study.

Table 5.2.1: Gender

Details	Number of respondents	Percentage
Male	30	75%
Female	10	25%
Total	40	100%

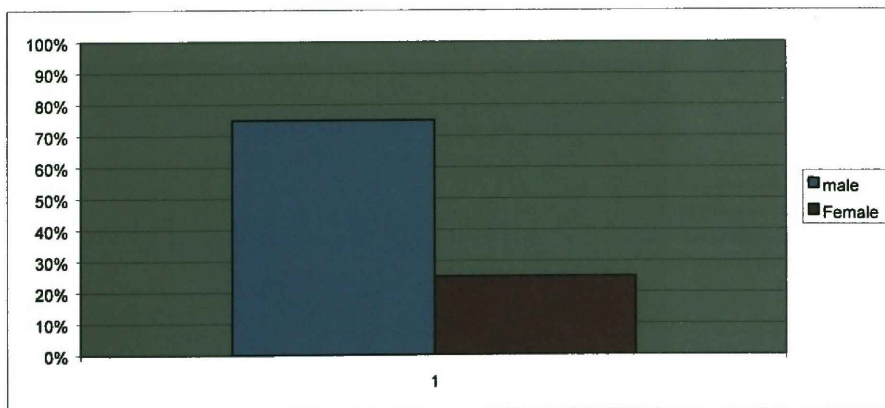
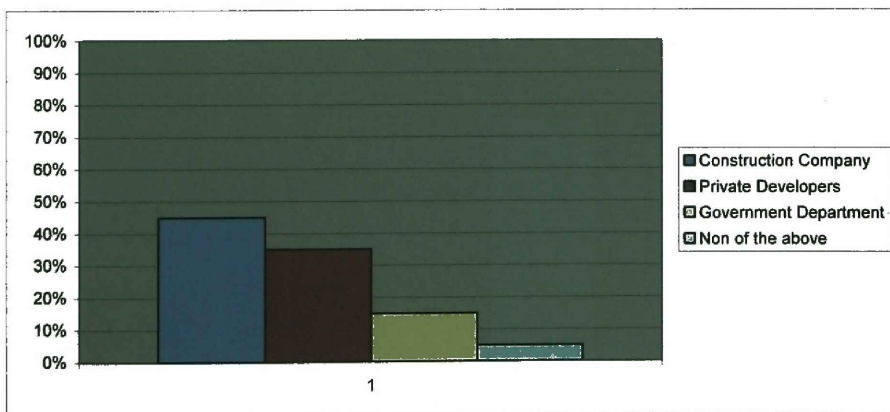


Fig. 5.2.1: Gender

According to Table 5.2.1 and Fig 5.2.1, 75% of the respondents were male.

Table 5.2.2: Role in the Construction industry

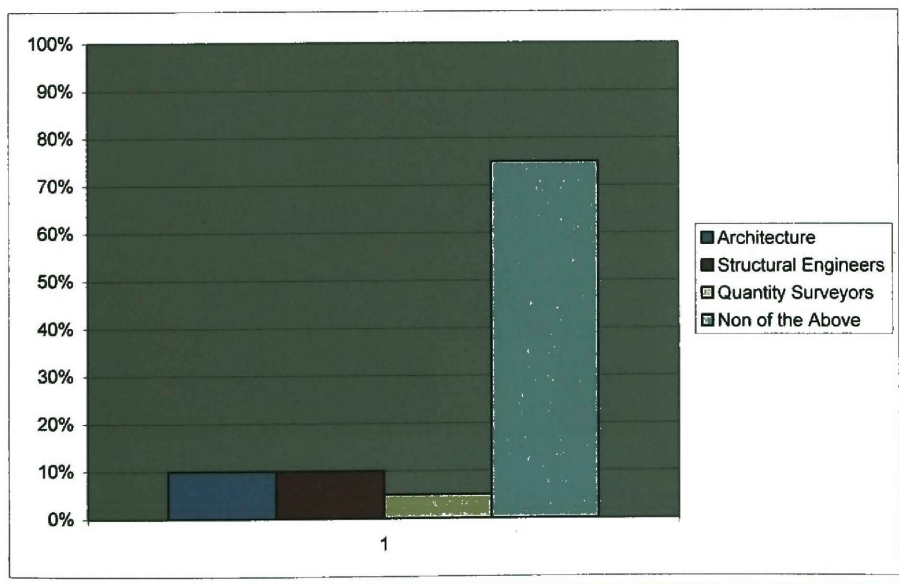
Details	Number of respondents	Percentage
Construction Company	18	45%
Privates developers	14	35%
Government Department	6	15%
None of the above	2	5%
Total	40	100%

**Fig 5.2.2: Role in the Construction industry**

According to Table 5.2.2 and Fig 5.2.2, 45% of the respondents were employees, owners of construction companies.

Table 5.2.3 Respondents' profession

Details	Number of respondents	Percentage
Architects	4	10%
Structural Engineers	4	10%
Quantity Surveyors	2	5%
None of the above	30	75%
Total	40	100%

**Fig 5.2.3 Respondents' profession**

According to Table 5.2.3 and Fig 5.2.3, 75% of the respondents were not architects, structural engineers nor quantity surveyors.

Table 5.2.4 Respondents' income

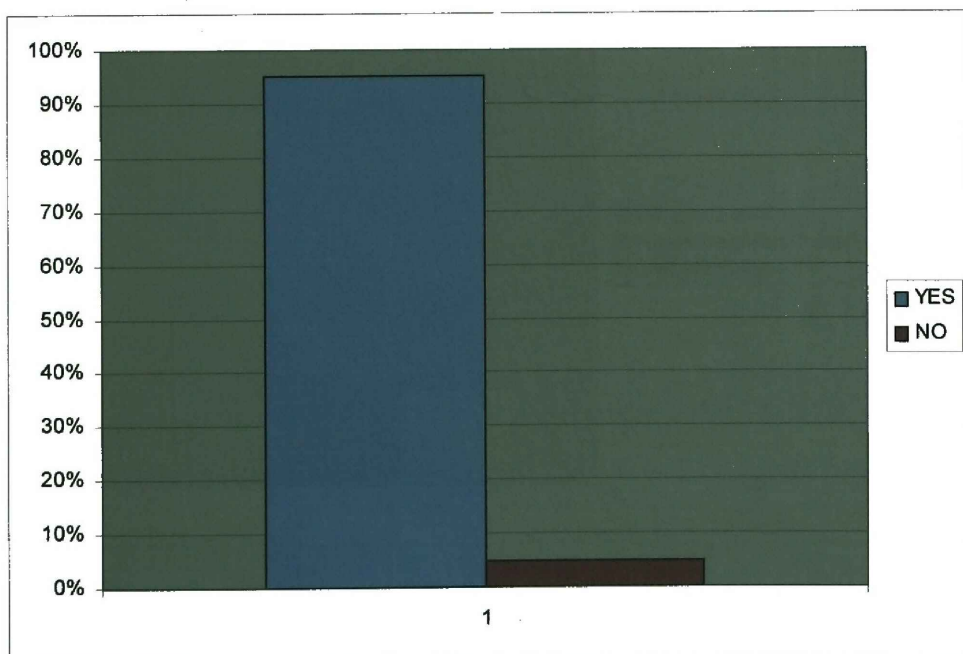
Details	Number of respondents	Percentage
Between P10, 000 to P50, 000	0	0%
Between P 50,000 to P500, 000	32	80%
Over P500, 000	8	20%
Total	40	100%

**Fig 5.2.4 Respondents' income**

In Table 5.2.4 and Fig 5.2.4, it is indicated that 80% of the respondents earned between P50, 000 and P500, 000 per annum.

Table 5.2.5 use of concrete products in construction projects

Details	Number of respondents	Percentage
Yes	38	95%
No	2	5%
Total	40	100%

**Fig. 5.2.5 use of concrete products in construction projects**

According to Table 5.2.5 and Fig 5.2.5, 95% of the respondents agreed to use concrete products on their construction projects.

Table 5.2.6 Concrete product quality assurance

Details	Number of respondents	Percentage
Standard certified	24	60%
Private laboratory tested	8	20%
Does not matter	8	20%
Total	40	100%

**Fig. 5.2.6 Concrete product quality assurance**

In Table 5.2.6 and Fig 5.2.6, it is shown that 60% of the respondents used standard certified products.

Responses: -

- The respondents who did not use concrete products in their construction sites could not give any reasons for not using them.

Fig 5.2. 7 Reasons for not using concrete products**Responses: -**

- Quality products builds quality structures
- Standard certified concrete products are usually specified by the national tender board
- Standard certified products ensures that quality products are used
- Standard certified products have a uniform and consistence quality
- Standard certified products comply to the set specification
- Standard certified products are strong and durable.

Fig 5.2.8 Reasons for using certified products**Responses: -**

- Pioneer Products
- Kwena Brick Force
- Pan Africa
- Brick Build (Panda)
- Kalahari Brick Four

Fig 5.2. 9 Respondent's supplier of concrete products

Table 5.2.10 Organisation that certifies respondents' concrete products

Details	Number of respondents	Percentage
BOBS	22	55%
SABS	8	20%
Material Testing Centre	6	15%
Others	4	10%
Total	40	100%

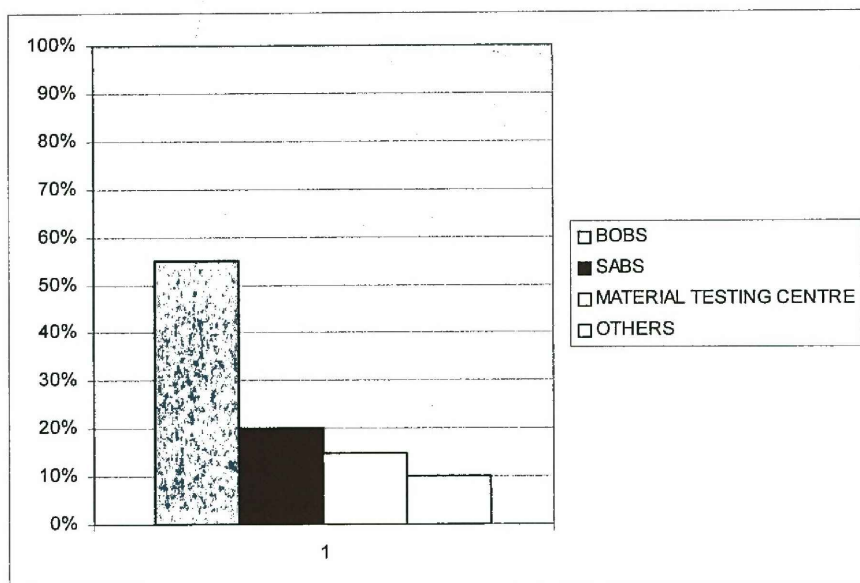


Fig. 5.2.10 Organisation that certifies respondents' concrete products

According to Table 5.2.10 and Fig 5.2.10, 55% of the respondents selected BOBS as the organisation that certified their products.

Table 5.2.11 Display of certification marks on concrete products

Details	Number of respondents	Percentage
Yes	18	45%
No	16	40%
Not aware	6	15%
Total	40	100%

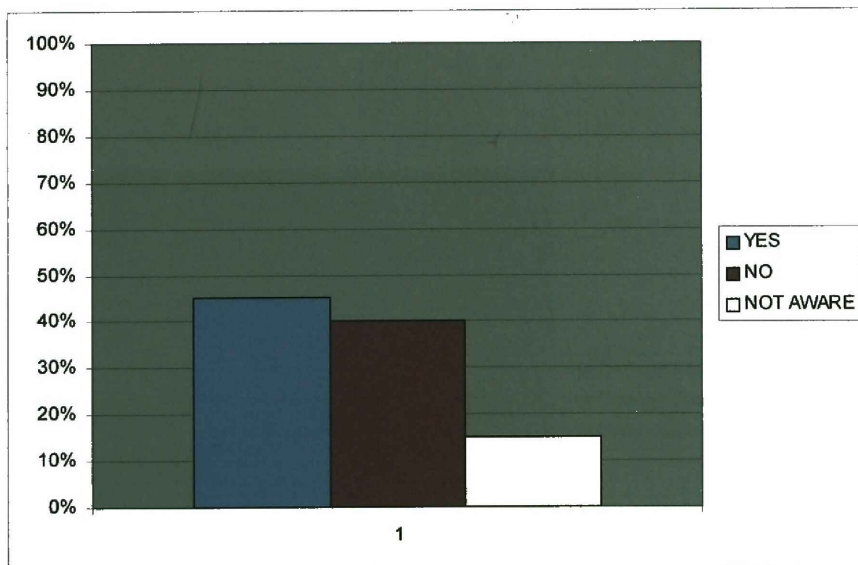
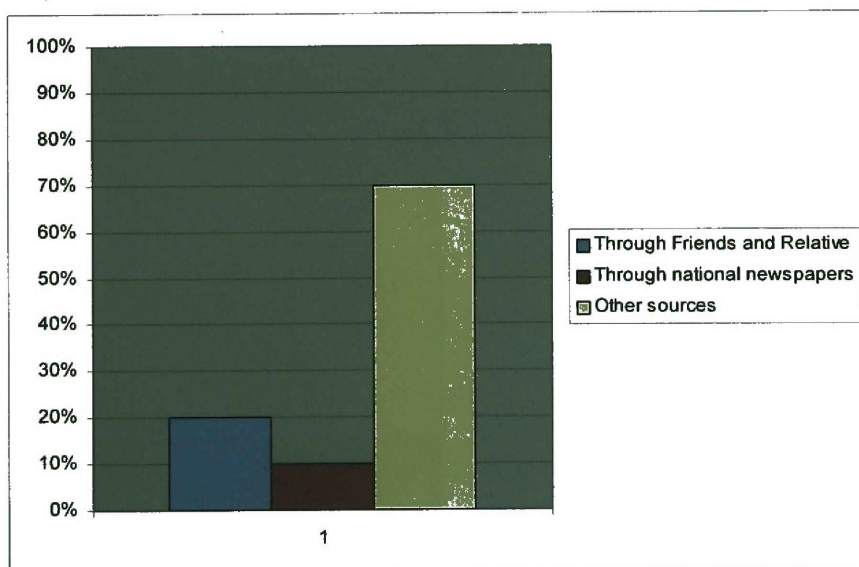
**Fig. 5.2.11 Display of certification marks on the Concrete Products**

Table 5.2.11 and Fig 5.2.11 indicate that 45% of the respondents stated that suppliers displayed certification marks on their products.

Table 5.2.12 Obtaining information about standard quality

Details	Number of respondents	Percentage
Through friends and relatives	8	20%
Through national newspapers	4	10%
Other sources	28	70%
Total	40	100%

**Fig. 5.2.12 Obtaining Information about standard quality**

In Table 5.2.12 and Fig 5.2.12 it shows that 70% of the respondents obtained quality information through other sources.

Table 5.2.13 Priority factor considered when buying concrete products.

Details	Number of respondents	Percentage
Price	8	20%
Quality	32	80%
Promotion	0	0%
Delivery	0	0%
Location of the supplier	0	0%
Total	40	100%

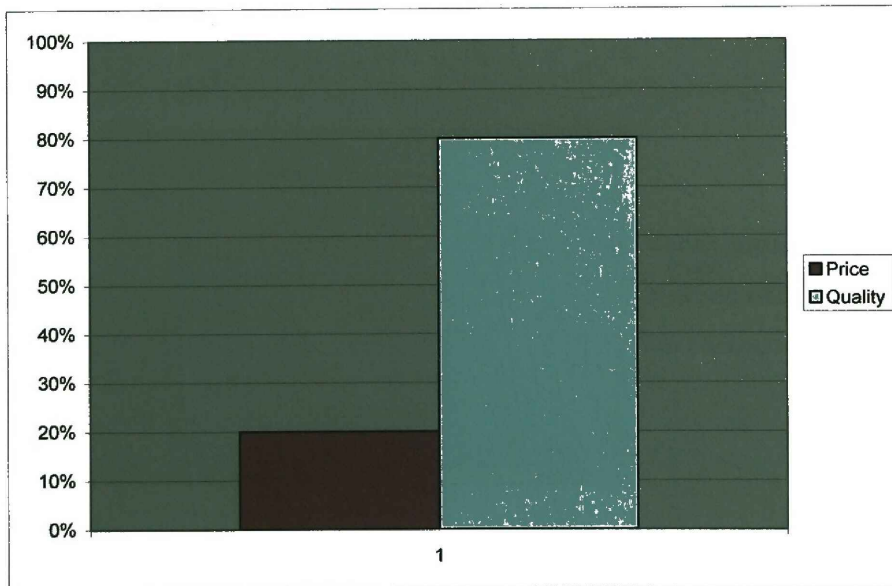
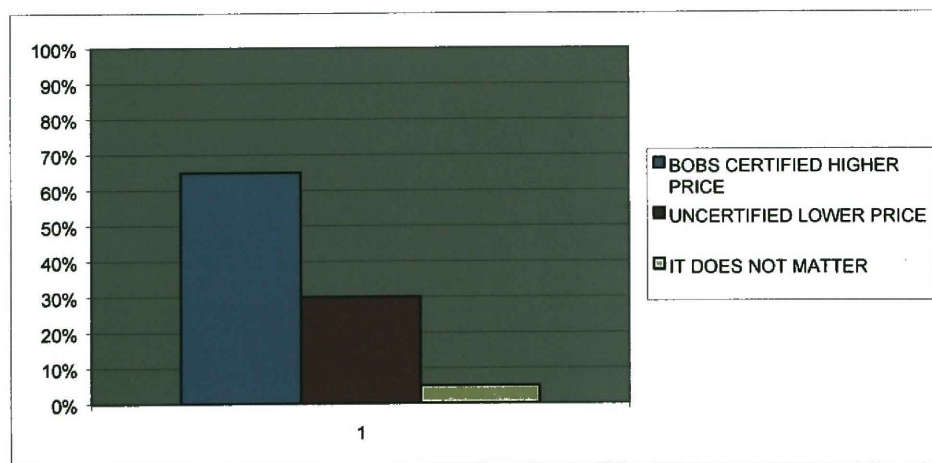


Fig. 5.2.13 Priority factor considered when buying concrete products.

The data in Table 5.2.13 and Fig 5.2.13 show that 80% of the respondents consider quality as priority factor when buying concrete products.

Table 5.2.14 BOBS certification compared with price advantage.

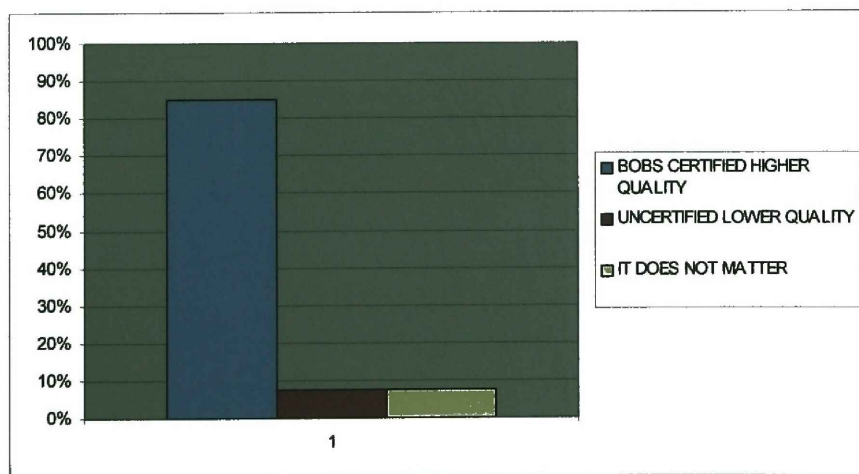
Details	Number of respondents	Percentage
A supplier certified with BOBS charging a higher price	26	65%
A supplier not certified with BOBS but charging a lower price	12	30%
It does not matter	2	5%
Total	40	100%
Total	40	100%

**Fig. 5.2.14 BOBS certification compared with price advantage.**

The data in Table 5.2.14 and Fig 5.2.14 indicated that 65% of the respondents would prefer to buy their concrete products from a supplier who was BOBS certified charging higher prices.

Table 5.2.15 BOBS certification compared with lower quality

Details	Number of respondents	Percentage
A supplier certified with BOBS producing higher quality concrete products	34	85%
A supplier not certified with BOBS but producing lower quality concrete products	3	7.5%
It does not matter	3	7.5%
Total	40	100%

**Fig. 5.2.15 BOBS certification compared with lower quality**

According to Table 5.2.15 and Fig 5.2.15, 85% of the respondents stated that they would prefer to buy their concrete products from a supplier who was BOBS certified also producing high quality products.

Table 5.2.16 BOBS certification compared with concrete products deliveries to construction sites

Details	Number of respondents	Percentage
A supplier certified with BOBS but does not deliver concrete products to sites.	30	75%
A supplier not certified with BOBS but does deliver concrete products to sites.	10	25%
It does not matter	0	0%
Total	40	100%

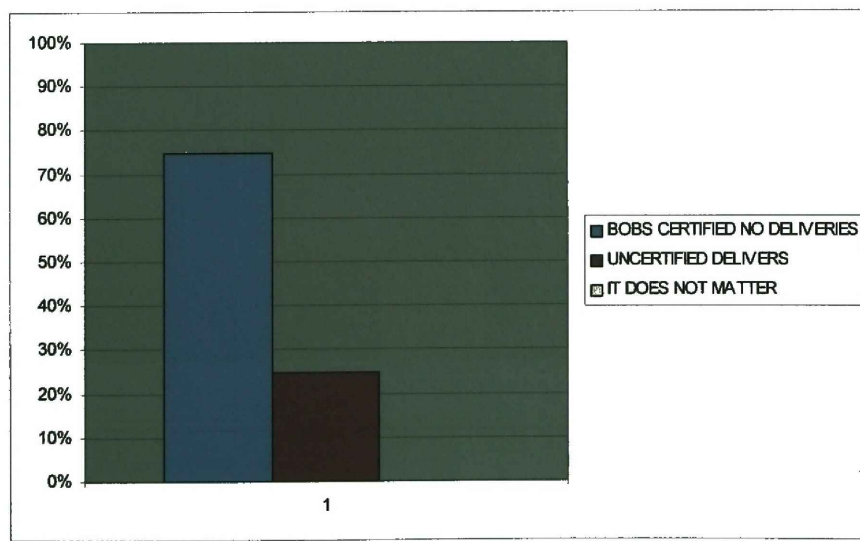
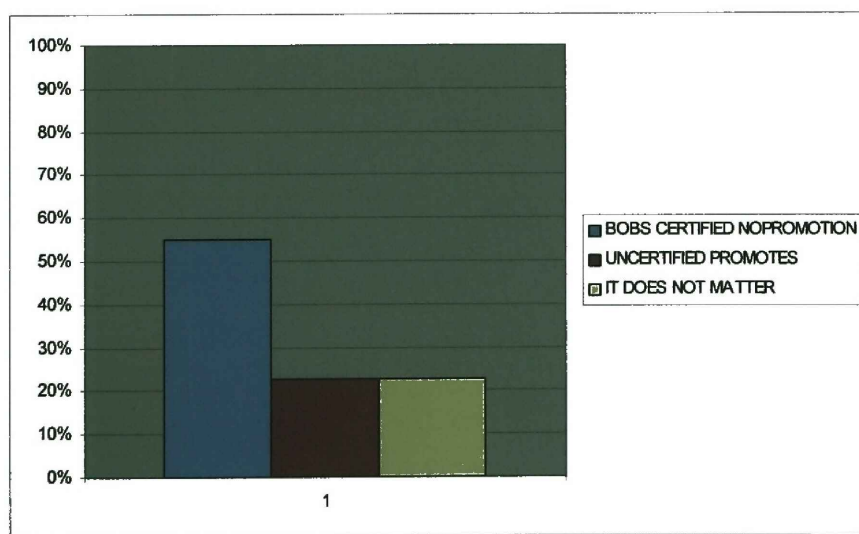


Fig. 5.2.16 BOBS certification compared with concrete products deliveries to construction sites

A supplier who is certified with BOBS but does not deliver concrete products to sites was more favourable scoring 75% as in indicated in Table 5.2.16 and Fig 5.2.16.

Table 5.2.17 BOBS certification compared with promotion

Details	Number of respondents	Percentage
A supplier certified with BOBS but does not promote its concrete products.	22	55%
A supplier not certified with BOBS but does promote concrete products	9	22.5%
It does not mater	9	22.5%
Total	40	100%

**Fig. 5.2.17 BOBS certification compared with promotion**

In Table 5.2.17 and Fig 5.2.17, it is indicated that 55% of the respondents would rather buy their concrete products from a supplier who was BOBS certified but did not promote its products.

Table 5.2.18 BOBS certification compared with time of delivery

Details	Number of respondents	Percentage
A supplier certified with BOBS but is slower at deliveries.	22	55%
A supplier not certified with BOBS but is faster at deliveries.	14	35%
It does not matter	4	10%
Total	40	100%

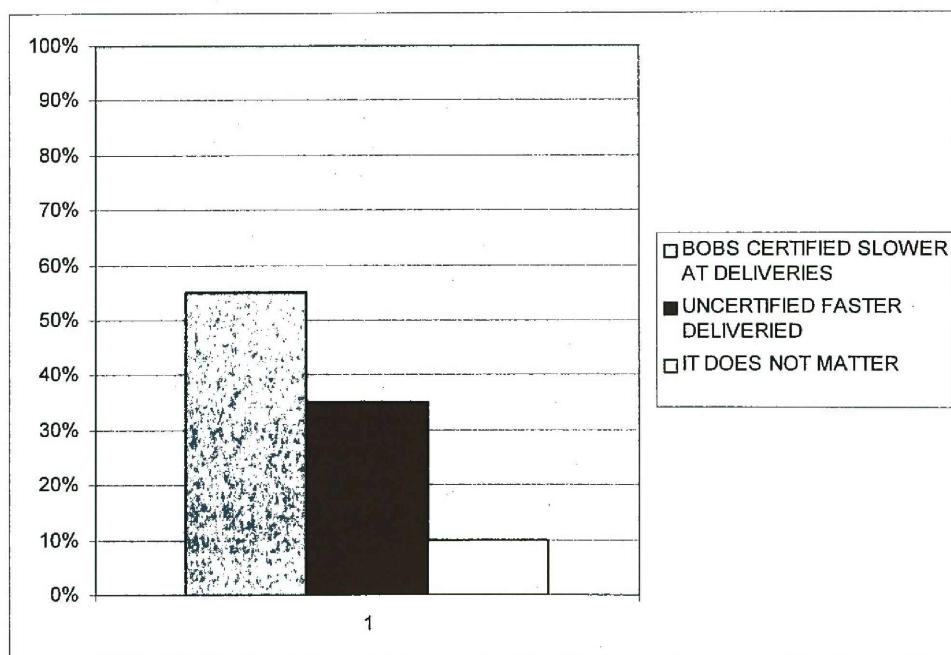
**Fig. 5.2.18 BOBS certification compared with time of delivery**

Table 5.2.18 and Fig 5.2.18 shows that 55% of the respondents would rather buy their concrete products from a supplier who was BOBS certified but is slow at deliveries.

Table 5.2.19 BOBS certification compared with availability of information

Details	Number of respondents	Percentage
A supplier certified with BOBS but does not provide informational properties about its products.	13	32.5%
A supplier not certified with BOBS but does provide informational properties about its products.	24	60%
It does not matter	3	7.5%
Total	40	100%

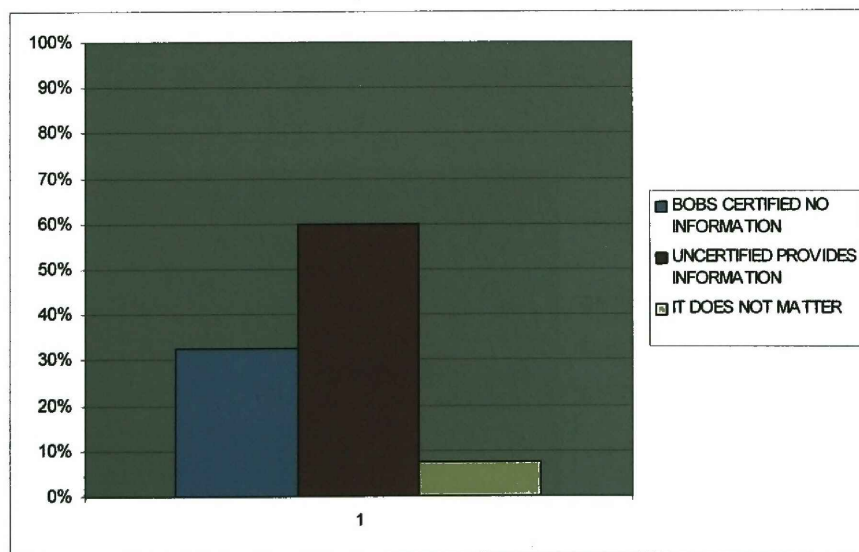


Fig. 5.2.19 BOBS certification compared with availability of information

According to Table 5.2.19 and Fig 5.2.19, a supplier not certified with BOBS but does provide informational properties scored 60%.

Table 5.2.20 BOBS certification compared with distance from the construction site.

Details	Number of respondents	Percentage
A supplier certified with BOBS but is located fifty kilometres from the construction site.	22	55%
A supplier not certified with BOBS but is located ten kilometres from the construction site.	12	30%
It does not matter	6	15%
Total	40	100%

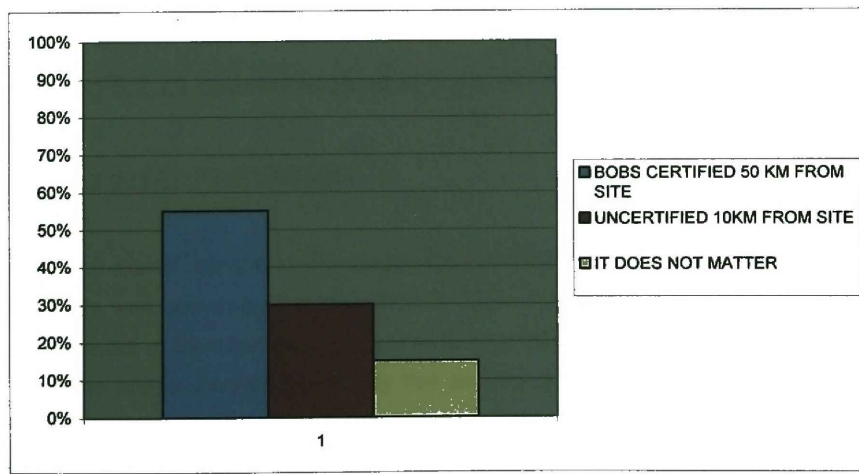


Fig. 5.2.20 BOBS certification compared with distance from the construction site.

Even if the supplier is located further away from the construction site 55% of the respondents selected a supplier who was certified with BOBS but located fifty kilometres from the construction (Table 5.2.20 and Fig 5.2.20)

Responses: -

- Lower prices do not guarantee quality concrete products.
- Good services to the customer matters most.
- Certification is important but does not guarantee customer satisfaction.
- Quality for concrete products is a very important aspect for a construction company.
- Project lead-time determines the quality of the products.
- Not aware that BOBS certifies concrete products.
- Long-term experience guides the buying decision.
- Source all concrete products that are certified by the BOBS.
- Reasonable pricing and readily availability of the products in stock influences buyer decisions.
- Buying usually influenced by long constant business relationships.
- A product made of concrete products is expected to last a lifetime.

Fig 5.2.21 Comments on other buyer decisions on concrete products.

5.3 INTERPRETATION

The males' sample in the study was dominant in the construction industry as this was shown by the response in Table 5.2.1 and Fig 5.2.1 responses on gender of the interviewee. Seventy five percent of the respondents were male. The results revealed that forty five percent of the interviewees were running construction companies and seventy five percent had other qualifications apart from architectures, structural engineers nor quantity surveyors. Construction companies are businesses that specifically exist to build or construct structures for other parties at a fee. Eighty percent of private developers have an annual income of between P50, 000.00 and P500, 000.00. Ninety five percent of the respondents agreed to use concrete products on their construction projects. A sample of selected respondents was picked from

a population that uses, was expected to have used, are using and will use concrete products in their construction projects.

"Standard certified" concrete product was the most favoured way of ensuring quality concrete products in the construction projects. Table 5.2.6 and Fig 5.2.6 show that sixty percent of the interviewees preferred to use standard certified products. A higher score of the standard certified products indicated that respondent actually recognised that standard certified products ensured quality results in their construction projects. As a follow up, Table 5.2.8 displays the reasons respondents selected standard certified products and all the reasons were based on quality. Some of the responses, which bring out the quality matters, stated that certified products had consistence quality that complied with the set specification and would eventually build quality structures that were strong and durable.

According to Table 5.2.10 and Fig 5.2.10 the Botswana Bureau of Standards (BOBS) was the most favoured organisation that certified concrete products used in the construction projects scoring fifty five percent. Therefore BOBS is a popular third party standard certifier of the concrete products in Botswana. The majority of concrete products consumers who responded to the research questionnaire were aware of the contributions of the organisation in the construction industry. In Table 5.2.11 and Fig 5.2.11 the results show that forty five percent of the concrete products consumers who used standard certified products noticed the certification mark displayed on various concrete products. However, this score is lower compared to the fifty five percent in Table 5.2.10 and Fig 5.2.10. This therefore shows that few concrete products suppliers display their certification mark on their concrete products and for those who do, do so in a less visible manner.

There were respondents who stated that they did not depend on the standard certification and question twelve was trying to find how they obtained information about standard quality. In Table 5.2.12 and Fig 5.2.12 majority of respondents amounting to seventy percent stated that they used other sources to obtain information about standard quality. National newspapers were the least on the score with only nine percent meaning that this form of media is the least source of information for concrete products consumers.

Table 5.2.13 and 5.2.13 show that respondents considered quality as priority with a score of eighty percent. Table 5.2.6 and Fig 5.2.6 also indicate the same results that consumers preferred to use standard certified products. Table 5.2.13 yields eighty percent, the same response that quality was of paramount importance when deciding which concrete product to buy. A supplier whose products are standard certified especially by BOBS in Botswana will therefore enjoy a higher sales volume due to perceived quality.

To test whether BOBS certification could be used as marketing tool seven questions were specifically designed for the questionnaire. Table 5.2.14 and Fig 5.2.14 to Table 5.2.20 and Fig 5.2.20 contain results that revealed the impact of BOBS certification on buyers to make a decision. These included the following : - price, quality and delivery of concrete products, promotion, informational properties and location of the concrete suppliers. Interestingly six out of the seven questions asked had higher scores in favour of a supplier certified with BOBS even when some negative factors about the supplier were included.

- Table 5.2.14 and Fig 5.2.14 indicate that sixty five percent of the respondents would rather buy their concrete products from a supplier who was certified with BOBS and at the same time charging a higher price than a supplier who was not certified with BOBS. This result also corresponds with results in Table 5.2.13 and Fig 5.2.13 where quality scored higher as a priority factor when the respondents make decisions when buying concrete products.
- According to Table 5.2.15 and Fig 5.2.15 eighty five percent of the respondents would prefer to buy their products from a supplier who was BOBS certified also producing a high quality concrete product. Quality products certified by the third party institution such as BOBS confirmed that certification does influence buyer decision.

- Placing or delivering concrete products is important in the construction industry, as most of the building materials are bulky and heavy. Nevertheless, Table 5.2.16 and Fig 5.2.16 show that seventy five percent of the respondent would prefer to purchase their concrete products from a supplier who was certified by the BOBS but did not deliver to construction sites. This indicates that the majority of the respondents believed that a BOBS certified supplier would provide quality products. BOBS certification is further proved to be a very influential factor in deciding from which supplier to purchase concrete products.
- Promotion is when a company uses several communication tools to send information in the form of messages to the target audience. Interviewees who preferred to buy their concrete products from a supplier who was certified with BOBS but did not promote their products were fifty five percent as displayed in Table 5.2.17 and Fig 5.2.17. Certified suppliers are more favourable than the ones not certified but promote their products. Since other factors were held constant a higher score response in favour of a BOBS certified supplier was not a coincidence but an indication of positive preference for a certified supplier. Again this confirmed the influence BOBS certification has got on buyer decisions.
- Despite including a negative factor in a certified supplier such as being slow at deliveries of concrete products to construction sites, fifty five percent of the respondents preferred to buy their concrete products from such a supplier. Table 5.2.18 and Fig 5.2.18 confirmed these findings. Even if a non-certified concrete products supplier was quicker at deliveries only thirty five percent of the respondents preferred to buy their products from such a supplier. BOBS certification has once again proved to be a determining factor in shifting buyer decisions.

- When consumers make decisions on what products to buy they need information. In Table 5.2.19 and Fig 5.2.19, sixty percent of the respondents preferred a supplier who was not BOBS certified but provided informational properties about the product. Only thirty two point five percent selected a supplier who was certified with BOBS but did not provide informational properties about its products. A lower score in favour of a certified supplier is evidence that suppliers who are certified must not only depend on certification to attract customers but must provide adequate information about the products they are selling to inform their clients.
- Location of a concrete products supplier is an important factor when making a buying decision. Concrete products are mostly bulky and heavy and need special transportation equipment implying higher costs. It is for this reason that a minus factor was included on a certified supplier to see whether this would shift buyers' decision. Table 5.2.20 and Fig 5.2.20 show that fifty five percent of the respondents selected a supplier who was certified with BOBS but is located fifty kilometres from the construction site. The respondents who picked a supplier who was not BOBS certified but was only ten kilometres were only thirty percent. This shows that a high percentage of the respondents preferred a certified supplier even if its location was fifty kilometres away from the construction site.

- When consumers make decisions on what products to buy they need information. In Table 5.2.19 and Fig 5.2.19, sixty percent of the respondents preferred a supplier who was not BOBS certified but provided informational properties about the product. Only thirty two point five percent selected a supplier who was certified with BOBS but did not provide informational properties about its products. A lower score in favour of a certified supplier is evidence that suppliers who are certified must not only depend on certification to attract customers but must provide adequate information about the products they are selling to inform their clients.
- Location of a concrete products supplier is an important factor when making a buying decision. Concrete products are mostly bulky and heavy and need special transportation equipment implying higher costs. It is for this reason that a minus factor was included on a certified supplier to see whether this would shift buyers' decision. Table 5.2.20 and Fig 5.2.20 show that fifty five percent of the respondents selected a supplier who was certified with BOBS but is located fifty kilometres from the construction site. The respondents who picked a supplier who was not BOBS certified but was only ten kilometres were only thirty percent. This shows that a high percentage of the respondents preferred a certified supplier even if its location was fifty kilometres away from the construction site.

5.4 CONCLUSION

This chapter reflects the interpretation of the data collected for this study. The results were presented in Table and graph form and interpreted in this chapter according to the respondents' answers that were summarised without misrepresenting any views or investigated findings. The responses obtained are adequate to provide answers as to the basic research question and the purpose of the study, which was whether the BOBS certification does influence consumer-buying behaviour. However, there are elements that surfaced in the process of the investigation that will need further research.

The research results and interpretation gave an in-depth insight to the research problem that will be discussed in chapter six.

CHAPTER 6

DISCUSSIONS, CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

6.1 INTRODUCTION

The research findings that were analysed and interpreted in chapter five are the basis to answer the research question that will enable the researcher to draw conclusions and finally recommend solutions to the problem. Chapter six will be dedicated to answer the research questions, which were stated in chapter three and are as follows: -

PRIMARY PROBLEM

- Analysing the effect of the Botswana Bureau of Standards certification on buyer decision on pre cast concrete products in Gaborone capital city of Botswana.

SECONDARY PROBLEM

- To find out whether the Botswana Bureau of Standards (BOBS) certification can be used as a marketing tool.
- To find out whether the respondents appreciate the BOBS certification.
- To find out whether the pre-cast concrete consumers appreciate the intentions of quality delivery to the public.

To solve both the primary and secondary problems the researcher collected data mainly through semi-structured and structured questionnaires using specific questions that are in Annexure B.

Interviewees offered their responses in the form of writing and ticking the appropriate answers from the multiple choice type questions.

This chapter will therefore be dedicated to the discussion of the research findings, the conclusions drawn from the data and the recommendations based on the findings. Cross-reference to the underlying theory in the literature review and the other earlier chapters will be done to bring clarity to the discussion.

6.2 DISCUSSIONS

Research discussions will be based on the primary and secondary questions which were posed in chapter three. The discussion will also focus on the research questions that were reflected in chapter three.

6.2.1 ANALYSIS OF BOBS CERTIFICATION ON PRE-CAST CONCRETE BUYER DECISIONS

• ANSWERING THE PRIMARY AND SECONDARY RESEARCH PROBLEMS

The primary problem of this research was to analyse the effects of the BOBS certification on buyer decision on pre-cast concrete products in Gaborone, the capital city of Botswana. Based on the research findings, this objective was met. In this research (Table 5.2.6 and Fig 5.2.6) it was observed that sixty percent of the respondents used the standard certification as concrete quality assurance. Table 5.2.8 and Fig 5.2.8 confirm the reasons concrete products consumers prefer to use standard certified products; the major one being quality assurance, which was stated in different ways by the respondents. The respondents said that standard quality products built quality structures that ensured uniformity and consistency throughout the projects. In Table 5.2.10 and Fig 5.2.10 fifty five percent of the respondents selected BOBS as the organisation that certified their products. Concrete products consumers usually seek quality first.

According to the results in Table 5.2.13 and Fig 5.2.13 eighty percent respondents said they considered quality as a priority factor when buying concrete products.

Indeed standard certification influences pre-cast consumer buying decisions in Gaborone, Botswana. Although certification of pre-cast products is associated with higher cost of control and failure cost than one not certified, the benefits are higher (in terms of positive perceptions) than not certifying. BOBS certified companies have to comply with rigorous regular inspections (that increase costs) to ensure that the standards are maintained.

The research findings confirm the fact that pre-cast concrete manufacturing companies certify their products in order to ensure that quality standards of their products (offering) are maintained so that consumers can build confidence in their products. Certified consumers are more likely to keep old customers and attract new ones as the research showed that sixty percent (Table 5.2.6 and Fig 5.2.6) of pre-cast concrete consumers would select a standard certified product for quality assurance. According to the research consumers believe that they can satisfy their needs and wants by relying on the BOBS certified products (fifty five percent, in Table 5.2.10 and Fig 5.2.10) will bring about value and satisfaction without experiencing dissonance. Kotler (1997) and Assael (1993) explain the benefits of a product as a bundle of attributes and benefits designed to satisfy customer needs. One of the attributes pre-cast concrete consumers look for when they are making a buying decision is whether BOBS certified the supplier. According to this research a certified supplier will capture a higher market share due to the BOBS quality assurance.

To capture the respondents' views other factors were at *ceteris paribus* while negative factors were included in the questionnaire in a certified supplier to examine whether it really mattered in their buying decision. Uncertified pre-cast concrete suppliers were given positive factors such as lower prices, delivery to site, promotion, faster deliveries, provision of adequate information to clients and closeness to the construction site. In six questions, (results shown in Tables and Figs 5.2.14, 5.2.15, 5.2.16, 5.2.17, 5.2.18, and 5.2.20) a larger percentage of the respondents selected options that contained a BOBS certified supplier with negative factors such as higher prices, does not deliver to construction sites, carries out no promotional activities, slower at deliveries and far away from the construction site. This is an indication of how consumers are influenced positively by BOBS certification and that they value it in their decision making.

Various decision processes are conducted when purchasing items such as toothpaste, a tennis racket, personal computer, a car or concrete products. Assael (1993) distinguished four types of consumer buying behaviour based on the degree of buyer involvement and the degree of differences among brands. As discussed in the literature review these are complex, dissonance, habitual and variety seeking buying behaviour. The four groups of respondents were fitting in each one of these buying behaviours. Construction companies, structural engineer, quantity surveyors and architects are involved in habitual buying behaviour while private developers are involved in complex buying behaviour. Despite differences in buying behaviours of the respondents the research indicated that BOBS certification had influence on the decisions of the interviewees.

Therefore, pre-cast concrete manufacturers can stage-manage this idea in their marketing programmes. BOBS certification is a marketing asset that can make a significant difference in the company's profitability, market share and production efficiency.

6.2.1.1 BOBS CERTIFICATION AS A MARKETING TOOL

- ***ANSWERING THE RESEARCH QUESTION 3.4.1. (Namely; To find out from the pre-cast concrete consumers whether the Botswana Bureau of Standards certification influence consumers' buying decisions of pre-cast concrete products.)***

The following discussion focuses on the responses to the above question.

The research findings were conclusive that BOBS certification is a marketing tool that has an impact on the pre-cast concrete consumers buying decisions. Any factor that can influence a buyer's decisions can be considered as a marketing tool. Some of the factors that can influence consumers to buy or not to buy a product include the price, distribution, quality and the culture of the people. In this research it can be concluded that BOBS certification in Gaborone, Botswana can be used as a marketing tool, a factor that will make a difference whether a consumer buys the product or not. Higher percentage scores for BOBS certified suppliers as indicated in the research results in Tables and Figs 5.2.14 to 5.2.20 support this conclusion.

As BOBS certification is therefore proved as an effective marketing tool it should be emphasised by certified suppliers during the marketing campaign to attract potential buyers. Concrete suppliers must know that certification assures consumers that stringent quality procedures as demanded by the BOBS are always complied with in the process of production. Concrete products consumers demand for quality as evidenced in the research and quality has to be confirmed by an independent institution such as the Botswana Bureau of Standards. Knowledge of this fact gives strength to the certified suppliers to pursue this marketing strategy while assuring their clients that they are producing quality products accepted by the BOBS.

Concrete products consumers recognise the certified products as quality ones and would disregard other negative factors of the certified supplier and purchase their products. Despite high quality costs that certified manufacturers incur they stand to gain more benefits in terms of higher market share, reputation and quality control from BOBS inspectors. These inspectors conduct regular inspections to ensure that set standards are adhered to otherwise the certification can be withdrawn. BOBS inspectors monitor the certified companies to ensure concrete products are produced under efficient conditions and help to maintain manufacturers' standards all the time.

Consumers who are particular to environmental issues would most probably favour a BOBS certified supplier as the inspectors police strict regulations on environmental degradation, healthy and safety issues.

6.2.1.2 AWARENESS AND PERCEPTION ABOUT BOBS

- **ANSWERING RESEARCH QUESTION 3.4.2**

(Namely; To investigate consumers' awareness and perception about the Botswana Bureau of Standard as an institution and its certification.)

Pre-cast consumers are aware of the existence of the BOBS and know its roles in society. According to the research results in Table 5.2.10 and Fig 5.2.10 fifty five percent indicated that the respondents used the organisation for certifying concrete products. Table 5.2.11 and Fig 5.2.11 indicate that forty five percent noticed the certification mark displayed on concrete products. Tables and Figs 5.2.14, 5.2.15, 5.2.16, 5.2.17, 5.2.18 and 5.2.20 confirm that consumers are aware and appreciate the roles that BOBS plays in society and make use of the BOBS certification for their benefits to make buying decisions.

Consumers perceive BOBS certification as a buying decision making tool that helps to differentiate a quality product from a sub-standard one.

Government resources are therefore not wasted since this research has tested the institution's popularity in terms of its public awareness, integrity, and how the public utilises it. Consumer perception about the BOBS certification has been proved that the institution's integrity is held highly to attract consumers to buy more of certified products due to certification. If consumers are aware of the services that the BOBS provides, it is only then that they can have a meaningful gain from the institution.

However a score rate of forty five percent on Table 5.2.11 and Fig 5.2.11 was too small and cause for concern as compared with other results in Table 5.2.6, Table 5.2.10, Fig 5.2.6 and Fig 5.2.10. It is therefore assumed that certified suppliers do display the certification mark in a less visible manner. To achieve a wider usage of certification suppliers must visibly display the mark on their concrete products. This practice will have a multiple benefit to the supplier and BOBS. Consumers would quickly notice the mark and decide whether to buy the product or not.

6.2.1.3 PRE-CAST CONCRETE CONSUMERS APPRECIATE BOBS CERTIFICATION

- **ANSWERING RESEARCH QUESTION 3.4.3**

(Namely: Does the pre-cast concrete consumers appreciate the intentions of quality delivery to the public)

The public is aware of the existence of BOBS and its objectives as the findings have shown that higher score rates are in favour of a BOBS certified supplied. The respondents are aware that the priority objective of BOBS is to ensure that quality products are delivered to the public. Table 5.2.6 and Fig 5.2.6 indicate that sixty percent of the respondents preferred to use standard certified products. According to Table 5.2.10 and Table 5.2.10 at fifty five percent BOBS was the most favoured organisation that certified concrete products used in the construction industry.

6.2.2 OTHER ISSUES ARISING IN THE RESEARCH

The respondents were asked to comment on their buyer decisions on concrete products especially on issue that they think were not covered in the questionnaire. A discussion of some views is done in the following paragraph. The respondents' views were mainly based on quality matters, which were, emphasised several times throughout the presentation in different ways. Some respondents confirmed their choices for quality that lower prices do not guarantee concrete products popularity. For them concrete products should be of quality and must be sold at the right price. Quality concrete products are a very important aspect of construction companies to build structures that are of quality as this also determines the survival of the company. A construction company that uses lower standard products will be considered as a shoddy company that should be avoided. Excellent workmanship starts with excellent raw materials. Also important to mention that building structures are supposed to be guaranteed for ten or more years. This means that an independent government agent that has the interest of society at heart must certify quality concrete products that are used.

Customer relationship was also one of the elements that surfaced in this research. Some respondents believe that just being BOBS certified was not enough but that there should be good customer service. Customers must receive their materials in time, must have information about the products they buy, customer queries must be attended to in a short period of time, customer must be allowed to communicate with management and a conducive business environment must be created for customers to do business with the suppliers. BOBS certification proves that the supplier is producing quality products but this is not enough because the company is also dealing with people who have emotions. Therefore some respondents included such matters as "long constant business relationships" when deciding from which supplier to buy their concrete products.

A supplier who is BOBS certified and by implication producing quality concrete products must ensure that his or her production is consistent to ensure that there is always stock to avoid frustrations when consumers need the products. The prices of such a supplier should match that charged by the market. Failure to do this will only weaken a company's market competitiveness.

Some respondents were actually surprised when they were asked about the Botswana Bureau of Standards certification of concrete products. This is an indication that some consumers do not know about the existence of the BOBS and its roles in society.

6.3 CONCLUSIONS

The research findings discussed with postscript allow an opportunity to conclude the endeavour of this investigation. This research aimed to analyse the effects of Botswana Bureau of Standards certification on buyer behaviour decision on pre-cast concrete products in Gaborone, Botswana.

- The primary problem of the research was tackled effectively as the buyers' perceptions on the BOBS certification on the concrete products came out clearly that buyer decisions are influenced by the BOBS certification.
- It is concluded that concrete products buyers' decisions are swayed positively (in favour of certification) with the inclusion of the BOBS certification factor in the process of deciding from which supplier to purchase their products. Other factors are also relevant in making buying decisions but holding constant these factors while varying BOBS certification status shows that certification impacts on concrete buying behaviour.
- From this analysis therefore it is justifiable to conclude that the Botswana Bureau of Standards certification is a marketing tool.

Certification has a positive effect on buyers, as it was revealed in this study that buyers would prefer to buy concrete products from a supplier who is certified.

- It suffices to say that concrete suppliers whose products are certified by BOBS are not wasting their valuable resources in terms of money and time as this certification gives them a higher competitive edge over suppliers who are not certified. Consumers who purchase BOBS certified products are also assured of a quality product that would result in a strong and durable construction structure.
- Government resources to keep BOBS operating are not wasted as the pre-cast concrete consumers recognise the role of this organisation.
- Broad markets for certified companies are available as a wide range of people accept certified products
- Certification ensures customer satisfaction failure to which the consumer can report any poor quality of a certified product to BOBS for intervention.
- Pre-cast concrete suppliers display certification on their concrete products in a less visible manner

6.4 RECOMMENDATIONS

6.4.1 RECOMMENDATIONS TO CONCRETE MANUFACTURING COMPANIES

- The research findings and conclusions implies that the concrete manufacturing companies will benefit from this research as it has proved that BOBS certification influences concrete buyer decision.

Therefore it is recommended that concrete manufacturing suppliers consider it a marketing tool that can be exploited to gain a larger market share.

- It is recommended to concrete manufacturing companies to review their marketing strategy and incorporate certification in their marketing programs so as to improve sales and profitability.
- The results of this research provide evidence that certification influences buyer decisions. Therefore, it is recommended to those uncertified concrete manufacturers to take up the challenge to enhance their competitiveness by certifying their products.
- Certified pre-cast concrete suppliers need to inform consumers in their marketing campaigns what it means to be certified so that consumers can appreciate certification. Certification is not a waste of money, time and other resources but a valuable instrument to a company's marketing programmes.
- Certification of concrete products stabilises the product status in the market as consistence quality is maintained while creating brand loyalty. To create a competitive advantage in pre-cast concrete industry it is recommended that suppliers brand their products. Branding of BOBS certified pre-cast concrete products would eventually cause certification to be appreciated by the pre-cast concrete industry.
- Certified BOBS suppliers need not take this for certification for granted but should try to include other marketing mix programmes such as matching market prices or even bettering them, delivering products to clients on time, engaging in marketing campaigns and implementing sound customer relations strategies to attract new customers and retaining existing ones.

6.4.2 RECOMMENDATIONS TO BOBS

- The research findings show that the public is aware of the existence of and the roles BOBS plays in society. However, the score rate for people who know about the BOBS is only fifty five percent. The other forty five percent does not know what the institution exists for. Therefore, it is recommended that BOBS should launch a massive public awareness campaign that will inform the public about the roles of BOBS and what certification means and its benefits. A successful public awareness will popularise certification, which will breed positive benefits for the concrete manufacturers, the consumers and the BOBS itself. Construction structures will be built from quality products that are safe and healthy and durable, as they will stand the test of weather and time.
- BOBS must make it mandatory for certified suppliers to display standard certification marks so that consumers can easily identify products, which comply with the standards.

6.4.3 RECOMMENDATIONS TO GOVERNMENT

- The finding of the study have shown that consumers recognise BOBS' objectives as an institutions that promotes standardisation and quality assurance in industry and commerce with the aim of improving product quality, industrial efficiency and productivity. Therefore, it is recommended that the government must continue supporting this institution to further BOBS endeavours. Some of the strategies government can implement are to pass laws that all government construction projects must use pre-cast concrete products that are certified by BOBS.

This would compel non-certified suppliers to certify their concrete products resulting to a nation producing quality products that eventually would build quality buildings that are durable, safe and healthy.

6.4.4 RECOMMENDATION TO PRE- CAST CONSUMERS

- Consumers are encouraged to buy certified concrete products to hedge against buying sub-standards products. Standard certified products are a reasonable way of ensuring quality in their construction sites.

6.4.5. FURTHER RESEARCH (OTHER USES OF BOBS CERTIFICATION)

- These research findings have proved that certification can be used as a marketing tool. However, findings on other uses or functions of certification were very weak in this research. It is therefore recommended that a further study be conducted to find out the reasons pre-cast concrete manufacturing suppliers certify their concrete products other than as a marketing tool.

Bibliography

Assael H. Marketing Principles and Strategy (Second Edition) Harcourt Brace Favanovich College Publishers (USA) (1993)

Baker M J. The marketing Book, (Third Edition) Butterworth-Heinemann Ltd, Oxford. (1994)

Beckham D. The Marketing Book (Third Editions) Butterworth-Heinemann Ltd Oxford, UK (1992)

Botswana Bureau Standard Management (BOBS) 2004

Bureau J. The Marketing Book (Third Editions) Butterworth-Heinemann Ltd Oxford, UK (1994)

Certification. The Link Between Standards Products and Services. Botswana Bureau of Standards, Botswana (2004)

Cozby P.C. Methods in Behavioural Research (Fifth Edition), Mayfield Publishing Company, California (1993)

Crosby P.B. Quality is Free New York, Mc Grow Hill (1979)

Diamantopoulos A, and Schlegelmilch B. Taking the Fear Out of Data Analysis (1997)

Doyle P. The Marketing Book (Third Edition) Butterworth-Heinemann Ltd Oxford, UK (1994)

Irwin P.L. Johnson R.D. Estimating Pricing Quality Tradeoffs Using Comparative Judgments, Journal of Consumer Research, (June 11 1984)

ISO 2003 ISO/IEC DGUIDE 67, (2003)

Kish L. Survey Sampling; John Wiley and Sons, USA (1965).

Kotler P. Marketing Management, Analysis, Planning, Implementation and Control; Saddle River New Jersey. USA (1997)

Lancaster A. The Marketing Book (Third Editions) Butterworth-Heinemann Ltd Oxford, UK (1994)

Maaga M.P. Research Methods North West University, South Africa (2002)

Morgan L.A. The Importance of Quality, New York Lexington Books, (1984)

Mundembe R. How the Botswana Bureau of Standards can work with the Construction Industry to Meet Customers Needs; Botswana Bureau of Standards (Botswana) (2004)

Pelser F. Operations Management Lecture Notes; North West University, South Africa (2004)

Porter M.E. Competitive Advantage: Creating and Sustaining Superior Performance, New York Press (1985)

Quality. The U.S. 'Drives to Catch Up' Business Week, (November 1982)

"Quality Programs Show Shoddy Results" The Wall Street Journal
(May 14, 1992)

'Quality in Europe,' Work Study, (January-February 1993)

Standard Act 1995, Government Printer, Gaborone, Botswana, (1995)

Standardisation – The Link Between Standards Products and Services
Botswana Bureau of Standards, Gaborone, Botswana (2004)

Strategic Marketing Plan.htm, (November 25th, 2004)

The Promoter of Standards and Quality in Botswana Volume 29-06-
2004, Gaborone, Botswana (2004)

Van Rensburg A. Accessibility of Standards Information in South Africa:
<http://web.simons.edu/chen>: (2004)

Van Rensburg W.P.J. Strategic Marketing Management Notes: North West
University, South Africa (2004)

ANNEXURE A

Denny Mweetwa

P.O.Box 47527,

Phakalane.

Gaborone.

Tel: 5480656\ Cell: 72228566

Dear sir\madam,

Ref: Botswana Bureau of Standards Certification

I am a Masters of Business Administration degree student at the North West University in Mafikeng, in the Republic of South Africa in conjunction with Liverpool University in London. I am conducting a research to analyse the effect of the Botswana Bureau of Standards certification on buyer decision on pre-cast concrete products in Gaborone, Botswana.

It is with my uttermost pleasure to include you in my number of respondents and I anticipate honest answers from you to draw a valid conclusion from the research. Your identity will not be solicited nor included in this research.

I am attempting to know whether the BOBS certification has got any influence on your buying decision for the pre-cast concrete products.

Collected data will be presented in an aggregate form for analysis and if you are interested research results will be forwarded to you.

Warm regards

Denny Mweetwa

Student

ANNEXURE B

Questionnaire

Please tick an answer you select or write where appropriate

1.0 Gender?

A. Male

B. Female

2.0 What role do you play in the construction industry? I am a

A. Construction Company

B. Private developer

C. Government Department

D. Non of the above specify

3.0 What is your profession?

A. Architect

B. Structural Engineer

C. Quantity Surveyor

D. Non of the above specify

4.0 If you are a private developer what is your annual income group in Pula value?

A. Between P10, 000 to P50, 000

B. Between P50, 000 to P500, 000

C. Over P500, 000

5.0 Do you use concrete products in your construction projects?

A. Yes

B. No

6.0 If your answer to question 5 is yes, to ensure that you use a quality product, please select the type of concrete product quality assurance you use in your construction projects.

- A.** Standard certified
- B.** Private laboratory tested
- C.** Does not matter

7.0 If your answer to question 5 is no please motivate your choice (give reasons)

8.0 Why do you use the standard certified products selected in question 6?

9.0 Who is the supplier of your concrete products?

10. For your construction projects, if you use standard certified products please choose the organisation that certifies your products. **Note that BOBS stands for Botswana Bureau of Standards and SABS stands for South Africa Bureau of Standards**

- A.** BOBS
- B.** SABS
- C.** Material Testing Centre
- D.** Others

11. If you use a certified product do suppliers display certification mark on their concrete products?

- A.** Yes
- B.** No.
- C.** Not aware

12. How do you obtain information about quality if you do not buy certified products?

- A. Through friends and relatives
- B. Through national newspapers
- C. Other sources

13. When buying a concrete product, which priority factor, do you consider most?

- A. Price
- B. Quality
- C. Promotion
- D. Delivery
- E. Location of supplier

When all factors are held constant please select a better option.

14. Please select the more favourable supplier you would prefer to buy your concrete products from.

- A. A Supplier certified with BOBS charging a higher price
- B. A Supplier not certified with BOBS but charging a lower price
- C. It does not matter

When all factors are held constant please select a better option.

15. Please select a more favourable supplier you would prefer to buy your concrete products from.

- A. A Supplier certified with BOBS producing higher quality concrete products
- B. A Supplier not certified but producing a lower quality concrete products
- C. It does not matter.

When all factors are held constant please select a better option.

16. Please select a more favourable supplier you would prefer to buy your concrete products from.

- A. A Supplier certified with BOBS but does not deliver concrete products to sites
- B. A Supplier not certified with BOBS but delivers concrete products to site
- C. It does not matter

When all factors are held constant please select a better option.

17. Please select a more favourable supplier you would prefer to buy your concrete products from.

- A. A Supplier certified with BOBS but does not promote its concrete products
- B. A Supplier not certified with BOBS but promotes its concrete products
- C. It does not matter

When all factors are held constant please select a better option.

18. Please select a more favourable supplier you would prefer to buy your concrete products from.

- A. A supplier certified with BOBS but is slower at deliveries
- B. A supplier not certified with BOBS but is faster at deliveries
- C. It does not matter

When all factors are held constant please select a better option.

19. Please select a more favourable supplier you would prefer to buy your concrete products from.

- A. A Supplier certified with BOBS but does not provide informational properties about its product.
- B. A supplier not certified with BOBS but provides adequate informational properties about its product
- C. It does not matter

When all factors are held constant please select a better option.

20. Please select a more favourable supplier you would prefer to buy your concrete products from.

- A. A supplier certified with the BOBS but is located fifty kilometres from the construction site
- B. A supplier not certified with the BOBS but is located ten kilometres from the construction site
- C. It does not matter.

21. Any other comments about your buyer decisions on concrete products.
