An investigation of the role of women in the South African construction industry

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Dedication

This dissertation is dedicated to my wife, Vanessa and our two daughters Niraiya and Deshaya, for their love and motivation, without whose patience this study would not have been completed.

"Too often we give children answers to remember rather than problems to solve." - Roger Lewin
Declaration

I, Megesnen S. Moodley, declare that "An investigation of the role of women in the South African construction industry" is my own work and that all sources that I have used or quoted have been indicated and acknowledged by means of complete references. This work has not previously been accepted in substance for any degree and is not being concurrently submitted in candidature for any degree. The thesis is submitted in fulfilment of the requirements for the degree of Master of Technology in Construction Management at the University of Johannesburg.

31st July 2012

M. S. Moodley

Date

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JOHANNESBURG
Recognition and Acknowledgement

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The author's daughters, Niraiya and Deshaya Moodley for their patience and inspiration.

"A child can ask questions that a wise man cannot answer." - Author Unknown
Abstract

**Purpose:** This study looked at the challenges and gender-based issues which women in construction face in South Africa and abroad compared to their male counterparts in order to establish why fewer women are attracted to the industry as compared to men and why women in construction have a lower success rate.

**Methodology:** A literature review on the topic was completed and close-ended and open-ended questions were posed in the questionnaire, which was completed by contractors and consultants nationwide and subsequently analyzed.

**Problem investigated:** Women have not emerged as significant players in the industry both in terms of size and volume of contracts, as well as breaking down the 'glass ceiling' which is still faced by many women today, especially consultants.

**Findings:** Construction has always been a male dominated industry. Therefore, women continue to feel restricted and not well received by their male counterparts. Women still confirm that they have to constantly prove their worth to their male counterparts in order to be accepted and add value to the organization.

**Research limitations:** The study focused on women in the construction industry as a whole and did not look at women specifically within the various built environment disciplines. Further research is also required to investigate and look into female students' experiences whilst studying and after graduation.

**Value:** The study highlights the challenges and gender-based issues that exist with women in construction today, and suggests what should be done to attract and retain more women in the sector.

**Keywords:** women, challenges, contractors, consultants, construction.
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<tr>
<td>ASAQS</td>
<td>Association of South African Quantity Surveyors</td>
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<td>ASROC</td>
<td>Association of Road Contractors</td>
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<tr>
<td>BBBEE</td>
<td>Broad Based Black Economic Empowerment</td>
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<tr>
<td>BEE</td>
<td>Black Economic Empowerment</td>
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<tr>
<td>CBO</td>
<td>Community Based Organization</td>
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<tr>
<td>CIDB</td>
<td>Construction Industry Development Board</td>
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<tr>
<td>DBSA</td>
<td>Development Bank of Southern Africa</td>
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<td>DTI</td>
<td>Department of Trade and Industry</td>
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<td>ECDP</td>
<td>Emerging Contractors Development Programme</td>
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<td>FOCI</td>
<td>Federation of Construction Industry</td>
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<td>GDDH</td>
<td>Gauteng Department of Housing</td>
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<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
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<tr>
<td>IDT</td>
<td>Industrial Development Trust</td>
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<td>JV</td>
<td>Joint Venture</td>
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<td>NAWIC</td>
<td>National Association of Women in Construction</td>
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<td>NDPW</td>
<td>National Department of Public Works</td>
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<td>NGO</td>
<td>Non Government Organization</td>
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<td>NHBRC</td>
<td>National Home Builders Registration Council</td>
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<td>NSW</td>
<td>New South Wales</td>
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<tr>
<td>PPC</td>
<td>Pretoria Portland Cement</td>
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<tr>
<td>QS</td>
<td>Quantity Surveyor / Quantity Surveying</td>
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<tr>
<td>SABTACO</td>
<td>South African Black Technical and Allied Careers Organization</td>
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<td>SAWEN</td>
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<td>SAWIC</td>
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<td>SMME</td>
<td>Small Micro and Medium Enterprise</td>
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<td>SSA</td>
<td>Statistics South Africa</td>
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<td>UK</td>
<td>United Kingdom</td>
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<tr>
<td>USA</td>
<td>United States of America</td>
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<td>WFH</td>
<td>Women for Housing</td>
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**Built Environment Professions** – A term used to describe all professions within the construction sector including architecture, building science, civil engineering, construction management and economics, quantity surveying, survey and town and regional planning as regulated by the Professions Act (Lawless, 2005).


**Consultant** – This is an experienced individual that is trained to analyze and advise a client in order to help the client make the best possible choices (Search IT Channel, 2011). In construction an example of such an individual would be a quantity surveyor, an architect, an engineer, a project manager, etc.

**Contractor** – A person or business which provides goods or services to another entity under terms specified in a contract. Unlike an employee, a contractor does not regularly work for a company (Investor Words, 2011).

**Gender Discrimination** – refers to the systematic, unfavourable treatment of individuals on the basis of their gender roles, which denies them enjoying their rights and accessing opportunities or resources (The Sixth African Development Forum, 2008).

**Government** – Body of people that sets and administers public policy, and exercises executive, political, and sovereign power through customs, institutions, and laws within a country (Business Dictionary, 2011).

**Paired t-Test** - Given two paired sets $x_1$ and $y_1$ of $n$ measured values, the paired t-test determines whether they differ from each other in a significant way under the
assumptions that the paired differences are independent and identically normally distributed (Mathworld, 2011).

Presenteeism - it is the opposite of absenteeism. In contrast to absenteeism, when employees are absent from work, presenteeism discusses the problems faced when employees come to work in spite of illness, which can have similar negative repercussions on business performance. It can also refer to the expectation of employers for their employees to be present at work regardless of whether any work is available or accomplished (Wikipedia, 2011).
Chapter 1: Introduction

1.1 Background

In 1980, women still owned only an estimated 1% of the world’s property (Weideman, 2004). Regarding countries in Africa, Weideman (2004) stated further that despite more than a decade of land reform in Zimbabwe, men still owned 90% of the land in rural areas. Female-headed households, in Botswana, owned a third less land than male-headed households. In Nigeria in 1990, women still constituted 50% of those who lived and worked in rural areas, but owned less than 5% of the total land area.

In South Africa, it was only through legislation introduced in 1985 and again in 1988 that rural African women were no longer legally considered minors in land related transactions (Weideman, 2004).

Current South African Statistics:

- 60% of women live in poverty compared to 41% of men
- 40% of SA households are headed by women
- 75% of female-headed households are classified as poor
- 60% of rural and 48% of urban African women are unemployed

Source: (Khuthaza, 2011)

Most homes in rural areas and in the informal settlements are built and maintained by women. Since 1994, women have become more noticeable in the construction industry, especially in housing construction (Mjoli-Mncube, 2005). Although women have played a part in the building of homes for centuries, it has only been since the onset of the Democratic South Africa that they have materialized as salaried workers and business owners in this industry.
Most women in Southern Africa are subjected to discrimination based on gender and often suffer from neglect and abuse by men, because they are economically poor (South Africa Government Online, 2009). The inclusion of women in the construction sector not only breaks gender barriers but also empowers women by ensuring a basis for sustainable sources and control of income. Women are generally seen as inferior to men on qualities believed to be necessary to succeed in the business world and the talents and skills they bring to the table are valued considerably less than that of men (Gupta, Turban, Wasti and Sikdar, 2009 cited Marlow, 2002). South Africa Government Online (2009) stated that there is a perception that construction is for men and that women are not entrepreneurial. The problem is due to the social and cultural background of these women. The dominant stereotype in construction has been that women’s work is free or cheap, and as a result, women still dominate the voluntary free work domain.

While it is known that women are community oriented and that they are prepared to create societal value, it is equally important that they gain economic power and create wealth in the construction industry. Their reliance on a male family member or partner leads to unequal access to education between girls and boys, which in most African countries, is a result of cultural norms. Also more poor female children than male children drop out of school to look after their siblings when they are orphaned (usually by HIV/AIDS) (South Africa Government Online, 2009).

Mahlobo (2006) pointed out that two types of opportunities are available for women in construction, which are: opportunities from the charters and opportunities from government. The construction charter which was released in July 2007 has a strong emphasis on women’s development and empowerment. Main strategies that were suggested included mentoring by the larger companies, coaching, as well as commitment of time by established companies to help women in their places of work with cash flow management, systems and processes for shortening time frames, administrative and financial skills, coaching on tendering and pricing, skills development, etc. (Mahlobo, 2006). The charter recognized that it is difficult for owner managers to leave their businesses for training.
The other recommendation was that companies must commit to employing women in executive and management positions. On ownership, the charter also proposed targets for the acquisition of shares by women. The financial services charter committed banks to lending out more than R40 billion to affordable housing, which is an area where women are active. The policy for human settlements created several opportunities for women-owned companies to benefit from the housing process (Mahlobo, 2006).

Mahlobo (2006) highlighted that the 'human settlement policy' was an opportunity for government to use women-owned companies for the upgrading of existing houses in the old townships as well as the repairs of the houses built since 1994. She went on to say that the NHBRC can assist here by using emerging women contractors with fast tracked skills for this work. The integrated human settlement policy promoted the building of community facilities with housing projects. Schools and crèches have standard plans that can be easily mastered, because it is repetitive work. Most women contractors have experience in these types of buildings and they can be used for this kind of work. There are millions of Rands being spent every year on training of women and black contractors with very little results. This needs to be maximized instead of creating new institutions. There are very few women plumbers, electricians, tilers, carpenters, etc. and these are all areas that attract high fees. These specialists are required by both households and companies, and are sustainable in both new and old areas (Mahlobo, 2006).

1.2 Purpose of the study

The purpose of this study is to explore the constraints, challenges, opportunities and strategies that can make women strong players in the South African construction industry. The study aims to look at a few random countries on the African continent and abroad, and will provide a comparison to South Africa. The study will also provide feedback on selected issues from women in the built environment fields of work in South Africa and will also look at the contribution that the South African government has made towards assisting women in construction.
1.3 Rationale

It has been established that equipping women with construction related skills provides them with confidence to enhance their development (DBSA, 2009). This motivates women to engage in self-build housing projects that will not only ensure that women have adequate shelter, but also that they can earn an income from such skills. Therefore by getting women to participate in the construction industry empowers them to harness their development and thus reducing vulnerability amongst women.

Majority of female-headed households are that of females under the age of 19 with no skills to earn a decent income. This acts to their disadvantage and results in their disempowerment and limits their income opportunities. An important lesson learnt from a pilot 'Women in Construction' project (undertaken by Practical Action Southern Africa in Zimbabwe) was that, only when women are empowered and start earning a reasonable income, are they respected by their male counterparts and start contributing to decisions related to household income.

Training of women and girls in construction and business related skills is essential for them to participate with a better informed understanding of the construction industry.

1.4 Problem statement

Women have not emerged as significant players in the industry both in terms of size of contracts, as well as volume of contracts, given the positive environment created by government for their participation. Women are also a minority in the executive and managerial levels of this sector. Women managers are estimated to be around 8% of the industry. Unfortunately this is also true for the built environment professions, and they are also under represented at universities in the core areas of the profession.
In 2004, South African Minister of Public Works, Stella Siqcau said, "The construction industry is the third largest employer in the country, employing more than 500,000 people, and is estimated to be worth between R25 billion and R32 billion" (Engineering News, 2004). The participation of women in the industry, while significant when compared to pre-1994, is still quite minimal. Women still have not made a substantial advancement in the R25 billion market.

Both national departments of housing and public works have set targets for the increased participation of women in construction and housing, however most of these targets have not been achieved by the provinces. In Limpopo for example, 80% of public works projects have gone to women, but no women-owned company has become a dominant player in the province. It is critical that the constraints be explored in order to locate the proper strategies that need to be put in place, in order to maximize their impact, efficiency, growth and competitiveness in the industry. There is a lack of financial management and project management skills. These skills are extremely important for survival in the industry and are mostly lacking in women-owned companies.

Most women entrants in the industry come from professions outside the core built environment fields such as civil engineering, quantity surveying, town planning, building sciences, architecture and others. This results in the person entering the industry without the necessary technical and financial skills. Most women-owned companies remain small, despite years of existence. This works as a disadvantage as it limits the jobs that women can actually tender for, and therefore limits them to projects of a particular size and complexity. The Construction Industry Development Board (CIDB) and National Home Builders Registration Council (NHBRC) have come up with registers that regulate the industry and assign capacity in terms of financial capacity, experience and history. Women will most likely be classified at the lowest levels, thus limiting their competitiveness and impact.

Access to finance is clearly one of the major constraints to women's participation in the industry (Mahlobo, 2006). Most projects require performance guarantees of at
least 10%, most of which they cannot raise. Some women companies lose their contracts because they cannot structure the necessary finance in the necessary time and their contracts get allocated to other bidders. This problem leads to a lack of continuity of work, which causes most women to use up their resources between contracts. Some women have started projects using their own finance and have not been able to complete the projects, which results in them losing both their own investments and the client’s investment. Apart from the negative impact on the business, it also impacts on their ability to secure future contracts.

Most women contractors in particular, rely mostly on government contracts especially from municipal and provincial government. Most of them are involved with projects such as subsidy houses, schools, crèches and roads, usually in one province. There is a pool of small contractors and it is difficult for one company to get all the projects. Public works has a roster system which is accessed by several contractors. It is therefore difficult for a contractor to jump the queue (Mahlobo, 2006). The heavy reliance on one client results in less of diversification in terms of work. Without aggressive marketing, the business runs a huge risk of failing. Marketing skills and business skills are critical for women-owned companies.

1.5 Scope of the Study

This study looks at the challenges and gender-based issues which women in construction face in South Africa and abroad compared to their male counterparts in order to establish why fewer women are attracted to the industry as compared to men and why women in construction have a lower success rate.

1.6 Objectives of the research

1.6.1 To provide a South African and International comparison of the key issues faced by women in the construction industry.
1.6.2 To identify the challenges faced by women in the South African construction industry, and to discuss what support and government initiatives are currently in place to support women contractors.

1.6.3 To determine the extent of the gender-based issues that has placed constraints on the development and advancement of women in the South African construction industry.

1.7 Literature review

Many challenges faced by women in construction have previously been researched. Some of the most significant research is highlighted below:

In April 2005, Verwey compiled a research entitled, “A comparative analysis between SA and USA women entrepreneurs in construction.” Her research looked at relevant literature on what, how many, why and where women entrepreneurs in construction found their niche markets, which aspects make women unique, how poverty and unemployment negatively affect women and what entrepreneurial barriers women experience, comparing a developed country (USA) to a developing country (SA).

In 2004, Gurjao compiled a research entitled, “The Changing Role of Women in the Construction Workforce.” Her research looked at the key issues surrounding the low percentage of women in the construction industry in the UK. It explored the myths surrounding women in the industry and the apparent unattractiveness of the industry to them. It also looked at the bigger picture such as the changes within the construction sector to where it stands today, in order to develop an in-depth understanding of the changing role and need for women in the industry.

In November 2005, Kalabamu compiled a research entitled, “A global view of women's inclusion and exclusion from the construction industry.” He looked at the
extent to which women in Botswana are currently excluded from the construction industry.

In June 1999, Fielden, Davidson, Gale and Davey compiled a research entitled, "Women in construction: the untapped resource." They looked at the current position of women in the construction industry in Britain. Their research examined the barriers preventing women's entry into the industry, subsequent barriers faced by those working within the construction industry and initiatives committed to promoting equality for women and men in construction.

In December 2000, Hari Priya, compiled a research entitled, "Violence against women construction workers in Kerala, India." The study examined the violence against the women construction workers in Karala.

In March 2005, Mjoli-Mncube, compiled a research entitled, "Opportunities for women in housing and construction." The study looked at women's participation in the South African construction industry with regard to housing and the common challenges that these women encountered.

In September 2004, Powell, Dainty, Bagilhole and Neale compiled a research entitled, "Women's career choice in construction." In September 2005, another research was compiled and titled, "Coping in Construction: Female Students Perspectives." Both these studies looked at the fact that the UK construction industry was male dominated. Government responded by introducing a number of initiatives to encourage women to pursue engineering degree courses, including construction programmes. Women represent the most significant group of untapped potential for the UK construction sector and so their recruitment and retention in the industry is vital for its future prosperity.

In April 2006, Adeyemi, Ojo, Aina and Olanipekun compiled a research entitled, "Empirical evidence of women under-representation in the construction industry in Nigeria." They found that female resource represents about half of Nigeria's human resources. For optimal utilization of human resources, gender equality and equity, it
was considered that women should be adequately represented in the construction industry which is a prime motivator of the country's economy. A survey was also conducted to know the level of participation of women in some selected categories of workforce in the industry.

In October 2006, Mahlobo, compiled a research entitled, “Challenges faced by women contractors in housing construction.” Her study looked at amongst other aspects, the challenges faced by female contractors in subsidy housing, challenges related to lack of bridging finance and government participation in the South African Construction Industry.

The following are some of the more important questions that will be addressed in this study:

- When did women get involved in construction?
- Which aspects make women unique as entrepreneurs?
- How many women vs. men are there in the construction industry?
- Where do women find market niches as construction entrepreneurs?
- How are women entrepreneurs discriminated against and when did it start?
- What barriers do women entrepreneurs experience?
- How severe is gender discrimination in affecting entrepreneurial performance?
- How can female entrepreneurs in construction be assisted?
- What can women pro-actively do against poverty and discrimination?
- Why do women choose to be construction entrepreneurs or construction consultants?
1.8  Methodology and research design

Primary resources - fieldwork:

The answers to the above questions were determined by qualitative and quantitative research methodologies such as surveys and interviews which were conducted with women working for or managing their own construction companies and with women consultants in the construction industry from all provinces in South Africa. Interviews were also conducted with the Gauteng Department of Housing (GDOH), Khuthaza previously known as “Women for Housing”, South African Women in Construction (SAWIC), and the National Home Builders Registration Council (NHBRC).

A survey was carried out and one hundred (100) questionnaires were completed by women entrepreneurs, consultants and contractors in the construction sector.

Secondary resources - literature:

The research was conducted with reference to existing theoretical literature, as well as published and unpublished South African and international research. Various books, published journals, unpublished dissertations, conference papers, newspaper articles, websites and periodicals were used in the gathering of information.

1.9  Contributions of this completed study

There is clearly a need for guidelines for women-owned companies. This study will be aimed at the construction industry as well as the South African government to raise awareness of the many obstacles that women in construction face today and which will have to be eliminated in order for these women to either run a successful business or to progress in the professional environment.

The study will show these entrepreneurs the factors that lead to failure, and those that lead to success. It will also provide an insight into the international context such
as Africa and the rest of the world with the use of research and literature on a few random countries.

Verwey, 2005 emphasized on the comparison between men and women entrepreneurs. This is shown in Table 1.1.

Table 1.1: Comparison between male and female entrepreneurs

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Male Entrepreneurs</th>
<th>Female Entrepreneurs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Motivation</strong></td>
<td>Achievement – strive to make things happen. Personal independence – self image as it relates to status though their role in the corporation is unimportant. Job satisfaction arising from the desire to be in control.</td>
<td>Achievement – accomplishment of a goal. Independence – to do it alone.</td>
</tr>
<tr>
<td><strong>Sources of funds</strong></td>
<td>Personal assets and savings. Bank financing. Investors. Loans from friends and family.</td>
<td>Personal assets and savings. Personal loans.</td>
</tr>
<tr>
<td><strong>Occupational background</strong></td>
<td>Experience in line of work. Recognized specialist or one who has gained a high level of achievement in the field. Competent in a variety of business functions.</td>
<td>Experience in area of business. Middle management or administrative-level experience in the field. Service-related occupational background.</td>
</tr>
<tr>
<td><strong>Personality</strong></td>
<td>Opinionated and persuasive.</td>
<td>Flexible and tolerant. Goal</td>
</tr>
<tr>
<td>-----------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Support groups</td>
<td>Friends, spouse, professional acquaintances (lawyers, accountants). Business associates.</td>
<td>Close friends, spouse, family, women professional groups, and trade associations.</td>
</tr>
<tr>
<td>Types of business started</td>
<td>Manufacturing or construction</td>
<td>Service related – educational services, consulting, or public relations.</td>
</tr>
</tbody>
</table>

Source: (Verwey, 2005)

1.10 Overview of chapters

The following is a breakdown of the chapters in this report:

1.10.1 Chapter 1: Introduction

This chapter provides an introduction to the proposed research as well as an overview of the entire study and specifies areas to be explored. The rationale, objectives of the study, key research questions and subsidiary research questions
are formulated. The methodology statement and scope are also defined in this chapter.

1.10.2 Chapter 2: International Literature Review (Rest of the world)

This chapter highlights the extent to which women are involved in construction abroad, which is the UK, Australia, India and Singapore. The challenges faced by these women in the industry abroad are highlighted. The reasons for choosing to further their studies in the built environment, the transition from education to work and gender inequalities are all discussed in detail.

1.10.3 Chapter 3: International Literature Review (Africa)

This chapter highlights the extent to which women are involved in construction in Africa, which is in Nigeria, Botswana and Ghana. The many challenges faced by these women in construction in these countries are highlighted.

1.10.4 Chapter 4: South African Literature Review

This chapter looks at reasons why women in South Africa are drawn into the Construction Industry. These women either, work for construction companies, own and manage their own companies or are professional women in the industry such as quantity surveyors, engineers, architects, project managers, etc.

Challenges that these women face in the industry are discussed such as what constrains their participation in the sector and what other important aspects exist, and if dealt with, will it make a huge difference to enhance their participation in the workplace.
1.10.5 Chapter 5: Research Methodology

The research instruments comprising of the methodologies, which are used to effectively research and achieve the objectives of the study is discussed in this chapter.

1.10.6 Chapter 6: Analysis of data

A survey was completed and interviews were carried out with female employees, entrepreneurs and professional women within the industry. The results were analyzed in this chapter to provide extremely valuable feedback.

1.10.7 Chapter 7: Conclusion and recommendations

Overall conclusions and recommendations are highlighted in this chapter, which provides a valuable insight into the industry through the eyes of women today. Frequently asked questions, replies and possible solutions to challenges are highlighted which is the primary purpose of this report. The contribution to the industry by support organizations for women in construction is also discussed in this chapter.

1.11 Conclusion

Women entrepreneurs in construction build and develop the environment and economy, starting low at a profit margin that is common for survival at this time in the construction industry, but with the drive to meet challenges (Verwey, 2005). Therefore we can see that women are in construction mainly because of the "pull factors" which is discussed in chapter 4, that include new challenges, the need for achievement as well as the love for construction.

According to the Emerging Contractors Development Programme (ECDP), 1200 emerging contractors were registered on its database in 1999, only 7% were women
and mostly involved in the lesser side of the industry primarily providing cleaning, catering services, etc. The database has steadily grown and in 2003 women were slightly more than 10% of the nearly 3300 registered small enterprises.

Chandra and Loosemore (2004) conducted a survey to explore the self-perceptions of women in construction and to compare it to female self-perceptions in other male dominated and female dominated industries. Women in the construction industry emerged quite positively from the research with the highest overall level of self-esteem (Chandra et al., 2004).

Women take great pride in knowing that they have achieved in building or creating something and researchers have found that most tradeswomen have a high degree of job satisfaction (Verwey, 2005). However, these achievements are usually prolonged due to many challenges. Women nationally and internationally face these challenges but on different levels. The next three chapters will discuss the challenges and gender based issues that women face locally and abroad.
Chapter 2: International Literature Review (Rest of the world)

2.1 Introduction

This chapter highlights the challenges faced by women in construction in a few random countries abroad. The following countries were chosen and studied to ascertain the levels of participation of women in the construction industry abroad as well as the existing constraints that affect the performance of women. These countries were chosen to produce a detailed comparison of women in the construction industry in developed and developing countries:

- United Kingdom (UK)
- Australia
- India
- Singapore

Women are currently excluded from the construction industry which is an industry that today, is not only responsible for delivering homes but delivering meals on the table as it provides cash employment to sizeable proportions of economically active populations in most countries worldwide (Kalabamu, 2005).

*Table 2.1* shows women's participation that is the percentage of women in the construction industry in selected parts of the world (Welis, 2000).
Table 2.1: Female participation in the construction industry

<table>
<thead>
<tr>
<th>Region</th>
<th>Women in paid employment in construction as a percentage of the total (various years, 1995-2000)</th>
<th>Women in production jobs as a percentage of the 'economically active' women in construction (various years, 1990-1995)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latin America (10 countries)</td>
<td>5.0%</td>
<td>9.8%</td>
</tr>
<tr>
<td>Western Europe (8 countries)</td>
<td>7.6%</td>
<td>11.2%</td>
</tr>
<tr>
<td>Sub-Saharan Africa (6 countries)</td>
<td>5.6%</td>
<td>N/A</td>
</tr>
<tr>
<td>Asia:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thailand</td>
<td>17.9%</td>
<td>95%</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>7.8%</td>
<td>88%</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>12.2%</td>
<td>78%</td>
</tr>
<tr>
<td>India</td>
<td>5.7%</td>
<td>N/A</td>
</tr>
<tr>
<td>Pakistan</td>
<td>1.3%</td>
<td>N/A</td>
</tr>
<tr>
<td>Source: (Wells, 2000)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2.2 United Kingdom (UK)

Gurjao (2005) confirmed that the UK construction industry is one of the strongest in the world playing a critical role in ensuring Britain's prosperity, providing a tenth of the UK's gross domestic product and employing over 2 million people. However, the ever increasing skill gap and labour shortage is a threat to the industry if it wants to remain at the forefront and improve its productivity and business performance. Gurjao (2005) also confirmed that women in the UK construction industry currently account for just below 10% of the workforce. This reflects their under representation in an industry which fails to attract and retain more women.
It was stated in the building press that if every 16 year old boy currently at school were to go into construction, this would still not be enough to meet future demands (Dainty and Geens, 1993). Expanding inclusivity, which includes attracting and retaining more women in the construction sector, is therefore a key priority for the UK and many overseas construction sectors facing skill and labour shortages, where increasing the number of women in the workforce would definitely help to solve the problem (Gurjao, 2005).

For a number of years women have been moving into professional careers such as law, accountancy and medicine, all of which require high-level qualifications and are considered attractive because of the perceived high level of social status. Today, numbers of women and men are almost equal in these sectors. But occupational sectors such as engineering and construction have not seen a corresponding change in the make-up of the workforce (Gurjao, 2005). Hodgkinson and Hammills (2005) conducted a survey and stated that engineering is perceived as a potentially uncomfortable place for females. They went on further to say that in group interviews, many girls (and quite a few boys) believe being a woman in engineering involves costs, such as the potential for male hostility, conflict between managing their career and motherhood, and the need to prove themselves as good as men. Of the survey, 40% of respondents ‘agree’ or ‘strongly agree’ that women who enter engineering have to cope with hostile remarks from men Hodgkinson et al (2005).

Girls now perform better than boys in education and in getting qualifications (Gurjao, 2005). In spite of constituting nearly 50% of the population, more than 46% of the labour market, and more than 50% of the entrants into higher education, women account for just 10% of the construction workforce (Gurjao, 2005). This breaks down as 1% of trades' people, 10% of those working in professional occupations (such as design and management), 84% secretarial, 2% are sole traders and 4% are micro-enterprises (employing one to ten people). These figures have remained relatively fixed for the last few years (Gurjao, 2005).
In the UK, construction and engineering, technology and manufacturing are the most segregated areas of learning with 90 per cent of learners being men, whilst hairdressing and beauty therapy are dominated by women who make up 91% of learners. More men apply for, accept and obtain, higher education qualifications in SET (Science, Engineering and Technology) related subjects than women. However, this is slowly changing and the number of female SET graduates is now increasing (Gurjao, 2005).

Figure 2.1 shows the occupational distribution of women in construction according to the 2002 Labour Force Survey in the UK. Less than 5% of all women are employed in skilled construction and related trades.

Source: (Gurjao, 2005)
It has been noted frequently that educational segregation leads to occupational segregation, with women still seriously underrepresented in the primary sector, which is manufacturing. Women tend to be concentrated in health and social work (82%) and education (70%), whereas men tend to be concentrated in construction (87%), transport, storage and communication (74%) and manufacturing (72%) (Fielden, Davidson, Gale and Davey, 2000). This means that construction continues to be the most male dominated of all the major industrial groups (refer to Table 2.2), even though women’s employment within the industry has risen by 14% over the past decade (Fielden et al., 2000). The employment patterns of men and women also differ, with 92% of men being employed in full-time positions compared to only 55% of women (Fielden et al., 2000).

Table 2.2: Employment by industry and sex in the UK: 1997 (thousands)

<table>
<thead>
<tr>
<th>Industry</th>
<th>Women</th>
<th>Men</th>
<th>Total</th>
<th>% Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture, Forestry &amp; Fishing</td>
<td>52</td>
<td>198</td>
<td>260</td>
<td>24%</td>
</tr>
<tr>
<td>Energy and Water Supply</td>
<td>48</td>
<td>196</td>
<td>244</td>
<td>20%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>1121</td>
<td>2880</td>
<td>4001</td>
<td>28%</td>
</tr>
<tr>
<td>Construction</td>
<td>112</td>
<td>748</td>
<td>860</td>
<td>13%</td>
</tr>
<tr>
<td>Distribution, Hotels &amp; Catering</td>
<td>2837</td>
<td>2279</td>
<td>5116</td>
<td>55%</td>
</tr>
<tr>
<td>Transport and Communication</td>
<td>341</td>
<td>964</td>
<td>1305</td>
<td>26%</td>
</tr>
<tr>
<td>Banking, Finance, Insurance, etc</td>
<td>2084</td>
<td>1828</td>
<td>3912</td>
<td>53%</td>
</tr>
<tr>
<td>Public Administration, Education and Health</td>
<td>3883</td>
<td>1884</td>
<td>5567</td>
<td>70%</td>
</tr>
<tr>
<td>Other Services</td>
<td>526</td>
<td>439</td>
<td>965</td>
<td>55%</td>
</tr>
<tr>
<td>Total</td>
<td>11014</td>
<td>11216</td>
<td>22230</td>
<td>49.5%</td>
</tr>
</tbody>
</table>

Source: (Fielden, Davidson, Gale and Davey, 2000)

Research has been conducted into the problems faced by women entering and working in certain professions, such as surveying and architecture (Fielden et al., 2000). These problems have been isolated as being due to a number of factors which include the education process, image of the industry, recruitment practices, sexist attitudes, organizational culture, and working environment.
Refer to Table 2.3. It can be seen that women employed in the construction industry are mostly engaged in clerical and secretarial positions. A high percentage (43%) of women is employed in part-time positions.

Table 2.3: Vertical occupational segregation of the UK construction industry by sex (percentages)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female</td>
<td>Male</td>
<td>Female</td>
<td>Male</td>
<td>Female</td>
<td>Male</td>
</tr>
<tr>
<td>Managers and</td>
<td>5.1</td>
<td>6.9</td>
<td>8.4</td>
<td>8.7</td>
<td>15.4</td>
<td>9.3</td>
</tr>
<tr>
<td>Administrators</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professional and</td>
<td>0.6</td>
<td>4.2</td>
<td>1.3</td>
<td>5.0</td>
<td>3.7</td>
<td>5.8</td>
</tr>
<tr>
<td>Technical</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secretarial and</td>
<td>88.6</td>
<td>3.2</td>
<td>82.2</td>
<td>2.8</td>
<td>63.0</td>
<td>1.1</td>
</tr>
<tr>
<td>Clerical</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supervisory</td>
<td>1.6</td>
<td>4.8</td>
<td>1.7</td>
<td>4.9</td>
<td>0.8</td>
<td>4.7</td>
</tr>
<tr>
<td>Crafts</td>
<td>1.1</td>
<td>51.7</td>
<td>3.0</td>
<td>54.2</td>
<td>4.8</td>
<td>61.2</td>
</tr>
<tr>
<td>Operatives</td>
<td>2.3</td>
<td>15.6</td>
<td>2.5</td>
<td>15.0</td>
<td>1.8</td>
<td>9.9</td>
</tr>
<tr>
<td>Others</td>
<td>0.7</td>
<td>13.6</td>
<td>0.9</td>
<td>9.4</td>
<td>6.2</td>
<td>11.2</td>
</tr>
<tr>
<td>Total Employed</td>
<td>5.8</td>
<td>94.2</td>
<td>8.0</td>
<td>92.0</td>
<td>9.0</td>
<td>91.0</td>
</tr>
</tbody>
</table>

Source: (Fielden, Davidson, Gale and Davey, 2000)

Although the opportunities for women in the construction industry appear to be increasing, they are still extremely limited, and women continue to be seriously underrepresented in built environment professional bodies.

Some of the barriers that exist for women entering and working within the construction industry in the UK are as follows:

2.2.1 Lack of knowledge and a poor image

The construction industry has a problem with image, that is, the general lack of knowledge and information about the industry, the career opportunities it can offer and what qualifications are required. The Construction Industry Training Board
(CITB) found that parents, teachers and school children believed that jobs in the construction industry were limited to bricklaying, joinery, painting and decorating. The CITB also found that 63% of young women interviewed felt that it would be practically impossible for women to get jobs in the construction industry and only 17% thought that it would be a suitable career for them (Fielden et al, 2000).

2.2.2 Male dominated training courses

Fielden et al (2000) found that over half the young women who returned their questionnaires, reported that during their training period they encountered a general disbelief among male instructors and colleagues that women could be technically competent. Many women reported that this attitude had persisted through training into the workplace, where they had been expected to undertake clerical and support duties and had to fight to receive technician training and work.

2.2.3 Recruitment practices and procedures

Women are frequently deterred from applying for jobs within the construction industry by informal recruitment procedures or advertisements and brochures that display images which promote masculine values and interests, unstructured interviews, discriminatory selection criteria and sexist attitudes (Fielden et al, 2000). Many employers still consider women unsuitable for some traditionally male-dominated jobs. For example, in the manual trades, workers need a reasonable level of strength and fitness, with some jobs requiring above average upper body strength for lifting and heavy operations. The need for physical strength is used often by employers to deter women from applying for such positions.

2.2.4 Sexist attitudes

Women in the UK construction industry are subjected to sexist behaviour and practices (Fielden et al, 2000). Women surveyors reported that they had been
singled out by male technicians and clients for tasks intended to 'test' their ability to work in a male environment. On building sites this might involve being sent up tall buildings, being expected to inspect unsafe buildings, being subjected to rude and indecent behaviour and being asked technical questions designed to catch them out. If women refuse to carry out such tasks they may be accused of incompetence and be seen as a target for further harassment.

2.2.5 Male dominated culture and environment

The construction industry displays a macho culture, where relationships are characterized by argument, conflict and crisis (Gale, 1994). As a result, employees (male and female) find that they are exposed to an extremely hostile environment. Women find themselves very much in a minority and it can be intimidating for a new female recruit to have to walk onto an all-male site on the first day of her job (Fielden et al, 2000).

Sexual harassment within the construction industry in the UK is a real concern, with almost all reports on women in the industry acknowledging this problem (Fielden et al, 2000). Bagilhole and Dainty (2002) looked at female engineer's experiences on British construction sites. Four completed diaries were returned, which provided detailed insights into the day-to-day experiences of women in their work environment. One of the diaries was summarised and clearly shows that from Week 1 until Week 12, she was continuously sexually harassed. Bagilhole et al, 2002 stated that her exact words at Week 12 were "It is situations like this that have made me realise that there is more to life than construction . . . the men want to keep it a man's world."

2.2.6 Family commitments

Watts (2009) conducted a research which looked at the work-life balance amongst women civil engineers. Watts (2009) stated that for many women the critical problem
centred on the issue of working long hours, including often working over weekends. Hours of work in construction tend to increase during peak times (especially towards the end of a contract) with standard ten hour days, and often employees are given little warning about overtime. It is also known within the industry that working long hours show employment commitment (Sutherland and Davidson, 1993). This works in the employee's favour when it comes to promotions and even future job security. Watts (2009) stated that all the women in her study were open about the long hour's culture in the profession and the expectation of senior managers that they would stay as long as it took to finish the job. Site based employees, both professional and manual workers, are usually subject to changing work locations. This can involve travelling long distances and periods away from home, a situation which produces serious difficulties in terms of transport and child-care ((Fielden et al, 2000).

There is also pressure on working women to delay childbirth and for those who do have children to hide their existence. Women who gained acceptance within their profession found that this was frequently jeopardized by pregnancy (Greed, 1990). Watts (2009) pointed out that a critical issue for her participants of the survey was how to achieve a balance between a fulfilled career and a range of personal roles as friends, partners, wives, mothers and daughters.

2.2.7 Career development and growth

Dainty and Bagilhole (1999) highlighted from their survey that women were found to have progressed at an average of one hierarchical level behind their male peers of similar age and experience. Women found it difficult to progress from junior to middle management. It took longer to reach middle management than their male counterparts. However, once middle management was reached, they were then on par with their male counterparts and could even move ahead at a faster pace. Dainty et al (1999) stated that their analysis indicated that only women, who showed a long term commitment to the industry of around 12 to 13 years, progressed in parity with their male peers.
The following must therefore be taken into account in order for the UK to encourage more women into construction:

- Elimination of gender discrimination
- Good and continuous training.
- Flexible working hours and help with childcare.
- Equal pay.
- School visits and bringing girls on site.
- Provide female role models and networking systems.

Source: (Greed, 1990)

2.3 Australia

2.3.1 Introduction

In Australia, one of the major employment sectors include the property and business services sector, which accounts for 796,600 jobs for men and women, the construction industry with 575,800 of its full time jobs held by men, and the education sector where women predominate, holding 263,600 of the full time jobs (Scott, 2003).

Because the number of women in construction trades are extremely low, this results in the individuals, the industry, and therefore the community suffering by utilizing only one gender. A survey was carried out by the Building Careers Centre which showed that the highly male dominated industry deterred women who were afraid of isolation, discrimination and harassment (Thompson, 1996). It appears that many women fail to cope with the early years of life in the industry and leave to seek alternative professions (Chandra et al, 2004).
In the mid-1990s, the UK construction industry employed approximately 1.77 million people of whom only 10% were women. Around the same time, the proportion of women in the Australian building industry was 14% (Lingard and Lin, 2003).

2.3.2 Findings

"The findings are not surprising, least of all to the few women who have defied the odds", says Thompson. Thompson's survey (1996) looked at the attitudes and awareness levels of male and female secondary students and examined social beliefs and the school's education system. Her study found that young women believed the construction industry is male dominated which perceived sexism, discrimination and harassment to be widespread. Most young people still believe that young women are not suited to work in the construction industry and more than 30% believe that women should only work in the administrative and professional areas of the construction industry (Thompson, 1996).

Many young men still believe that women are both physically and psychologically unsuited for construction work (Thompson, 1996). Thompson's survey also confirmed that young people start to seriously make career choices by the age of 16 and that gender-based career stereotyping makes it difficult for young girls to establish their own career choices or to change from the career path which their parents dictate (Thompson, 1996). Most parents said they would not encourage their daughter to enter the construction industry, although many said that they would encourage their sons to do so. This helps to explain why many capable women do not consider the construction industry as a career choice.

Thompson (1996) explained that education at school level is only part of the battle. She went on to say that male builders have to accept women in the building workplace and that senior management know that the construction industry is male dominated but have done very little to change things. The existing training system, dominant management styles, and employment practices contribute to the maintenance of traditional attitudes (Thompson, 1996).
identified some practices that need to change urgently, such as 'grapevine recruitment' which reproduces the dominant characteristics of the existing workforce by excluding those not already in established networks. This practice, widely used in the construction industry, restricts access to employment for women and other minorities (Thompson, 1996).

Thompson (1996) stated that the ongoing discrimination in the workplace and negative perceptions regarding the capability of women undermines the attempts to retain quality employees, which is a waste of resources and expertise. She went on further to say that to improve the recruitment and retention of women in the Australian industry, the Building Careers Centre have identified a number of initiatives and are now being put into effect. The Centre proposes to make the most of syllabus requirements for school pupils to take on work placement in the building and construction course now being offered by New South Wales secondary schools. The arrangement of site tours for school teachers and career advisors will ensure that accurate information will be passed on to pupils regarding available occupations. The Centre also proposes that by providing practical industry experience to primary school pupils, children will be exposed to career options earlier.

A number of groups have also formed over the years to address the issues, provide a support mechanism, and to encourage more women to enter the industry. One such group is "Constructive Women" which is an association of women architects, planners, landscape architects and women in the building industry in NSW, which was formed many years ago (Thompson, 1996).

Thompson (1996) stated that up to 50% of architecture students are women and therefore it is still a mystery as to what happens to women graduates. "There needs to be a study done on where women go after they graduate because fewer than 10% register as architects after leaving university," says Anne Conville, an architect and previous president of Constructive Women (Thompson, 1996). Anne Conville went on further to say that there are many issues which need to be addressed and one of
the issues is the need for women to move in and out of the profession to bear children, rather than the traditional male approach of staying in a company and working their way up. Ann Conville also stated that instead of being placed in larger organizations, more women architects prefer to work in smaller practices.

NAWIC which is "The National Association of Women in Construction" was formed in the United States in 1953. From an initial membership of 16, the organization has grown to around 8000 (Thompson, 1996). Members are from all sectors of the industry including subcontractors, building surveyors, architects, tradeswomen, project managers, developers and students who are pursuing construction related fields of study. Members also include government officers, and suppliers of materials and equipment.

The association aims to unite women for their mutual benefit, promote co-operation and better understanding among members, promote education, contribute to the betterment of the industry, encourage women to pursue and establish their careers in the construction industry, and to provide members with an awareness of the legislative process and legislation as it relates to the construction industry (Thompson, 1996).

Paula Gerber-Jones, a senior associate with a legal firm in Melbourne, has brought the NAWIC to Australia. She was previously involved in NAWIC in the US and says that the status of women in construction in the US is more advanced than in Australia; however she has high hopes that the organization will become as strong and effective in Australia. Sandra Steele of NSW is the current national president. From its beginning in 1995, NAWIC has strived to build a dynamic organisation which encourages and supports women in the construction and related affiliate industries. Their members have risen steadily over the years due to enhanced networking opportunities and the continuing development of member services and benefits (NAWIC, 2009).
Gerber-Jones stated previously that an important aspect for NAWIC is the mentoring which is helping students to make the transition from study to work and will also encourage girls at school to consider a career in the construction industry. To address this problem NAWIC aims to make videos and distribute these to schools and also make encouraging offers in the industry for work experience for school students. NAWIC has also introduced Awards of Excellence for women.

Leslie Butterfield, previous president of the NSW branch of NAWIC and also a civil engineer and business project manager for a major construction firm said that she has faced great opposition. To her, being a woman in the construction industry means constantly proving capability and professionalism with technical abilities always questioned. She says that “The higher up the ladder you go, the more opposition there is. And there is no active encouragement”.

Butterfield said that there are now more women in some areas of construction like interior design and architecture, but for areas such as engineering and trades, not much has changed. NAWIC hopes to change this and to support women who are already in the industry. NAWIC seeks to unite women across the entire construction industry.

Lingard et al (2003) stated that the results of their survey suggested that construction organizations implement formalized career management processes, which must be applied consistently to all employees. In the short term, affirmative action policies should be considered as a means of redressing the gender imbalance in construction organizations as a whole and at senior management levels in particular. However, such policies should only be implemented alongside a serious attempt to educate all employees in the requirements for and advantages of developing a diverse workforce (Lingard et al, 2003). The relationship between female employees and their immediate supervisors is also an important determinant of their organizational commitment. Perceptions that supervisors are supportive are positively associated with organizational commitment. Training supervisors in how to better manage a diverse workforce is therefore particularly important.
Lingard et al (2003) stated that women who remain highly committed to their choice of a construction career may be more likely to ‘exchange’ participation in a rewarding job or career for organizational commitment, than those who question their employment or vocational choice.

2.4 India

2.4.1 Introduction

While women are struggling to get into the construction workforce in European countries, in some parts of the developing world they are already there. Anyone who has visited the Indian subcontinent will notice the large number of women labouring on construction sites, where they sometimes form the majority of manual workers. Women constitute nearly half of the population of India (48.1 percent which makes 403.4 million women in absolute numbers as per the 1991 census) (Priya, 2000).

Women are integrated into the building workforce at the bottom end of the job hierarchy, as unskilled workers and head load carriers. They undertake some of the hardest and most strenuous tasks but are forever given the role of ‘unskilled workers’ or ‘helpers’. They are also paid less than men undertaking similar tasks and sometimes they are not paid at all, as in many cases payment is made to the husband for the work that the women did. Although they are very clearly visible to the casual observer, women construction workers are ‘invisible’ in official records and reports (Wells, 2000).

Refer to Figure 2.2 which shows the distribution of women in India according to the industrial sub-sectors. It can be seen that the least amount of women work in the construction, mining and transport sectors.
2.4.2 Findings

In India, as in most other developing countries, labour is recruited through subcontractors and intermediaries. Subcontracting may go through several stages on a large project, creating a multi-layer contracting system. Often the whole family, including children and the old, migrate to work in a kind of caravan that moves to the construction site (Wells, 2004). Women migrating to the cities with their men folk (husbands, brothers, etc.) help out with the construction work, working alongside their husbands. When payment is by measured output (as it is in the production of building materials, such as stone chippings, on the site) extra hands are much needed to increase output and earnings. The “piece work” system therefore encourages workers to engage their wives and children (Wells, 2004).

Some women migrate to the city for jobs in construction with their husbands, or to
join their future husbands and others make it on their own. A survey with 62 women building workers in Mumbai (Bombay) revealed that a number of women had been abandoned by their husbands and had no land, no housing or means of livelihood in the rural areas (Wells, 2004). They came to Mumbai alone, without skills or education, looking for work and a place to live for themselves and their children. They found both in the construction industry. Basic housing is often available on the construction sites, which is one reason why landless labourers from the rural areas are drawn to the industry. Also, in big cities such as Mumbai there is fairly regular work, even in the rainy season. During the monsoon, one woman found cleaning and finishing work inside partially completed buildings and another worked as a domestic servant in the neighbourhood (Wells, 2004).

The construction techniques used in India are highly labour-intensive. Multi-storey buildings are erected in the towns with little mechanical equipment, maybe a cement mixer but no cranes or hoists (Wells, 2004). All materials are carried from one part of the site to another, usually on the head. Aggregates are crushed by hand on the site. Details of the kind of work that women are doing on construction sites and of their wages and conditions of employment have emerged from a number of surveys over the years.

In separate surveys of female construction workers in Bihar and Delhi, Sinha and Ranade (1975) found that women were only employed as unskilled labour, performing such tasks as earthworks, carrying bricks and stone chippings in a head load, crushing bricks, etc (Wells, 2004). Only 13.3% of the respondents performed some type of skilled work, including masonry, carpentry and painting and 76.6% of the women worked as unskilled manual labour.

Most of these women entered the construction sector due to circumstantial poverty or by chance, not by choice. Despite the generally high literacy level in Kerala, 53.3% of the respondents were illiterate. The majority of the women interviewed (44.7%) had worked in the construction sector for fewer than 5 years and 18.7 percent of the respondents for more than 10 years. Some of the women interviewed
by Shah, 1996 in Mumbai were dedicated to their work in the construction industry and had remained with the same contractor for many years (Wells, 2004). However after 12 or 15 years their skills were still unrecognised and their wages showed no improvement.

They entered the industry as carriers of head loads and 'helpers' to male workers and remained in this position (Wells, 2004). As almost all skills are acquired 'on the job', unskilled male workers are able to designate themselves as skilled, or at least semi-skilled, after 2 or 3 years in the industry. But this progression is impossible for women workers.

Table 2.4: Nature of work (survey done with 3 different organizations in India)

<table>
<thead>
<tr>
<th></th>
<th>NK</th>
<th>HTG</th>
<th>SI</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Unskilled Manual Labour</td>
<td>39 (33.9)</td>
<td>35 (30.4)</td>
<td>41 (35.6)</td>
<td>115 (100)</td>
</tr>
<tr>
<td></td>
<td>(78.0)</td>
<td>(70.0)</td>
<td>(82.0)</td>
<td>(76.6)</td>
</tr>
<tr>
<td>2. Skilled Daily Wages Labour</td>
<td>5 (25.0)</td>
<td>11 (55.0)</td>
<td>4 (26.0)</td>
<td>20 (100.0)</td>
</tr>
<tr>
<td></td>
<td>(10.0)</td>
<td>(22.0)</td>
<td>(8.0)</td>
<td>(13.3)</td>
</tr>
<tr>
<td>3. Seasonal Contract Labour</td>
<td>6 (40.0)</td>
<td>4 (26.7)</td>
<td>5 (33.3)</td>
<td>15 (100.0)</td>
</tr>
<tr>
<td></td>
<td>(12.0)</td>
<td>(8.0)</td>
<td>(10.0)</td>
<td>(10.0)</td>
</tr>
<tr>
<td>Total</td>
<td>50 (33.3)</td>
<td>50 (33.3)</td>
<td>50 (33.3)</td>
<td>150 (33.3)</td>
</tr>
<tr>
<td></td>
<td>(100)</td>
<td>(100)</td>
<td>(100)</td>
<td>(100)</td>
</tr>
</tbody>
</table>

Source: (Hari Priya, 2000)

Table 2.4 shows that 76.6% of the respondents are unskilled manual labour and only 13.3% do some type of skilled job which includes masonry, carpentry and painting. Shah's survey also revealed that some women were eager to learn a trade but could not find anyone to teach them (Wells, 2004). The supervisors and skilled workers became angry when these women requested training. Similar responses were met from their husbands. Skills are generally passed on from father to son. Skill transfer to women is not something that men are willing to think about (Wells, 2004).
Loop (1992) also did not find any skilled female workers or any female entrepreneurs. When employers and labourers were asked why this was the case, the interviewer was greeted with laughter “on hearing this strange and stupid question” (Loop, 1992). The responses to the question are shown in Table 2.5. The general view was that women were not able to do skilled construction work. The work was too dangerous, as it involved climbing, or it was too tough for women. Some mentioned that women were not interested to receive training. However, a fair proportion of the men interviewed stated that the main obstacle lay within their own ranks. Men did not want women to acquire skills because that would mean more competition and that might pose a threat to their dominant status.

Table 2.5: Reasons why there are no skilled female labourers in India

<table>
<thead>
<tr>
<th>Reasons</th>
<th>Entrepreneurs</th>
<th>Labourers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Women are not able to do the work:</strong></td>
<td>46</td>
<td>50</td>
</tr>
<tr>
<td>Cannot climb to roof or scaffolding (dangerous)</td>
<td>26</td>
<td>23</td>
</tr>
<tr>
<td>Don’t have the strength or courage for this tough work</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td>No skill or knowledge of the work</td>
<td>9</td>
<td>21</td>
</tr>
<tr>
<td>Women are shy/modest or have inferiority complex</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td><strong>Women are not interested in the work:</strong></td>
<td>25</td>
<td>24</td>
</tr>
<tr>
<td>Women are not interested to learn the skills</td>
<td>22</td>
<td>23</td>
</tr>
<tr>
<td>Women come to work irregularly</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td><strong>Women are not allowed by men or by culture:</strong></td>
<td>26</td>
<td>26</td>
</tr>
<tr>
<td>Male mistress/masons don’t allow women to learn skills</td>
<td>15</td>
<td>11</td>
</tr>
<tr>
<td>Women may not come out, it is our culture: they cannot be</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Entrepreneurs because they cannot search for labourers</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>Women’s clothes are not fit for this work</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td><strong>Women cannot get orders</strong></td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Society has no faith in female mistress</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
</tr>
<tr>
<td>Total: absolute number of reasons</td>
<td>275</td>
<td>319</td>
</tr>
</tbody>
</table>

*Source: (Loop, 1992)*
Loop also observed that on building sites in Tamil Nadu, there was a very detailed division of labour on site. In other words, masons only laid bricks; mortar was mixed by others (male helpers) and carried by yet others (women helpers). Fetching and carrying water is also the work of women. This division of labour economises on the use of skills. However, it also allows for differentiation of tasks along gender lines. The fact that women's work is different from men's work, even if only slightly so, opens the door to wage discrimination (Loop, 1992). There was a huge gap in wages between skilled and unskilled men and between unskilled men and unskilled women. There were no skilled women. Although the actual wages paid varied between the towns and between regular and casual workers, the ratio between the wages paid to the three groups was on average 35:20:12. The wage rate of the male helpers was more than 1.5 times that of the female helpers who do tasks which are (at the most) only slightly different.

A further problem, as mentioned before and identified by a number of authors, is that wages are often not paid to the women but to their husbands. In this case the number of days worked by women is added to that of their 'men folk' and, except in the case of single women, payment is made only to the men (Wells, 2004). This means that the women's names do not appear on the contractors' register. Even though the women work at the construction site and their employers pay for their work, technically they do not exist as employees. As far as official records are concerned the women are invisible. The 'invisibility' of women also explains the failure of official data to capture the extent of female employment or participation in the construction industry in India. The proportion of women workers employed as casuals increased from 88% in 1983 to a massive 95% in 1993, while the proportion of men employed as casuals rose from 58% to 64% in the same period (Wells, 2004).

The major problem faced by most women in the industry in India was the non-availability of toilets at the construction sites. Most of the respondents expressed the opinion that at least a temporary type of toilet could be arranged by the
organizations but none of them pay any attention to this most basic need. To fulfil this need they have to go to bushes nearby or use somebody's house near the site. Sexual harassment of women workers was a rare phenomenon. In many cases extra marital relations were noticed with co-workers or subcontractors (Priya, 2000). This could be in retaliation to the habit and behaviour of husbands. Husbands of 36% of the respondents were alcoholic. One third of the women were exposed to frequent beating and 18% mentioned that their husbands had affairs with other women.

For a women worker, the place of residence and construction site is very important. In an Indian situation, women have to complete all the household chores before they go to work and have to carry the packed lunch with them (Priya, 2000). The study showed that only 19.3% of women workers lived less than 5 km away from the site and 27.3% lived at a distance of more than 15 km. A distance of 5 km is usually covered by walk and it takes nearly 30 to 45 minutes to cover this distance. A distance above 5 km involves using public transport which took between 1 and 1.5 hours. This shows that the women workers have to leave home on an average 1 to 1.5 hours before the duty time.

18% of women stated that the financial problem was the main obstacle to learn any skilled job. 17.3% of respondents stated that they could not learn any skilled job because of too much family burden and responsibilities. Most of the women mentioned that their duty time started between 7 am and 8 am and they had to work until 5 pm or 6 pm depending on the nature of work. If it is a day of concreting, then they had to finish it and it could take another 2 hours after 6 pm and they received very little allowance for this. On an average they had to work 9 hours a day.

Immediate supervisors, contractors, sub contractors and colleagues were a major source of problems for women workers. One third of the respondents commented on the arrogant attitudes of contractors, subcontractors and colleagues and 24% complained of frequent abuse for no reason (Priya, 2000). 20.6% of the respondents stated that the types of harassment affect their behaviour towards other co-workers.
and family members. 15.3% undergo mental depression due to harassment. 17.3% feel restlessness and 8.6% feel total uneasiness for a few days (Priya, 2000). Many women stated that their husbands were alcoholic and that they were exposed to frequent beatings, whilst others acknowledged that their husbands had affairs with other women.

India still has a long way to go to improve the working conditions in the construction industry for women. There are many problems that need to be addressed. The leadership quality of female construction workers are poor and these women need proper training and capacity building for lobbying for their demands (Priya, 2000). Most of the women construction workers are not willing to get their daughters into this job. Most of them are sending their children to school and are optimistic. They think their children will get a better job than theirs and are living on that hope.

2.5 Singapore

2.5.1 Introduction

As at January 2004, there are 245 fulltime QS students of which 145 (59%) are females at the National University of Singapore (Ling and Poh, 2004). Ling and Poh, 2004 stated that a survey by Leow, 2002 showed that 63% of female QS graduates are working in the Singapore construction industry. Their occupations include project managers (4%), contractors QS (31%) and consultant QS (65%). The 37% of females who are not in the construction industry suggest the need to investigate what factors deterred them (Ling et al, 2004).
2.5.2 Findings

A woman's career strategy is influenced by external factors and internal factors (Dainty et al, 2000). External factors include the nature of the industry, working conditions, and sexist attitudes among industry players that make a construction career unattractive. Internal factors relate to personal attributes, circumstances, characteristics and abilities. Refer to Table 2.6 which highlights the factors that affect the performance of women in the construction industry in Singapore.

Table 2.6: Potential situations faced by female QS undergraduates in Singapore

<table>
<thead>
<tr>
<th>No.</th>
<th>Nature of the construction industry</th>
<th>Working conditions</th>
<th>Sexist attitudes</th>
</tr>
</thead>
<tbody>
<tr>
<td>E1</td>
<td>Construction jobs have poor image</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E2</td>
<td>Construction jobs are very competitive in nature</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E3</td>
<td>Construction jobs are stressful and demanding</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E4</td>
<td>Construction jobs are masculine in nature</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E5</td>
<td>Construction jobs are undertaken under harsh working conditions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E6</td>
<td>Construction jobs have long working hours</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E7</td>
<td>Construction jobs are career focused at the expense of family</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E8</td>
<td>Female graduates face glass ceilings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E9</td>
<td>Female graduates are not given equal opportunities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E10</td>
<td>Female graduates are given desk bound jobs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E11</td>
<td>Male culture exists at the workplace</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E12</td>
<td>Female graduates face sexual harassment at work</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Variables identified by:

- Gale (1994); Fielden et al (2000, 2001); Isaacs (2001)
- Fielden et al (2001)
- Fielden et al (2000, 2001)
- Fielden et al (2001)
- Lingard and Sublet (2000)
- Bennett et al (1999); Dainty et al (2000, 2001)
- Gale (1994); Dainty et al (2000)
- Fielden et al (2000)
<table>
<thead>
<tr>
<th></th>
<th>Internal factors</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>E13</td>
<td>Female graduates are not easily accepted at the workplace</td>
<td>Dainty et al (2000); Greed (2006)</td>
</tr>
<tr>
<td>I1</td>
<td>Intimidated by overwhelming males on sites</td>
<td>Fielden et al (2000)</td>
</tr>
<tr>
<td>I2</td>
<td>Having interpersonal skills</td>
<td>Bennett et al (1999)</td>
</tr>
<tr>
<td>I3</td>
<td>Managing and supervising staff</td>
<td>Bennett et al (1999)</td>
</tr>
<tr>
<td>I4</td>
<td>Being competent at work</td>
<td>Agapiou (2002)</td>
</tr>
<tr>
<td>I5</td>
<td>Committed to career</td>
<td>Dainty et al (2000)</td>
</tr>
<tr>
<td>I6</td>
<td>Withstanding job pressure</td>
<td>Authors</td>
</tr>
<tr>
<td>I8</td>
<td>Being competitive</td>
<td>Whitlock (2002)</td>
</tr>
<tr>
<td>I9</td>
<td>Being logical and able to reason</td>
<td>Isaacs (2001)</td>
</tr>
<tr>
<td>I10</td>
<td>Having high level of performance</td>
<td>Bennett et al (1999)</td>
</tr>
<tr>
<td>I12</td>
<td>Paying attention to details</td>
<td>Bennett et al (1999)</td>
</tr>
<tr>
<td>I13</td>
<td>Having technical skills</td>
<td>Dainty et al (2000)</td>
</tr>
</tbody>
</table>

Source: (Ling and Poh, 2004)

Ling et al (2004) carried out a survey to establish whether female QS undergraduates are deterred from entering the construction industry in Singapore because of the issues identified in the above-mentioned table. The population of this study comprised full time female QS undergraduates in Singapore. These students were enrolled in the four-year BSc (Building) programme at the National University of Singapore.

From the 80 questionnaires distributed by Ling et al, 2004, 64 usable questionnaires were returned, comprising 36 from 4th year students and 28 from 3rd year female QS undergraduates. The response rate of 81% is high. Amongst the 54 respondents, 33 of them (51.6%) were not sure if they would be joining the construction industry (hereinafter labelled as “fence sitters”), and 27 (42.2%) planned to enter the construction industry. The remaining four of them (6.2%) had decided not to work in this sector (Ling et al, 2004).
The responses showed that the majority of the students were not sure if they would be joining the construction industry. This is a big problem because scarce resources had been invested in training these female undergraduates, and yet, they may never enter the construction industry. This may later give rise to skills shortages and women's underrepresentation in the construction profession may also become worse (Fielden et al, 2000).

Table 2.6 shows that female QS undergraduates felt that construction jobs have a poor image (E1) and are very competitive in nature (E2). The “fence-sitters” felt that these factors may prevent them from entering the construction industry. Female QS undergraduates who are “fence sitters” felt that jobs in the construction industry are masculine in nature (E4), are stressful and demanding (E3), and entail long working hours (E6). These conditions prevent them from entering the construction industry. Dainty et al, (2000) have also found site work to be time consuming and infringing on social activities and family responsibilities.

To improve working conditions, it is recommended that construction companies shed the labour intensive and low skilled practices, and adopt higher level of mechanization and greater application of IT (Ling et al, 2004). It is also recommended that construction professional bodies and universities hold joint education and career seminars to introduce students and the general public to the construction industry. Female professionals could be invited to give career talks and share their working experiences (Ling et al, 2004).

Table 2.6 also shows that the “fence-sitters” felt that sexist attitudes exist in the construction industry in the following form:

- female graduates face glass ceilings (E8)
- female graduates are not given equal opportunities (E9)
- female graduates are given desk bound jobs (E10)
These ‘attitudes’ are therefore barriers which exist in Singapore that discourage women from entering the construction industry. Companies need to provide mentors for undergraduates that enter the construction industry. Mentors should ideally be women who would also act as role models (Ling et al, 2004).

2.6 Chapter summary

The following are the key findings from the countries discussed in this chapter:

Expanding inclusivity, which includes attracting and retaining more women in the construction sector, is a priority. In countries facing skill and labour shortages, increasing the number of women in the workforce would go some way to solving the problem (Gurjao, 2005). This would certainly improve productivity in India, if more women progress to become skilled workers.

Women reported that men in the construction industry still believe that women are physically, psychologically and technically incompetent. Men perceive women to be fit for administrative or ‘desk bound’ jobs only and are not willing to ‘part with’ or ‘pass on’ their skills to women which becomes a major challenge. It was also reported that women still experience high levels of sexual harassment and discrimination. These factors are a major cause for women not wanting to enter the construction industry.

For older women, the real barrier is the balancing of work and family life, just like other industries. The long hours and ‘presenteeism’ ¹ (the need to be seen at the job) culture, is difficult for female employees with childcare responsibilities, making the work-life balance a serious barrier to remaining in the construction sector. Women returnees, who have taken time out to raise a family, find it difficult to re-enter the construction industry. Construction employers will have to implement creative solutions, such as re-training to update skills, flexi-time, part-time working,

¹ Refer to ‘List of Definitions’
working from home, and job sharing in order to recruit and keep much-needed female employees across all levels of construction work.

The "glass ceiling" still exists in most countries today amongst many companies and it is recommended that employers conduct 'glass ceiling' self-audits to ascertain whether their organizational practices and corporate cultures impede the advancement of women (Ling et al, 2004).

The non-availability of toilets on construction sites is another major problem which many women reported at their interview.

2.7 Conclusion

The construction industry abroad cannot afford to ignore key sectors of the workforce. As a core industry throughout the world, construction needs to access a wider pool of talent from a more diverse range of people in terms of age, gender, and ethnic origin in order to recruit and develop a high quality workforce that is motivated and skilled to meet the demands of growing construction needs. Recruitment must be followed by induction of the new employee in order to improve retention levels. Job satisfaction as a result of opportunities like training and development, and promotion is more likely to retain staff.

The next chapter looks at a few countries on the African continent with regard to the experiences of women in the construction industry.
Chapter 3: International Literature Review (Africa)

3.1 Introduction

This chapter focuses on women that are employed in the construction industry and in particular, the poor female worker in Africa, at the centre of the analysis. It is her labour and enterprise which creates the wealth of the nation, and whose hard work leads to national growth. She needs security, a decent life, a share in the prosperity of the nation and the dream of a good life for her children. In a way, the change in economy has brought about a visibility for the women worker which did not exist before. The term ‘feminization of labour’ is now widely used and women are becoming more visible in the construction industry which until recently seemed to be barred to them.

The following countries were studied to ascertain the levels of participation of women in the construction industry in African as well as the existing constraints that affect the performance of women:

- Nigeria
- Botswana
- Ghana

The above countries were chosen to produce a detailed comparison of women in the construction industry in developing countries. This will give the reader a fair knowledge on the topic and the current status regarding the African continent. This will also help to highlight the challenges which exist in Africa (and possibly in South Africa), which we as South Africans can learn from and do our best to prevent from happening in order to progress.
3.2 Nigeria

3.2.1 Introduction

Female resource represents about half of Nigeria’s human resources. For optimal utilization of human resources, gender equality and equity, it was considered that women should be adequately represented in the construction industry which is the prime motivator of the country’s economy (Adeyemi, Ojo, Aina and Olanipekun, 2006).

Adeyemi et al (2006) conducted a survey to determine the level of participation of women in some selected categories of workforce in the industry. Data was collected from medium and large construction contracting companies regarding the number of males and females in some selected categories of the workforce, the suitability of some construction tasks for women and the constraints to female entry into the construction industry using questionnaires and interviews and visits to construction sites (Adeyemi et al, 2006).

Refer to Table 3.1 which shows the comparative male and female staff strength of construction companies in Nigeria.
Table 3.1: Comparative male and female staff strength of construction companies in Nigeria

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Management Staff</th>
<th>Clerical Workers</th>
<th>Labourers</th>
<th>Craftsmen</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>F</td>
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</tbody>
</table>
### 3.2.2 Findings

The survey conducted by Adeyemi *et al.* (2006) revealed that only 16.3% of the sampled companies’ workforces were women. Approximately 50% of these women were employed as labourers, 37.5% as administrative staff, 10 per cent as management staff and 2.5% as craftswomen. The ‘paired t-test’ performed on the male/female numerical strength showed that women were underrepresented in the construction industry in Nigeria (Adeyemi *et al.*, 2006). The survey also indicated that women preferred office related construction processes to site production.

---

2 Refer to “List of Definitions”
The survey also showed that only 16.30% of the total workforce was permanently employed in the industry as compared to 83.70% of men. 71 women personnel who made up 16.21% were employed in management positions while the figure for men was 367 (83.79%). Adeyemi et al (2006) also stated that it was observed that many of the 71 women classified as management staff were actually involved solely in administration and accounting. This further reduced the numerical strength of true women construction professionals.

Only 18 female crafts-persons were reported in this survey which shows that females are least employed as crafts-persons. The craft trades are therefore not disciplines which women tend to pursue. This could be linked to the traditional belief that these disciplines are strictly for men as some of the tasks require physical strength such as block laying, erection of formwork, reinforcement fixing, concrete placing, plumbing, carpentry, electrical installations, excavation and demolition (Adeyemi et al, 2006).

The construction industry is the core of Nigeria's economy and a major indicator of the country's wealth in social and economic terms. The industry is responsible for about 70% of the fixed capital formation and contributes 3% to the gross domestic product (GDP) (Adeyemi et al, 2006). Nigeria has a projected population of 128.77 million people and 49% of the working age is presumed to be females (Adeyemi et al, 2006).

Research efforts into female participation in construction in the developed countries have empirically revealed quite a number of socio-economic and cultural constraints inhibiting female entry into construction (Adeyemi et al, 2006).

Adeyemi et al (2006) confirmed some of these constraints as:

- A general prevalence of male culture in the construction industry.
• Outright gender discrimination which manifest as unequal job opportunities for women in the construction industry and intimidation of female workforce.
• Smaller proportion of women training in construction and allied fields.
• Low level image of the construction industry.
• Stressful, inflexible and harsh working conditions coupled with long hours of work which make it difficult for females to reconcile work requirements with family commitments.
• Competitiveness of construction business – a phenomenon that often generates the ‘glass ceiling syndrome’ (inability to attain senior position in the firm) for women.
• Lower level of females’ self confidence at career level compared to the males.

Very little research exists regarding female participation in construction. However, a number of studies on the informal housing delivery which is a sub sector of the Nigerian construction industry have revealed that there is low level of female participation in construction (Adeyemi et al, 2006).

This problem is also due to socio-cultural beliefs and values that prevail among the amalgamated multi-ethnic groups constituting Nigeria (Adeyemi et al, 2006). One of the main values and/or beliefs has been raised from the ‘one man many wives’ tradition which treats women as subordinates to men. There was a preference for a male child. This situation excluded women from formal education and training right from infancy. It encouraged the general belief of a low level of female intelligence, non-recognition of unmarried women and castigation of some economic activities as exclusively belonging to men such as construction (Adeyemi et al, 2006).

However, there has been a gradual change and noticeable increase in the female population in the engineering and environmental design fields in the last two decades due to women having equal access to education (Adeyemi et al, 2006).
Interviews conducted by Adeyemi et al, 2006 revealed that the recruitment factors which were rated the highest, such as work experience, potential for high productivity, academic qualifications and physical strength do not often favour women during interviews. At the time of recruitment, men usually outnumber women and due to age and long-standing tradition, men had better work experience and were naturally more productive on site. While women may have the same qualifications as men, the number of men having the same qualifications often outnumbers that of women.

The major aspects of construction works are site based and therefore it is required that certain workers such as site managers, project supervisors, foremen, craftsmen, labourers, etc., are physically fit to withstand the harsh site conditions like noise, dust and vibrations. This is in addition to lifting heavy objects, excavating, climbing, fixing components and operating plant and equipment. Men are considered to be more physically fit for these site conditions, the accompanying tasks, risks and health hazards.

Adeyemi et al (2006) therefore empirically revealed the inadequate participation of women in the Nigerian construction industry, which adds to the widespread belief that construction is a male dominated enterprise. Females feature prominently as administrative and clerical staff in office related construction activities and a vast majority of them are employed as labourers on construction sites. They are, however, almost absent in the craft trades and construction professionals. A woman’s other roles of mother and/or wife also prevents them from achieving their career goals.

Nigerian women claim that as long as they remain single, they could work in any area within the industry without much difficulty (Chun, Arditi and Balci, 2009). There is an urgent need to revise the National Construction Policy of Nigeria to adequately and objectively reflect gender issues (Adeyemi et al, 2006).
The Federation of Construction Industry (FOCI) in Nigeria is required to play a leadership role with regard to the mainstreaming of women into construction. The federation should also assist in forming a women labour pool from where construction companies can recruit female personnel (Adeyemi et al, 2006).

The pool could even be used on sustainable mass housing delivery. Mass housing production is characteristically simple, requiring no use of heavy equipment but is repetitive and labour intensive. It is an area of construction where female professionals can easily be integrated into decision making with respect to design, project planning and materials procurement. The female unskilled labour force naturally often outnumbers males on labour intensive construction sites in Nigeria. Mass housing production should therefore be an avenue for providing more employment for a female workforce (Adeyemi et al, 2006).

3.3 Botswana

3.3.1 Introduction

Similar to the Maasai, Galole Orma, Basotho and Ndebele, women in Botswana have traditionally built houses for their families. Once a man had acquired a residential plot, it was the responsibility of the wife to decide on the number, location and size of the various housing structures to be erected within the compound. According to Larsson and Larsson (1984), building a traditional Tswana house involved gathering materials and a few simple tools to be used (Kalabamu, 2005). The hand was the most important tool. The knowledge of building was passed on from one generation to the next by participation and observation. Like the Maasai, each house was known by the wife’s name even though the husband habitually shared it with her (Kalabamu, 2005).
3.3.2 Findings

Recent studies and census data have revealed that in Botswana, as elsewhere in sub-Saharan Africa, women are grossly underrepresented in formal (usually urban based) construction activities (Kalabamu, 2005). In 1991, women accounted for less than 14% of the national population employed in the construction sector (Kalabamu, 2005). In urban areas, only 11% of the population employed in the sector were women. Then, the majority of women (up to fifty percent in some towns) were employed as domestic workers (Kalabamu, 2005).

Table 3.2: Professionals and technicians in construction related fields, 2001

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Men</th>
<th>Women</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architects, Engineers, and related professions</td>
<td>1,805 (91.4%)</td>
<td>169 (8.6%)</td>
<td>1,974 (100%)</td>
</tr>
<tr>
<td>Physical and Engineering Science professions</td>
<td>2,263 (89%)</td>
<td>281 (11%)</td>
<td>2,544 (100%)</td>
</tr>
<tr>
<td>Building and Construction Trades workers</td>
<td>34,943 (92%)</td>
<td>2,981 (8%)</td>
<td>37,924 (100%)</td>
</tr>
<tr>
<td>Total</td>
<td>39,011 (91.9%)</td>
<td>3,431 (6.1%)</td>
<td>42,442 (100%)</td>
</tr>
</tbody>
</table>

Source: (Kalabamu, 2005)

As per Table 3.2 and according to the results of the 2001 census, women now account for only 8% of all the labour force in the construction industry (Kalabamu, 2005). About half of the few women employed in the construction industry worked as labourers, one third as crafts and tradesmen and less than 10% as clerks. Women are also underrepresented in administrative, managerial and professional fields of the construction industry. According to the 2001 census, women constituted less than 12% of professionals (architects, engineers and physical planners) in Lobatse, the second oldest and the fourth largest town in Botswana (Kalabamu, 2005).

Kalabamu (2005) undertook studies in Lobatse in 1996 and 2004. The study revealed that women were almost absent in two construction sites where six
construction companies had been contracted by the Botswana Housing Corporation to build over 1000 houses. Firstly, of the 700 employees at the two sites, only nineteen (less than three percent) were women. Secondly, none of the companies were owned, managed or controlled by a woman. Thirdly, none of the six companies had a female engineer or technician. Fourthly, two companies did not have a single female employee. Two companies had one woman each who worked as a clerk of works while another two companies had employed three female painters of whom two were qualified and one was an apprentice. The remaining fourteen (out of nineteen) were labourers whose duties included mixing concrete and carrying bricks in wheelbarrows (Kalabamu, 2005).

Site foremen contributed the absence of women in their payroll to several factors. Firstly, they argued that masonry work is too heavy for women and women are best at cleaning and painting. Secondly, they claimed that there were no skilled female tradesmen. Thirdly, they said, women do not seek casual employment as building labourers on construction sites. However, the foremen were satisfied with the performance of the few women within their employment and noted that women had a more positive attitude towards work than men who demanded payment at the end of each day and were absent from duty at the end of each month. The site foreman also said that women do not cause any trouble (Kalabamu, 2005).

Female labourers in the construction industry in Lobatse are likely to be young girls who dropped out of school in their late teens or early twenties (Kalabamu, 2005). She is likely to have completed her junior secondary school education in her home village but could not proceed further. Alternatively, she could have dropped out of school due to pregnancy or other social problems. On arriving in Lobatse, she could have shared a room with a friend, distant relative or an acquaintance from her home village. The search for the desired or appropriate job becomes fruitless as she lacks specialized training, experience and skills. She tries to establish her own business but lack of capital and reliable customers soon prove inhibitive. Alternatively, or later, she falls in 'love' with a boy. The boy, however, abandons her after a couple of months or as soon as she becomes pregnant. Then employment as a labourer at a construction site,
when available, becomes the only alternative source of income. She works for the contractor as she cannot train as a nurse or teacher or find employment as a cashier or textile worker. If her hopes are not fulfilled but she continues to work diligently for several years, the contractor may promote her to the post of clerk of works or as an apprentice. Despite the overwhelming number of men at the site, she experiences no sexual harassment or discrimination. She likes the male company but not the job, which she deems is tough and unfeminine (Kalabamu, 2005).

Kalabamu, 2005 also mentioned that some contractors stated that as a matter of practice they do not employ women. Neither female labourers nor women tradesmen reported any form of sexual harassment or discrimination from their male colleagues, whether in training or at work.

Women’s exclusion from building activities in Lobatse and elsewhere in Botswana is not confined to the waged or formal construction sector but extends to self-help housing (Kalabamu, 2005). Participation of household members in own house construction was almost entirely limited to unskilled labour input such as making concrete blocks, watering the blocks, mixing and serving sand-cement mortar, passing bricks and general manual work. Unless the male partner or the son was a trained builder, most households, whether male or female headed, hired skilled artisans to build, roof, plaster and paint houses for them. All the hired builders were men. The study by Tawengwa (1998) also revealed that regardless of the gender of the household head, all the hired skilled and unskilled labourers were male (Kalabamu, 2005).

Women’s physical participation in the construction of self-help houses in Lobatse was limited to mixing concrete, making and watering bricks or working as labourers for the male builders. Although women’s physical participation in self-help housing was confined to activities that do not require any special training, most women (especially women without formal employment) played significant roles in acquiring land, engaging builders, supervising and managing construction processes, and procuring building materials for their self-help houses (Kalabamu, 2001 and 2005).
Therefore it was concluded that in Botswana, women in Lobatse were largely excluded from core construction activities whether it be waged or self-help. Occasionally, women were included as labourers but rarely as tradesmen or professionals. Women, who worked as labourers or trained as tradesmen, did so without choice, having failed to get better jobs or to train as nurses, teachers or other so called feminine professions (Kalabamu, 2005).

Larsson (1989 and 1990) argues that men's takeover of housing responsibilities from women in Botswana was due to modernization processes where housing was transferred from the sphere of women to the sphere of men, but more importantly from the domestic sphere to the public sphere. This has rendered women's construction skills useless in urban settings. However, it promotes the demand for male labour, who is often the only one skilled to erect Western style houses as well.

Women's exclusion from building activities have also been intensified by the increasing and widespread popularity and preference for non-traditional building materials such as cement, concrete blocks and metal over mud and grass probably because the former are more durable (Kalabamu, 2005). Furthermore, formal and informal (on-the-job training) and educational facilities have tended to exclude girls either as a matter of policy or through socialization by labelling building trades as 'masculine' or refusing to employ female tradesmen.

3.4 Ghana

3.4.1 Introduction

In Ghana, the construction sector has been socially and culturally regarded as the preserve of men (Abankwa, 1995). It is the norm in the home environment where girls are made to accept certain female values of raising families and engaging in particular trades. Until recently, training programmes in construction were targeted at
boys. The training institutions had no facilities for girls even to participate as day students. At the tertiary levels, statistics show a low percentage of between 1 to 10% for women who have trained in the construction related professions (the highest being in architecture) (Abankwa, 1995). However after the training, records available from public construction agencies have shown the participation of women in the sector to be about 0.05%. This is an indication that even though some women get trained in a construction related field most of them do not actually work in the sector. The reasons have included workplace politics as well as frustrations from subordinates.

3.4.2 Findings

With women constituting more than 50% of the country's population and the fact that many of them are untrained, women's participation in the trade levels of construction remains limited (Abankwa, 1995). In Ghana, 51% of the estimated 14 million people are women. The women head 28.3% of all households and account for 60.2% of household financial contributions. Women also make up 57.4% of the actual labour force (Abankwa, 1995).

Refer to Table 3.3 for a breakdown of the percentage of men and women in the various employment sectors of Ghana. Abankwa (1995) stated that there has always been the underrepresentation of women in architecture, building technology and other construction related fields.
<table>
<thead>
<tr>
<th>Sector</th>
<th>Total employed</th>
<th>% Men</th>
<th>% Women</th>
<th>% of Total labour force</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>3,310,967</td>
<td>52.9</td>
<td>47.1</td>
<td>56.10</td>
</tr>
<tr>
<td>Mining and quarry</td>
<td>26,828</td>
<td>92.8</td>
<td>7.2</td>
<td>0.07</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>588,418</td>
<td>33.7</td>
<td>66.3</td>
<td>14.00</td>
</tr>
<tr>
<td>Electricity and water</td>
<td>15,437</td>
<td>90.9</td>
<td>9.1</td>
<td>0.05</td>
</tr>
<tr>
<td>Construction</td>
<td>64,686</td>
<td>93.9</td>
<td>6.2</td>
<td>0.14</td>
</tr>
<tr>
<td>Trading</td>
<td>792,147</td>
<td>14.1</td>
<td>85.9</td>
<td>24.40</td>
</tr>
<tr>
<td>Transport</td>
<td>122,806</td>
<td>95.4</td>
<td>4.1</td>
<td>0.18</td>
</tr>
<tr>
<td>Finance and insurance</td>
<td>27,475</td>
<td>72.5</td>
<td>27.5</td>
<td>0.27</td>
</tr>
<tr>
<td>Personnel service</td>
<td>473,716</td>
<td>71.7</td>
<td>28.3</td>
<td>4.80</td>
</tr>
</tbody>
</table>

Source: (Abankwa, 1995)

Generally, women contractors operate mainly in housing construction and materials production. In recognition of the limitations of the small-scale contractors, the Ghanaian government is pursuing programmes aimed at redirecting the role of the public sector and providing incentives to private estate developers to invest more in housing. Out of a concern to improve the income and living standards of Ghanaian women, and also to foster their meaningful integration into the labour force and increase their productivity and social status, the Government of Ghana decided to provide women with basic construction skills under the Urban II Project of Technical Services Centre (TSC) (Abankwa, 1995).

Women’s participation in Ghana’s industrial sub-sectors has been minimal especially in the areas pertaining to electricity, gas, water and mining (Amu, 2005). The lower participation of women in the other industrial sub-sectors may have a lot of reasons, one of which is the relatively low level of educational attainment for women in Ghana. For instance in 2000, only about 3% of women entered tertiary institutions in
Ghana while only about 5.7% of women have secondary education or higher (GLSS4) (Amu, 2005). However, jobs in the electricity and gas, mining and construction sectors require specialization, which means prolonged period of education, which most women do not have (Amu, 2005). Thus, most women are automatically cut off from jobs that require higher and specialized education. It can also be seen that there has been a drop in the percentage of women’s participation in the construction industry if we compare Abankwa’s 1995 table to Amu’s 2005 pie chart (Figure 3.1). There is a reduction from 6.2% to 5%.

Figure 3.1: Distribution of women in Ghana by Industrial sub sectors (%)

Other reasons may include the stereotyping of women in terms of occupation, where some jobs are considered feminine and others masculine thus putting some barriers in the way of women who wish to pursue careers in such fields. It may also be as a result of constraints in terms of time that such professions may put in the way of women, especially married women with infant children. In this instance, women may tend to find jobs where it will be relatively easier to combine their 3-in-1 professions: being a career woman, a wife and a mother (Amu, 2005).
Other concerns of women in the industry include:

- Lack of sufficient and affordable credit facilities, given the interest rate on loans;
- Technical expertise to meet the demands of the increasingly sophisticated consumer;
- Stiff competition from cheap imports;
- Access to information and technology.

These and other issues may contribute in preventing women from fully participating in more specialized sub-sectors industry. It is therefore paramount that programmes and policies are designed and implemented to solve these challenges (Amu, 2005).

Women are perceived to be homemakers and therefore they are reared to care for the home and children. This contributes to the low self-esteem of women who are made to believe that they are inferior to men and can therefore not stand up for themselves (Amu, 2005).

There are some common sayings that tend to perpetuate this low self-esteem of women (Amu, 2005). They include, but are not limited to the following:

- 'The woman's place is in the kitchen'
- When a woman gives birth people normally ask, 'is it nyipa (a human being) or a girl'
- When there is trouble in the home they will call the 'men'.

In the home a girl is taught to cook and to house keep in general while a boy is left to play football or do anything that he pleases (Amu, 2005). These and others factors have tended to diminish the importance of women in society both economically and socially. It is therefore important that the socialization processes that both boys and girls go through are made as gender neutral as possible. Only when the boy and the girl are made to believe in their equality and overcome the prejudices that both
genders have against each other, we will be able to fully integrate the girl/woman into all sectors of activity in the economy – socially and economically (Amu, 2005). Thus, women form the bulk of the poor in Ghana.

The Accra Daily Mail (05 July 2007) reported that women who were engaged in the road construction industry have expressed concern about the level of discrimination they faced regarding the awarding of contracts (The Norwegian Council for Africa, 2011). The women, who are members of the Association of Road Contractors (ASROC), said that contracts were not given to them because there was the fear that a woman could not do the job. Mr Twumasi Mensah, Chairman of ASROC, Ghana, said that women had come together because of the many problems they faced in the construction industry. "In a male-dominated industry such as ours, women need to come together and co-operate among themselves," Mr Mensah noted. He also mentioned funding, training, equipment and vehicles as challenges that women faced and which prevented them from competing with their male counterparts. Mr Mensah also noted that the women in the industry were dedicated, hard working and very efficient on the job even though they faced the challenges stated above.

In summary, the following have been identified as the major challenges that need to be addressed urgently in Ghana regarding the upliftment of women in the construction industry:

- gender-based issues related to increased and expanded access to credit; especially micro-finance as well as to broader processes of economic growth;
- women’s access to and control over land;
- women’s educational and training needs as well as access to information and technology;
- the time constraints on women.
3.5 Chapter summary

In general with African countries, many disciplines in the construction industry are regarded as disciplines for men and not for women. Men are seen to be more physically fit for the site conditions, the accompanying tasks, risks and health hazards. Traditionally, women are seen as having a low level of intelligence and also seen as being unsuitable for construction work which leads to women having a low self esteem. This prevents women from choosing a career in the built environment field. If women do work on site, their work is limited to being labourers and not tradesmen. Eliminating gender discrimination and traditional beliefs regarding women in the industry is a major challenge.

Women are underrepresented in the managerial and professional fields of the construction industry. This is mainly due to the low percentage of women that enter tertiary institutions or who have secondary education as well as the smaller proportion of women training in construction and allied fields. Generally, women contractors operate mainly in housing construction and materials production.

While sexual harassment may be lower as compared to countries outside the African continent as discussed in chapter 2, gender discrimination is still however a major factor which deters women from entering the construction industry. The stressful working conditions and long working hours that prevent the balance of work and family life are also barriers that prevent women from working in the sector.

3.6 Conclusion

In summary, the important issues and challenges regarding African countries in general are:

- Reducing male dominance.
- Eliminating gender discrimination and traditional beliefs.
• Attracting more women to the industry by focusing on young entrants such as school leavers and university graduates.
• Retention of women in the workforce.
• Understanding the extent of women employed in the whole industry, including the supply chain.
• Improving the working conditions for women in the industry such as the provision of toilets and ablutions for women in construction.

The next chapter looks at the experiences of women in the South African construction industry. The chapter discusses the issues associated with professional women graduates as well as women contractors.
Chapter 4: South African Literature Review

4.1 Introduction

Unemployment is one of the most important challenges faced by the poor people in South Africa. This has been made worse by the fact that over the last two decades, we have had a high level of retrenchment and every year hundreds of thousands of new jobseekers remain unemployed. The unemployment rate in 2011 currently stands at 23.3% countrywide (Index Mundi, 2011). Refer to Figure 4.1. The gender disaggregation of the data in 2006 showed that the rate of unemployment amongst men was 22.6% as compared to 31.7% amongst women (SSA, 2006), which shows the susceptibility of women to poverty (Ndinda and Uzodike, 2008).

Figure 4.1: Unemployment Rate (South Africa)

Source: (Index Mundi, 2011)
It is accepted worldwide that the development and growth of small, micro and medium enterprises (SMMEs) can play an important role in turning the unemployment situation around. Policies and programmes to support the development of SMMEs are therefore an important part of the democratic government's programmes to create a better life (ETU, 2010).

The government's national small business strategy seeks to address the following common problems faced by SMMEs (ETU, 2010):

- An unfavourable legal environment
- Lack of access to markets and procurement
- Lack of access to finance and credit
- Low skills levels
- Lack of access to information
- Shortage of effective supportive institutions

Since its inception, the national small business strategy was aimed at targeting women. However, women continue to make up the bulk of the subsistence sector of SMMEs and of the poor. During the last decade, a number of organizations and institutions were established by women to assist the many up and coming women entrepreneurs in construction.

There are many factors that lead to women choosing a career in construction. Figure 4.2 illustrates that women in South Africa are in construction mainly because of the need for new challenges, the need for achievement as well as their love for construction.
**Figure 4.2**: Reasons why women get involved in construction in South Africa

Source: (Verwey, 2005)

**Figure 4.3** highlights some of the reasons that trigger the start-up decision which is defined as the 'push and pull' factors of entrepreneurship. The 'pull' factors are those which encourage potential entrepreneurs by virtue of the attractiveness of the option (Verwey, 2005).

The 'push' factors on the other hand are those that make the existing option less attractive (Verwey, 2005).
4.2 Women in housing

There is an estimated 2.5 to 3.7 million people in South Africa, who are either unhoused or under-housed, the majority of who are women (Mjoli-Mncube, 2005). In South Africa in 1996, it was estimated that about 1.5 million people lived in informal houses or in shacks in urban areas. Statistics also show that about 45.5% of the South African population live in three rooms or less (Mjoli-Mncube, 2005). This situation shows the need for a rapid housing delivery programme which will create an opportunity for women contractors to participate in housing delivery.
Traditionally in rural areas in South Africa, women have been builders of homes, roads, crèches, etc. In most cases, they attained the resources, defined the needs and became the primary users. The role changed when construction became a paying job, the role of women then became free group work (Mjoli-Mncube, 2005). Although women were involved in housing construction “women participated only in building the crèche. Those who got skilled jobs were mainly the men and those who got the unskilled jobs were mainly the women, because of the low proportion that had been trained. The women were involved in clearing the sites for construction, carrying water and mixing concrete” (Mjoli-Mncube, 2005).

Equipping women with construction related skills as well as giving them confidence to improve their development, ensures that women engage in self-build housing projects, which not only ensures that women have adequate shelter, but also that they earn an income from these skills (Agherdien and Smallwood, 2008). Getting women to participate in the construction industry empowers them to harness their development, which reduces vulnerability amongst women. The women in South Africa are waiting to release their strength and ability in order to prove they are able to work in the construction industry. Women demonstrated that they are capable of joining together to make a difference when faced with significant challenges (Agherdien et al, 2008).

There are about 1000 women-owned businesses now registered and participating in construction through support organizations such as Khuthaza previously known as Women for Housing (WFH), South African Women in Construction (SAWIC), South African Women Entrepreneurs’ Network (SAWEN), etc. Refer to Annexure 1 for a list of some support organizations for women in construction. In a recent survey carried out by Ncwadi and Dangalazana (2006) regarding the emerging contractors in the construction of low cost housing in the Nelson Mandela Metropole, it was shown that 58% of the respondents were female. Females therefore played a dominant role amongst the emerging contractors in the Nelson Mandela Metropole.
Women's involvement in the housing industry is characterized by a number of challenges as it has been a male dominated industry for a long time. The most important challenges being domestic responsibilities, access to finance, and lack of construction skills.

4.3 Professional women graduates in construction

The University of Pretoria reported that approximately 10% of their undergraduate students in construction management are female with up to 20 to 25% in quantity surveying (De Leeuw, 2003). In their post graduate courses (MSc) women make up about 10% in the real estate course and between 20 and 25% in the project management course (De Leeuw, 2003). Generally, women are top of the class. Women, who enter what they perceive to be a man's world, are generally much more intent on succeeding than their male counterparts (De Leeuw, 2003).

Geertsema (2007) summarizes the results of the survey (Refer to Table 4.1) carried out by Pieterse, 2003 at Universities and Technikons (now called Universities of Technology) throughout South Africa. Overall, more female students chose quantity surveying as their field of study.

Table 4.1: Average percentage of women studying in construction sciences in South Africa

<table>
<thead>
<tr>
<th>Field of study</th>
<th>Universities</th>
<th>Technikons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction Management</td>
<td>3,1 %</td>
<td>6,5 %</td>
</tr>
<tr>
<td>Quantity Surveying</td>
<td>20 %</td>
<td>13 %</td>
</tr>
<tr>
<td>Civil Engineering</td>
<td>8,3 %</td>
<td>13,2 %</td>
</tr>
</tbody>
</table>

Source: (Geertsema, 2007)
According to the South African Black Technical and Allied Careers Organization (SABTACO) president Paul Kgole, there is still a shortage of black women entering the engineering field in South Africa (De Leeuw, 2003). SABTACO is an organization that aims to facilitate the creation of an environment that is conducive to the development and promotion of science and engineering skills in black communities. Its membership covers practitioners, graduates, technicians and students in the technical disciplines, including project management; civil, structural, metallurgical, mining, industrial, chemical engineering and geology. Of the two thousand members that SABTACO had in 2004, only one hundred were women (De Leeuw, 2003). The only professions that seem to attract women to them are Architecture and Quantity Surveying.

Lawless (2005) showed the anticipated gender transformation from 2004 until 2020 in her book ‘Numbers & Needs’, regarding the civil engineering profession. Refer to Figure 4.4.

Figure 4.4: Gender in civil engineering

Source: (Lawless 2005, Pages 228-229)

Lawless, 2005 stated that the recent efforts in terms of career guidance and the increased number of bursaries have had a significant effect on transformation. Figure 4.4 shows the steady anticipated increase of female civil engineer graduates for the future. Lawless (2005) also mentioned that on average, the female student
population has been increasing by 1.5% per annum over the last ten years. However she emphasized that more campaigns need to be directed at women and that it must be remembered that women constitute a virtually ‘untapped pool’ of resources to be developed.

4.4 Networking and linkages

Networking and linkages basically mean forming formal and informal partnerships and ties with other organizations in different areas of mutual interest and/or benefits (SGP, 2010):

Partnerships can be formed on technical grounds such as:

- For providing technical know-how.
- Skill sharing for monitoring and evaluation, proposal development, impact assessment, etc.

Partnerships can also be formed on general grounds such as:

- Cross sharing of experiences.
- Exchange of basic learning’s, concepts and knowledge.
- Sharing of trained manpower.
- Taking forward and strengthening support initiatives.

Networks and Linkages can be formed with various organizations that share the common vision and values for social development for any of the above-mentioned purposes (SGP, 2010). The organizations can be:

- Government at the National, State and Regional level.
- Various departments within the government.
- Non-government organizations (NGOs).
- Community based organizations (CBOs).
- Academic institutions.
• Advocacy and knowledge sharing consortium and networks.

The objectives of support organizations for women in construction are to protect women entrepreneurs in construction against discrimination, to access construction contracts, to create and secure business opportunities, to enhance their business enterprises, to promote women in the industry, to identify problems, to come up with solutions, to establish a competitive edge and to showcase their successes in order to survive in the male dominated construction industry. Therefore, these organizations need to be supported in order for them to strengthen business associations for their members to establish and run viable enterprises that can give them sustained incomes. This is discussed in more detail in chapter 6.

Government departments of gender are required to direct, execute and co-ordinate policies towards women’s liberation and development. Local authorities should assist with services including the provision of land for business premises and finance institutions for the provision of financial assistance. Technical institutions should be focused on the enrolment of more women in construction related courses.

4.5 Technology

South Africa should aim to attain development and promotion of appropriate technologies to assist women. In the ‘Women in Construction’ project (South Africa) a hydraulic brick press machine was introduced in March 2004 (DBSA, 2009). The hydraulic brick press was designed in response to queries raised by women under the project that the manual brick press was heavy and difficult for women to use.

4.6 Information dissemination

The media needs to play an important role in uplifting and capturing the profiles of women role models who have managed to claim the middle ground in the
construction sector. These profiles will encourage prospective new entrants in the construction sector (DBSA, 2009).

4.7 Construction Contact Centres

The previous Minister of Public Works, Ms Thoko Didiza, launched the first Construction Contact Centre (CCC) in Mayville, Durban on the 4th August 2007 (CIDB, 2011).

Construction Contact Centres are facilities created by the Construction Industry Development Board (CIDB) in partnership with Departments of Public Works at national and provincial level. It is a uniquely innovative concept that integrates all the support services that emerging construction contractors need, under one roof (Department of Infrastructure Development, 2011). The centres aim to provide one-stop shops for emerging contractors and professional service providers to access both financial and technical support (SouthAfrica.info, 2009). Skills development will also be provided for, so as to build the capacity of small enterprises and facilitate their further involvement in development processes. The contact details for the various centres can be found on the CIDB website: http://www.cidb.org.za/.

Thoko Didiza, the previous Minister of Public Works, explained that the contact centres would provide a platform for information and support on training, employment opportunities and registration (Engineering News, 2010). The target group for the contact centres is emerging construction contractors with CIDB level 1 to 4, particularly women, the youth and persons living with disabilities.

The aim of the Construction Contact Centre is to develop and support emerging contractors in the following ways (Department of Infrastructure Development, 2011):

- Assist the emerging contractors in complying with legislative requirements for the incorporation and administering of a construction business entity, such as CC registration, CIDB registration and up-grade, etc.
• To skill and up-skill emerging construction contractors and cooperatives in both soft and basic hard skills on various areas of the construction industry.
• To incubate emerging contractors and suppliers of construction materials to become efficient, competitive and sustainable business entities.
• Overall on-site support of emerging contractors to deliver good quality on specific projects in the following areas:

  - Site establishment
  - Cash-flow projection and management
  - Projection and management of Construction programme
  - Labour allocation and management
  - Material procurement and management
  - Submission of invoices
  - Health and safety issues
  - Handling of construction plant
  - Technical skills transfer

Nine Construction Contact Centres have been launched thus far throughout South Africa which will be of great benefit to the emerging female contractor in South Africa.

4.8 Youth in Construction (YIC)

The Youth in Construction (YIC) initiative is the result of collaboration between the Department of Public Works and the industry in support of the National Construction Week (MBA, 2011). The expo was held in a few provinces thus far and targets pupils from grades 8 to 12. It aims to support the national development of construction industry skills by demystifying perceptions about construction and encouraging young people to consider careers in construction.
Objectives of the initiative (MBA, 2011):

- Promote wise and correct subject choice amongst learners such as Maths and Science.
- Awareness of the career opportunities within the construction industry.
- Exposure to potential post school education and training providers.
- Exposure to Construction companies offering bursaries and learnerships.
- Provide brief hands on experience at the skills exhibition.
- Give teachers more information for informed career guidance.

4.9 Challenges faced by women in the industry

Some factors that affect women entrepreneurs are as follows (DBSA, 2009):

- high cost of fuel,
- foreign currency,
- high inflation which makes business planning almost impossible.

The AIDS epidemic has not been kind to the construction sector which demand people who are healthy since it's physically demanding. This is discussed in more detail in 4.8.6. Other factors include limited access to finance and credit, limited access to land and limited access to technical skills. Women were also excluded from certain jobs, and from career progression through jobs, because of the expectations that they would marry, have children, and take responsibility for raising them (Agherdien et al, 2008).

“Lack of access to finance, poor business management and a dearth of skills were some of the challenges women faced in the construction sector”. This was previously said by the Public Works Minister Thoko Didiza (DBSA, 2009). "You already start to lose (money) before you gain," said Didiza explaining how women sometimes spent much needed capital to draw up proper business plans." (DBSA,
She said another challenge women faced was being able to deliver projects in record time and also failing to address contingency measures in the event of unforeseen occurrences, such as inclement weather.

The FIFA 2010 World Cup brought about thousands of new job opportunities to men and women, especially with the construction of the new stadiums. About 27000 construction workers were employed for the stadiums. Refer to Annexure 3 and Annexure 4 which show the enthusiasm of these female construction workers and their enjoyment of working in the construction industry. However once the projects had been completed in preparation for FIFA 2010, the majority of the construction workers were retrenched and the challenge for many of these women was to find new employment within the construction sector. On the positive side, construction workers were given extensive skills training which will enable them to meet the demand for skilled workers on other post 2010 construction projects (Mywage, 2011).

The following are a few of the more important challenges faced by women in construction today:

4.9.1 Limited access to finance and credit

The start of any business begins with availability of finance. Lack of finance is a vicious circle which involves unemployment and low wages (Mjoli-Mncube, 2005). Therefore we can see that unemployment, low wages and no access to credit constrains women to participating in the construction industry. These factors prevent women from developing and growing their businesses or companies and therefore they cannot compete against other businesses in the industry (Mjoli-Mncube, 2005).

Start-up costs for any project requires finance as it includes performance guarantees, all risk insurance, workmen's compensation, wages, site establishment costs, purchase of materials and equipment, administrative costs and personal living costs (Mjoli-Mncube, 2005). Many contractors in the South African construction
industry also face challenges such as negative credit records and lack of working capital. Credit records at credit bureaus prevent access to working capital. Working capital loans are also difficult to get as there are certain conditions for qualifying for such loans. Lack of financial management and project management skills are both critical and necessary for survival in the industry and are mostly lacking in companies owned by women (Mjoli-Mncube, 2005). Some women-owned companies lose their contracts because they cannot obtain the required finance in the necessary time and they lose their contracts to other bidders. This causes a lack of a continuous stream of work which depletes their resources between contracts and constrains them from obtaining finance from financial institutions (Mjoli-Mncube, 2005). Some women have started projects using their own finance and have not been able to complete the projects, thus losing their own investment and the client's investment.

Most women entrants in the industry come from professions outside the core built environment fields such as civil engineering quantity surveying, architecture, etc and as a result they enter the industry without the necessary technical and financial skills (Mjoli-Mncube, 2005). They either subcontract those activities or do without it. Those who import the skills usually lose touch with the finance of the business and have no control over profitability. Projects are completed on time and according to the programme however no profit is made. Therefore, there is no growth and hence no capacity to take on bigger projects (Mjoli-Mncube, 2005).

Lack of access to finances continues to be the major problem faced by people who want to start their own businesses, or to expand their businesses to become more profitable (Mjoli-Mncube, 2005). Commercial banks generally do not regard the majority of people as bankable or creditworthy. An important part of the national small business strategy is therefore to create an enabling environment for entrepreneurs and small businesses to access finances. Although a number of institutions have been set up, we still have a very long way to go (Mjoli-Mncube, 2005).
Government has also established mechanisms for access to finance, through entities such as Khula Enterprise and Ntsika Enterprise. The aim of these groups are to promote government policies of capacity building and improved financial accessibility in order to assist previously marginalized informal and formal businesses and to provide finance to emerging entrepreneurs. Women form part of this category. Refer to Annexure 2 for a list of these financial institutions.

4.9.2 Lack of growth

Mjoli-Mncube (2005) stated that most women-owned companies remain small, despite years of existence. In construction in South Africa, this poses a problem as it limits the jobs that women can actually tender for and in turn this limits them to projects of a particular size and complexity. Mjoli-Mncube (2005) stated that the Construction Industry Development Board (CIDB) and National Home Builders Registration Council (NHBRC) have come up with registers that regulate the industry and assign capacity in terms of financial capacity, experience and history. Women will most likely be classified at the lowest levels, thus limiting their competitiveness and impact (Mjoli-Mncube, 2005).

4.9.3 Fronting

Women in the South African construction industry are the unfortunate victims of fronting (Mjoli-Mncube, 2005). This usually happens when there is a lack of finance and also a lack of appropriate technical skills. For ethical companies that want to transform and improve their economic empowerment ratings, the natural choice would be to become involved in an enterprise development initiative that would involve a women-owned company. Unfortunately this is only true 40% of the time (Mjoli-Mncube, 2005). Sadly, in a fronting situation, there are no winners, no skills are transferred, no profit is made and government loses its quest to empower women.

In a statement by the Minister of Public Works in 2005, Ms Stella Sigcau, the four types of fronting were discussed (Mjoli-Mncube, 2005):
• Fronts on Paper: Only the documents are legitimate.
• Company fronts: In this case contractors claim to be black-owned or black-empowered.
• Fictitious companies: Those who are experienced establish fictitious companies that are awarded contracts.
• Fronts in joint ventures (JV): In this case a non-BEE contractor forms a joint venture with a BEE contractor for a specific project.

4.9.4 Limited access to land

Women's ownership, control and management of, as well as access to land and property are extremely important aspects of sustainable development. Women, like men, need a home as a means of livelihood as well as a form of wealth or capital. Women and men's relation to land have historically differed (Lee-Smith, 1999). Women's lack of equal property rights with men is a major cause of the so-called "feminization of poverty" (Lee-Smith, 1999). Men inherit land for free whereas women in general do not.

In many places, women may be allowed to buy land but in some cases they cannot even do that without offending custom (Lee-Smith, 1999). With globalization and the spread of the money economy, women are further disadvantaged because land becomes capital. This is important for an up and coming female entrepreneur who is looking at increasing her worth especially fixed assets. Land title deeds are the main form of security used to secure loans and credit (Lee-Smith, 1999). Without this piece of paper, women find it harder to get loans and have to resort to other means of acquiring credit. These methods include micro-finance, women's banking, and revolving funds, etc.

Land and property ownership for women is an area where there are no laws or clear guidelines for dealing with traditional discrimination against women, even while declaring equality for all. By and large, women have no access to land and property.
ownership. This is compounded customs, traditional practices and ignorance of their rights which deter them from even attempting to make claims (Lee-Smith, 1999). Illiteracy especially among women slows learning and hampers participation in housing development. Men are assumed to be the head of the household and own all the property (Lee-Smith, 1999).

4.9.5 Marketing and business skills

Mjoli-Mncube, 2005 highlighted that most women contractors tend to rely mostly on government projects especially from municipal and provincial government. These are projects such as low cost housing, schools, crèches and roads which are usually from one province only. The work is not diversified and because of the large amount of small contractors, it becomes very difficult for a single company to get most of the projects. Public works has a roster which is accessed by many contractors who are included in the system. This system prevents a contractor from jumping the queue for instance, and therefore these small women-owned companies that rely on one client only run a huge risk of failing. Marketing skills and business skills are therefore critical for women-owned companies to qualify for work especially in the private sector.

As mentioned earlier, there are many support organizations for women in construction such as Khuthaza and SAWIC. These organizations provide training and workshops which run throughout the year to assist female entrepreneurs with skills development and business training.

4.9.6 HIV/AIDS and the effect on women in the industry

The construction industry is one of the largest employers in South Africa. It is also the industry that separates families for a long time. Recent studies show that the industry is under siege from HIV and AIDS and the impact on the sector can no longer be ignored (PMG, 2009). Typically, the industry attracts individuals with diverse socio-economic profiles ranging from the highly skilled engineer for instance,
to the unskilled casual or contracted labourer. The industry mainly employs men and women who are at the prime reproductive age which is between the ages of 18 and 35 years old, who therefore are generally at a higher risk for HIV infection. Furthermore, the nature of jobs in this industry also tends to be short term, thus rendering the workforce into this industry as a highly mobile group (PMG, 2009).

Research commissioned by the Department of Public Works, and other construction industry stakeholders indicated that the construction industry has the third highest incidence rate of HIV/AIDS per economic sector in South Africa (PMG, 2009). The impact of HIV/AIDS within the industry manifests itself in the form of high rates of absenteeism, depletion of skills which adding to a high cost of training of new staff and perpetuation of the poverty cycle particularly at household level. In addition, the high incidence of HIV/AIDS within the industry hinders its ability to manage and produce work in a timely manner (PMG, 2009). Disclosure of HIV status by a female construction worker brings about stigmatization, rejection, domestic violence, abuse and abandonment. Once women have AIDS symptoms, they are usually excluded from formal work in the construction industry.

4.9.7 Inheritance laws

It is also realized that even though there are opportunities for construction related enterprises to excel due to an abundant market, women are not keen to take up activities in the construction industry mainly because they consider it an industry for men (DBSA, 2009).

Research has shown that the poorest people in a community are those with no access to adequate shelter (DBSA, 2009). These are usually women who largely form part of the female-headed households, mainly because of the inheritance laws which discriminate against women and prevent them from entering the construction industry.
4.9.8  Access to technical skills training

Equipping women with construction related skills as well as giving them confidence to enhance their development, ensures that women engage in self-build housing projects which not only ensures that women have adequate shelter, but also that they earn an income from such skills (DBSA, 2009). Therefore, getting women to participate in the construction industry empowers them to control their development and thus reducing the weakness amongst women.

Majority of female-headed households are that of girls under the age of 19, who have no skills to earn a decent income (DBSA, 2009). This lack of adequate education and specialized skills is a disadvantage. A major lesson learnt from a pilot Women in Construction project (undertaken by Practical Action Southern Africa in Zimbabwe) was that, only when women are empowered and start earning sustainable income do they get respect from: men and start contributing to decisions related to household income (DBSA, 2009). The construction industry has excellent job prospects with good income, but has inherent gender entry barriers.

Training of women and girls in construction with business related skills is essential so that they can participate with a better informed understanding of the construction issues and therefore provide more meaningful input towards the growth of the nation (DBSA, 2009).

4.10  Government’s contribution towards women in construction

It is accepted within South Africa and internationally that women must be consciously involved as economic participants, as decision makers, as housing consumers, as housing agents and contractors in order to build sustainable viable settlements (South Africa Government Online, 2009). Government has recognized these roles for women and is committed to promoting women and women-owned businesses through its policies and programmes.
Women in South Africa have traditionally been employees rather than employers and the following are some of the reasons why:

- Lack of "track record" in running a successful and profitable business.
- Don't have enough wealth to provide security or collateral that is required by financial institutions.
- Some women lack the necessary skills that are required to manage their finance hence making it more difficult for the financial institutions to advance the finance that they need.
- No exposure to project management which affects women's ability to manage and finish projects on time and within budget.

Since the first democratic elections, the racial profile of South Africa's construction industry begins to experience gradual transformation and is much better than it was before 1994. Government is clearly doing its best to empower women. One of the aims is to eliminate sexism in construction and encourage and influence active female participation through policies of women economic empowerment. These policies aim to make it easier for women to gain access to capital for business development.

Government has also introduced certain legislation in order to improve gender equality in South Africa, the most notable being the following:

- The Commission on Gender Equality Act, No. 39 of 1996.
  Refer to: http://www.justice.gov.za/ for more information regarding the Act.

  Refer to: http://www.agsa.co.za/ for more information regarding the Act.

  Refer to: http://www.justice.gov.za/ for more information regarding the Act.
• The Preferential Procurement Policy Act, No. 5 of 2000. 

Refer to: http://www.kzntransport.gov.za/for more information regarding the Act.

Apart from the above, Government has also established a number of programmes aimed at promoting the participation of women in the construction industry. Two such programmes are the ‘Strategic Empowerment Programme’ and the NDPW ‘Contractor Incubator Programme (CIP)’.

The ‘Women in Construction: Strategic Empowerment Programme’ was launched in 2001 by the Minister of Public Works, Ms Stella Sigcau. This initiative aimed to assist women in construction in the following ways:

• Build sustainable capacity with the women-owned business enterprise.
• Accelerate the development of women contractors who are capable of executing large construction projects as prime contractors.
• Raise the profile of women contractors.
• Ensure that women business enterprises access the opportunities presented by departmental projects.
• Ensure that women-owned and controlled businesses develop and grow.

Source: (National Department of Public Works, 2011)

The DPW has also embarked on the development and implementation of a ‘Contractor Incubator Programme (CIP)’, to promote the development of sustainable contracting enterprises owned and controlled by Historically Disadvantaged individuals. The purpose of the incubator programme is therefore to create an enabling environment within which selected existing contracting enterprises can develop into sustainable contracting enterprises. Preference will be applied in the accessing of work so that enterprises owned and controlled by black people, women and the disabled persons are advanced (National Department of Public Works, 2011).
Between April 2004 and March 2005, the department gave contracts to the value of approximately R100 million to companies owned by women and between 2005 and 2006 the department spent approximately R60 million on women contractors (Miangeni, 2006). In 2006, MEC Nomvula Mokonyane stated that the Gauteng Department of Housing allocated R200 million to increase the participation of female contractors in the male-dominated construction industry (Miangeni, 2006). The department provided support systems for the women, including mentoring and coaching by professional teams.

Therefore, government has shown that it is committed to promoting women and women-owned businesses through its policies, programmes and funding.

4.11 Chapter summary - comparison between South Africa and abroad

The following similarities and/or differences were noticed:

In South Africa and abroad, women are underrepresented in the managerial and professional fields of the construction industry which is due to the low percentage of representation at universities in the core areas of the profession. In terms of numbers regarding these positions, South Africa can be compared to the international countries discussed in chapter 2, that is, although women are underrepresented in this sector in South Africa, the numbers are still significantly higher than many of the countries in Africa. The study has also shown that most female students tend to study either quantity surveying or architecture. This automatically results in fewer women professionals in the other disciplines such as engineering.

The South African government has taken many steps towards assisting women in the industry. In comparison to other countries, apart from the support from government, South Africa also has many organizations such as Khuthaza, SAWIC and SAWEN who assist, train and promote women within the construction industry.
Like the UK, South Africa needs to also focus on attracting and retaining more women in the construction sector which can be seen as a challenge at present. Women are referred to as the "untapped resource" which will benefit the industry tremendously.

As highlighted earlier, many women entrepreneurs come from professions outside the core built environment fields and as a result they enter the industry without the necessary construction, and/or financial skills to run a sustainable business, thus resulting in the closing down of many businesses today.

Gender discrimination still exists today in South Africa and throughout the world. It is a worldwide challenge where women are seen by their male counterparts to be physically, psychologically and technically incompetent. This is a major reason for women not wanting to enter the construction industry.

From the previous chapters, research has also shown that many women are afraid to enter the industry because of the characteristic and reputation of the sector to have stressful working conditions and long working hours which prevent a balance between work and family life which is also a major barrier in South Africa.

The impact of HIV/AIDS on the sector can no longer be ignored. The HIV/AIDS epidemic is a global crisis that demands urgent attention and committed sustained action by alliances of individuals, organisations and sectors (Heard, 2011). Unskilled staff are at high risk of contracting HIV because they lead a nomadic 'on site' lifestyle, living away from families in temporary accommodation with few recreational facilities, for long stretches of time. Although unskilled staff is easily replaced, training of replacement staff impacts on costs, productivity and quality. A large number of women working on construction sites fall into the "unskilled" category.

The 'Glass Ceiling' which is discussed in chapter 7, still exists in most countries and in most industries today, and which is still a major challenge to overcome. Lastly, the non-availability of toilets and ablution facilities on construction sites is a major
challenge as well as a deterrent for women wanting to enter the construction industry.

4.12 Conclusion

It is clear that there are numerous opportunities available to women in the South African construction industry and that it is necessary for us to influence women to enter the construction related professions and to link women with the increasing number of opportunities available in the industry. Women continue to show that they are successful builders in informal and rural areas. Women in the formal construction sector have demonstrated that they can and will excel as builders and owners of companies. They have proven that they are exceptional coordinators and managers in the public, private and ‘non-government organization’ (NGO) sectors.

The industry needs to realize that you can’t change the women in construction to fit the culture of the industry; instead we must work towards changing the environment and culture of the industry.

The next chapter discusses the research methods used to substantiate the topic.
Chapter 5: Research Methodology

5.1 Introduction

Many researchers agree that both the Qualitative and Quantitative research methods need each other more often than not (CSU, 2011). However, because typically qualitative data involves words and quantitative data involves numbers, there are some researchers who feel that one is better (or more scientific) than the other. Another major difference between the two is that qualitative research is inductive and quantitative research is deductive. In qualitative research, a hypothesis is not needed to begin research. However, all quantitative research requires a hypothesis before research can begin (CSU, 2011).

Although this research employed both quantitative and qualitative research methods, this is predominately a quantitative research due to the nature of the data collection process and the data analysis techniques.

5.2 Qualitative research

Ospina (2004) defined qualitative research as “a form of systematic empirical inquiry into meaning”. Ospina (2004) stated that by ‘systematic’ he meant ‘planned, ordered and public’, following rules agreed upon by members of the qualitative research community. By ‘empirical’, he meant that this type of inquiry is grounded in the world of experience. Ospina (2004) also highlighted that ‘Inquiry into meaning’ says that researchers try to understand how others make sense of their experience.

According to Patton (2001), qualitative research uses a naturalistic approach that seeks to understand phenomena in context-specific settings, such as “real world setting where the researcher does not attempt to manipulate the phenomenon of interest”, Golafshani (2003). Qualitative research, broadly defined, means “any kind
of research that produces findings not arrived at by means of statistical procedures or other means of quantification", Golafshani (2003).

5.3 Quantitative research

Quantitative research is about asking people for their opinions in a structured way so that you can produce hard facts and statistics to guide you. To get reliable statistical results, it is important to survey people in fairly large numbers and to make sure they are a representative sample of your target market (The Marketing Donut, 2011). Quantitative market research typically includes customer surveys and questionnaires. These can be conducted face-to-face with a clipboard and pen, over the telephone, via post or email, online or via your website. Survey questions have to be carefully considered so that the results will provide meaningful data (The Marketing Donut, 2011). Quantitative research is about numbers and the counting and measuring of things - objective hard data. It involves the use of structured questions with a limited number of predetermined response options (Organisational Heartbeats, 2011).

5.4 Justification for using both qualitative and quantitative methodologies

The qualitative research was used in this research to seek out the 'why', not the 'how' of the research topic through the analysis of unstructured information which in this paper relates to the interviews and open-ended questions that were asked in the questionnaire. It did not solely rely on statistics or numbers. Qualitative research was used to gain insight into people's attitudes, behaviours, value systems, concerns, motivations, aspirations, culture and lifestyles (QSR International, 2011). The strength of qualitative research is its ability to provide detailed descriptions of how people experienced the given research topic. It provided information about the 'human' side of the topic.
The quantitative research was also used to measure how many people feel, think or act in a particular way (Market Research World, 2011). The survey included a large sample of one hundred subjects. A structured questionnaire was used which incorporated many closed-ended questions which are questions with set responses. There were various methods used for collecting quantitative information but the most common were telephone interviews, one-to-one interviews, emails and a self-administered structured questionnaire.

When used along with quantitative methods, qualitative research helps us to interpret and better understand the complex reality of the given topic and the implications of quantitative data (FHI360, 2011).

Table 5.1 highlights the main differences between Quantitative and Qualitative research.
### Table 5.1: Comparison of quantitative and qualitative research approaches

<table>
<thead>
<tr>
<th></th>
<th>Quantitative</th>
<th>Qualitative</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General framework</strong></td>
<td>Seek to confirm hypotheses about phenomena</td>
<td>Seek to explore phenomena</td>
</tr>
<tr>
<td></td>
<td>Instruments use more rigid style of eliciting and categorizing responses to questions</td>
<td>Instruments use more flexible, iterative style of eliciting and categorizing responses to questions</td>
</tr>
<tr>
<td></td>
<td>Use highly structured methods such as questionnaires, surveys, and structured observation</td>
<td>Use semi-structured methods such as in-depth interviews, focus groups, and participant observation</td>
</tr>
<tr>
<td><strong>Analytical objectives</strong></td>
<td>To quantify variation</td>
<td>To describe variation</td>
</tr>
<tr>
<td></td>
<td>To predict causal relationships</td>
<td>To describe and explain relationships</td>
</tr>
<tr>
<td></td>
<td>To describe characteristics of a population</td>
<td>To describe individual experiences</td>
</tr>
<tr>
<td></td>
<td></td>
<td>To describe group norms</td>
</tr>
<tr>
<td><strong>Question format</strong></td>
<td>Close-ended</td>
<td>Open-ended</td>
</tr>
<tr>
<td><strong>Data format</strong></td>
<td>Numerical (obtained by assigning numerical values to responses)</td>
<td>Textual (obtained from audiotapes, videotapes, and field notes)</td>
</tr>
<tr>
<td><strong>Flexibility in study design</strong></td>
<td>Study design is stable from beginning to end</td>
<td>Some aspects of the study are flexible (for example, the addition, exclusion, or wording of particular interview questions)</td>
</tr>
<tr>
<td></td>
<td>Participant responses do not influence or determine how and which questions researchers ask next</td>
<td>Participant responses affect how and which questions researchers ask next</td>
</tr>
<tr>
<td></td>
<td>Study design is subject to statistical assumptions and conditions</td>
<td>Study design is iterative, that is, data collection and research questions are adjusted according to what is learned</td>
</tr>
</tbody>
</table>

**Source:** (FHI360, 2011)
5.5 Research procedures

5.5.1 Research design

The research design is said to be the logical sequence that connects the empirical data to a study’s initial research questions and, ultimately, to its conclusions. Colloquially, a research design is an action plan for getting from here to there, where ‘here’ maybe defined as the initial set of questions to be answered, and ‘there’ are some set of conclusions (answers) about these questions (Mahlobo, 2006).

Figure 5.1 is a graphical representation of the research design which was used.
Figure 5.1: Summary of the research design

Design and development of survey instruments

- Sample selection
- Data collection
- Analysis
- Outcome

Survey design
Questionnaire development
Interview schedule development

Data sources

Quantitative
Initial analysis

Qualitative
Data analysis

Outcome

Source: (Siragusa, 2001)
5.5.2 Literature review

A literature review is a critical and in-depth evaluation of previous research. It is a summary and synopsis of a particular area of research, allowing anyone reading the paper to establish why you are pursuing this particular research programme (Experiment/Resources, 2011). It demonstrates an individual’s ability to identify the significant information and sketch existing knowledge. It helps fill in the gap in the research that the work will address, and generates a rationale or justification for the study (The Pensters, 2011).

Relevant literature was reviewed in chapters two, three and four. This formed the basis of the secondary data. The literature reviewed supported the topic from the international and local perspectives. The secondary data used included books, published journals, unpublished dissertations, conference papers, newspaper articles, websites and periodicals.
5.6 Primary data collection

5.6.1 Subjects

Figure 5.2: Construction company owner completing an online questionnaire at a Khuthaza Workshop

Source: Photograph taken by Author

Personal interviews were carried out and a self-administered questionnaire was used for the collection of primary data. The online survey was set up and completed by the subjects on [http://www.tigersurvey.com/](http://www.tigersurvey.com/). One hundred (100) subjects were selected as this figure is statistically convenient. The author attempted to collect data from subjects over a broad spectrum of careers within the construction industry. The aim was to obtain a 50/50 balance between consultants and contractors. However a ratio of 60/40 was achieved with 60% being consultants and 40% being contractors.

Refer to Annexure 5 for the full questionnaire.
The candidates included the following:

- **Contractors (40%)**

  Questionnaires were completed by women who owned construction companies, women who worked for various construction companies; suppliers, subcontractors and manufacturers.

- **Consultants (60%)**

  Questionnaires were completed by female consultants in the construction sector of all provinces in South Africa.

5.6.2 Collection methods

The advantages of personal interviews, telephone interviews, self-administered questionnaires and the use of close-ended and open-ended questions are shown below. These methods were used for the collection of primary data for this research. The following information was sourced from: http://wwv.uwlax.edu/.

5.6.2.1 **Personal interviews**

The advantage of this method is that it permits detailed and in-depth questions and responses. It also minimizes non-responses.

5.6.2.2 **Telephone Interviews**

The advantages of this method is that it is convenient, saves time, relatively inexpensive and is less interviewer and investigator bias than personal interviews.
5.6.2.3  **Self-administered Questionnaire**

The advantages of this method are that it is cost effective for large areas, it minimizes interviewer bias and it promotes accurate answers.

5.6.2.4  **Question Formats**

There were three (3) types of questions that were asked:

**Open-ended questions:**

Respondents were given complete freedom to answer in their own words.

*Advantages:* Eliminated "forced choice" bias

Unlimited response varieties

**Closed-ended questions:**

Yes – No Questions: Respondents were limited to a positive or negative response.

*Advantages:* Minimized investigator bias

Responses were obtained quickly

Coding is simple and inexpensive

**Multiple choice questions:**

Respondents were limited to choice of more than two positions.

*Advantages:* Minimized investigator bias

Responses were obtained quickly

Coding is simple and inexpensive

Permitted a greater range of commitment than yes/no questions
5.7 Analyzing the data

Analysis of data is a process of inspecting, cleaning, transforming, and modelling data with the goal of highlighting useful information, suggesting conclusions, and supporting decision making (Wikipedia, 2011).

The questionnaires which were completed on http://www.tigersurvey.com/ were reviewed for completeness. All the subjects were females. This was then analyzed and interpreted in chapter 6 with the use of graphs. The responses from personal and telephonic interviews as well as all open-ended questions were analyzed and summarized to determine the key findings and the results are shown in chapter 6.

5.8 Conclusion

This chapter described the research methodology used as well as the justification for using both the qualitative and quantitative methodologies. The research procedure was explained which consisted of the research design, literature review, the primary data collection and the data analysis. Chapter 6 discusses the findings which followed the data collection and data analysis processes from the various sources.
Chapter 6: Analysis of data

6.1 Introduction

Having completed the literature study, attendance at seminars and interviews with key women in the South African construction industry, the self-administered questionnaire was then analyzed. This chapter provides a summary of the key findings of the survey.

The completed questionnaires were first validated as being from a woman firstly and secondly, either from a professional qualified woman or entrepreneur in the South African construction industry before being used for this study. The aim of the questionnaire was to first determine the subject’s length of time in the industry, the subject’s qualifications, the subject’s age group, the field of work which the subject’s organization specializes in and the number of female employees employed at that particular organization.

The questionnaire then looked at the factors which motivated the women to choose their careers in the construction industry, the challenges and gender-based issues that they currently face, as well as their perspective on the participation of the South African Government in assisting women to progress within the construction industry.

The responses from the one hundred subjects have been analyzed and the various replies and percentages have been shown with the aid of 3D charts where possible.
6.2 Results and analysis of survey

The following questions were asked and answered by all one hundred (100) subjects:

6.2.1 Subjects profile

6.2.1.1 What position do you hold in your organization?

Figure 6.1: Position held

Figure 6.1 shows that the majority of the subjects interviewed were employees (32%) and managing directors (28%).
6.2.1.2 How long have you been in business or employed in the construction industry?

Figure 6.2: Length of service

Figure 6.2 shows that most of the subjects interviewed (44%) have been in the construction industry for almost five years. 27% of the subjects have however worked in the industry for more than 10 years.
6.2.1.3 How old are you?

Figure 6.3: Age group

Figure 6.3 shows that the majority of the subjects interviewed (60%) were between 20 and 40 years of age. 17% were older than 50 years.
6.2.1.4 What formal education and training do you have?

Figure 6.4: Level of education

Figure 6.4 highlights that 33% of the subjects interviewed have an honours degree, while 29% have either Bachelor of Technology or Bachelor of Science degrees. Only 1% had a PhD Degree.
6.2.2 Subjects employment and field of work

6.2.2.1 What is your organization's key focus in the construction industry?

Figure 6.5: Field of work

Figure 6.5 shows that the majority of the subjects (45%) were quantity surveyors whilst 30% either worked for a contractor or were managing their own construction company.
6.2.2.2 Which province does your organization conduct most or all of its business?

Figure 6.6: Location

Figure 6.6 shows that the majority of the subjects interviewed (62%) worked in Gauteng, 16% worked in KwaZulu Natal. Only 2% of the subjects interviewed were from the North West and Northern Cape provinces.
6.2.2.3 How many female employees work in your organization?

Figure 6.7: Female employees

Figure 6.7 highlights that the majority of the subjects (66%) stated that between 1 and 5 female employees were employed at the organization which they worked for. Six subjects interviewed confirmed that their organization employed more than 20 female.
6.2.2.4 What is the average value of projects that your organization takes on?

Figure 6.8: Average value of projects

Figure 6.8 shows that a substantial number of the subjects organizations (36%) work on projects is over R20 million. 12% of the subjects were construction owners and new entrees into the industry, therefore working on small projects of up to twenty thousand rand.

Figure 6.9 shows that majority of the subjects organizations took on 5 projects per year. However, 13% completed more than 25 small projects for the year.
6.2.2.5 What is the average number of projects that your organization completes per year?

Figure 6.9: Average number of projects

6.2.2.6 Does your organization have equal opportunities and rights for men and women?

Figure 6.10: Opportunities and rights
Fourteen per cent (14%) answered “No” to the question in 6.2.2.6 and some of the responses received are quoted as follows:

- “There are some activities whether we like it or not, that women cannot perform for example, the lifting of heavy weights.”
- “There are no women in senior positions.”
- “90% of the females at my company are support staff.”
- “As a woman I feel that management, being predominantly men, are reluctant to give women the same opportunities as men. Especially when it comes to sending women to a site. I feel that men would much rather have women working in the office, doing administration work than using women efficiently on construction sites.”

6.2.3 Subjects motivation, views, challenges and expectations of the industry

6.2.3.1 What attracted you to the construction industry?

Some of the responses received from the interviews are quoted as follows:

- “The challenge of working in a man’s field.”
- “I am a technical person and the fact that I love to get my hands dirty attracted me to the construction industry.”
- “Architecture as an art form: Creating comfortable and practical spaces for human beings of all walks of life. Contributing to the liveability of the world we live in.”
- “RDP house construction: Making a difference in people’s lives by providing shelter and at the same time making money.”
- “Money, opportunities, enthusiasm, and the need for achievement.”
• “I love the challenges of the construction industry and I have proved to myself that I can do anything that a man can do.”
• “Wanting to make a difference in society and to help improve the living conditions of people.”
• “I wanted to prove and show other women that they can also do well in the construction industry.”
• “My passion for construction and the opportunities that is available. Creation of employment for others and to help alleviate poverty in our country.”
• “The fact that some women contractors performed poorly motivated me to make a difference.”
• “Ability to work on something from inception to life and watch it over the years. Being able to confidently say that you are making a positive contribution to the country’s economy.”
• “Family history.”
• “Construction is varied, which means that no project is the same and therefore there are always challenges that keep you on your toes.”
• “The excitement of developing projects from inception to completion, and working with diverse individuals.”
• “I wanted a better paying and prestigious job.”
• “Money!”
• “Being able to interact with like-minded people and to work with a team and solve problems.”
• “Being able to work out of the office.”
6.2.3.2 In general, the Construction Industry in South Africa is “male dominated”. Did this in any way have a negative impact on your studies, career or your business?

Figure 6.11: Impact of male domination

Thirty nine per cent (39%) answered “Yes” to the question in 6.2.3.2 and these were some of their replies from the interviews:

- “Men generally try to avoid women in meetings. They make it seem as if women don’t know enough about construction.”
- “I have to work harder to prove myself and get respect - from studies through to business.”
- “In many cases I was humiliated by male staff members trying to undermine my decisions because of my gender and I was made to look as if I didn’t know what I was doing.”
- “It is perceived that male contractors perform better than women contractors.”
- “Females find it difficult to hold their own in an industry which is run along ‘male’ values and principles. It has been a battle to learn to be confident and to command respect.”
• "I hit a 'ceiling' in my previous job. I was an associate but wasn't made director because I was told 'women marry and have children.'"

• "It was very lonely and tedious for me to be the only female in a class of 31 students. Men are always using rough words and insults when they talk amongst themselves. You have to be as tough as possible to survive."

• "Men perceive women to be 'soft' and would generally trust a male's technical expertise rather than a woman's."

• "Many gentlemen don't regard women as professionals, and will treat you with less respect."

• "I applied for a position at a residential development company which I did not get. I was told that with 'cultural beliefs' within the labour force it would be very difficult for a woman to lead the force and maintain a constant flow of communication and progress."

• "I always have to prove myself. I've had clients that did not take me seriously and would rather liaise with senior male QS."

• "You have to work harder, longer and smarter than your male counterparts to prove to management that you are capable of the job."

• "It impacted on my career, more than my studies. Men in the industry, especially the older ones, do not appreciate a woman on site. They make you feel inferior and stupid. This has an impact on one's self-esteem and confidence."
6.2.3.3 Have you experienced any “gender discrimination” or have you ever been “harassed” at work?

Figure 6.12: Gender discrimination and/or harassment

6.2.3.4 Women who answered “Yes” above shared their choice amongst the factors shown in the chart below, which contributed towards their gender discrimination and/or harassment.

Figure 6.13: Factors – Gender Discrimination / Harassment
Figure 6.13 clearly shows that “Disrespect” was the most chosen factor (28%). Next were ‘Limited opportunity for growth’ (24%), then ‘Inequality’ (20%) followed by ‘Treated unfairly’ (19%). ‘Sexual harassment’ was the least chosen factor (9%).

6.2.3.5 Do you feel that the South African Government is doing its best to promote the upliftment of women in the construction industry?

Figure 6.14: Government intervention

Forty eight per cent (48%) answered “No” to the question in 6.2.3.5 and some of the reasons from the interviews are quoted as follows:

• “I think that Government does try and they talk a lot about empowering women but the challenge is on the ‘implementation’ - little is done to empower women. We are not allocated projects and men seem to be trusted more than women to deliver on hard skills.”

• “Government should promote and introduce construction related courses at schools. As far as I know Engineering is offered to Matric pupils, but other than that the school (and pupils) are not exposed to programmes, career guidance, etc relating to the construction industry.”

• “Although government has their different organisations in place, the requirements for women to get help demand a lot of capital which is
something which we do not have hence there is a need for government to look at this."

- "There should be tenders for projects that are meant for 'women only' contractors."
- "There is no financial support to assist women in construction."
- "Verbal promises are made only - 'All talk but no action'."
- "Government do not investigate whether "women only" contractors are really run by women. I have found that some "women only" contractors only have a woman as a front person who is not involved in the building process at all. There are extremely good and competent women contractors whom I feel are being disadvantaged by the 'women fronting' companies. Government needs to look into this."
- "Government is only interested in black women through BEE. As a white woman you get no points, no advantage and therefore no future."
- "In terms of the Department of Public Works Procurement Policy for professionals, there is no extra weighting for female owned businesses as compared to male owned businesses. Therefore in my opinion, there is no 'incentive' for a woman to enter this male dominated field."
- "Women Empowerment is limited to showing the commitment from government only. Very little has actually changed. Women are still at the lower end of the industry. We are still battling to find work. We have little backup and support from government and woman contractors still remain small and emerging. Most women professionals still work for practices instead of running their own businesses. We need more role models and real support from government."
- "There should be more awareness around women in construction, more support of females with SMMEs in the industry and more scholarship and mentorship programmes for young girls."
- "I do not think that there are enough women in management positions in most consulting Quantity Surveying companies at present."
- "Government can definitely do a lot more."
6.2.3.6 The construction industry is male dominated and should remain that way.

Figure 6.15: Male domination

Disagree 94%
Agree 6%

6.2.3.7 Women can build successful careers within the construction industry.

Figure 6.16: Ability of women

Disagree 0%
Agree 100%
6.2.3.8  Women in construction do not get the same respect as men.

Figure 6.17:  Respect

![Bar chart showing 70% agree and 30% disagree.]

6.2.3.9  The construction industry is more suited for men.

Figure 6.18:  Suitability of the industry

![Bar chart showing 73% disagree and 27% agree.]

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6.2.3.10 Women are likely to be sexually harassed on construction sites.

Figure 6.19: Sexual harassment

Disagree 41%
Agree 59%

6.2.3.11 Women are not strong enough to handle physical construction work.

Figure 6.20: Physical construction work

Disagree 73%
Agree 27%
6.2.3.12 Increasing the number of women in the industry will improve the image of the construction industry.

Figure 6.21: Image of the industry

Disagree 17%
Agree 83%

6.2.3.13 The South African Government needs to create more initiatives to attract women into the construction industry.

Figure 6.22: Government initiatives

Disagree 12%
Agree 88%
6.2.3.14  Women are intimidated by the fact that there are more male professionals in construction.

Figure 6.23: Male intimidation

6.2.3.15  Women generally prefer careers in other industries such as medical, IT, commerce, etc.

Figure 6.24: Other industries
6.2.3.16 Would you encourage other women to follow your example and join the construction sector?

Figure 6.25: Prospective candidates

6.2.3.17 Do you prefer to be office based, site based or both?

Figure 6.26: Site vs. office
6.2.3.18 Of the reasons below, which one in your opinion, do you feel has the most impact on discouraging women to work on construction sites?

Figure 6.27: Discouraging factors

The most chosen factor of 23% was "lack of respect by the male counterpart". "Other reasons" amounted to 18% and the common replies were as follows:

- "Gender discrimination."
- "Sexual harassment."
- "Men do not take women seriously on construction sites and refuse to take/follow instructions from a woman."
- "Lack of support systems from government."
- "Procurement processes are not fair and are gender sensitive."

Another important factor as shown on the chart above, which amounted to 17%, was "inadequate toilet and ablution facilities" which seems to be a major problem on construction sites.
6.2.3.19 The term “Glass Ceiling” refers to the fact that the representation of women in the construction industry decreases with an increase in seniority of the position. What is your view on this? Do you think that this will change in the future?

The following were some of the replies received to the question asked in 6.2.3.19:

“This happens everywhere, not just in South Africa, and not just construction. I think it is getting better but it will continue to be a challenge for a long time to come.”

“I think it is true that at the top levels, women are not being represented at all. Men still don’t like to compete with women in this industry.”

“This will eventually change. More senior positions are occupied by males that have been in the industry for a long time. A lot of women have only recently taken interest in the construction industry. In time women will acquire the knowledge, and acquire the exposure and experience needed to sit in these positions.”

“Yes, but I think it will change with time since opportunities are increasing for women with the support that government is providing and the exposure that women now have.”

The term “glass ceiling” is all in the mind and women who are determined will prove themselves right and will show their worth and credibility. Yes, it will change in the future.”

“Yes it does exist. I think it is because women do not have as many years of experience as men. It will change because women are currently growing their experience.”
"I think that once women acquire more knowledge and skills and prove that they can deliver good quality work at reasonable prices and on time, then people (men) will start to take them more seriously and will be open to giving them more opportunities."

"It is true that there is a lower representation of women in senior positions. However this is not unique to the construction industry and can be attributed to a multitude of reasons from the dual roles women play as professionals and care givers in the home environment, non-recognition of talented women in some organisations, etc."

"I think that the term "glass ceiling" is false. Yes, this will change. We are currently living in an era where women now have first priority and in time to come this change will be something that the world will have to embrace and it will become part of our daily lives."

"The senior positions are (or should be) filled with older and more experienced people and there were not that many women in construction in the past. This situation will change with more and more women entering the construction sector and they too will also become the older experienced seniors of the future."

"Yes I believe this is true. Women are frequently used as window dressing in senior positions for tenders etc., as opposed to fulfilling useful roles in companies."

"This is true. Only women can lift themselves out of this situation. Women are being used by companies as directors, shareholders, etc. on paper only. This is not visible in the industry. When there are more women on site there will be a difference. We set our own 'glass ceilings'. Women need to be empowered to not set limitations on themselves. There are examples of successes. There needs to be more."

"My view on this is that it is true but often not due to factors in the industry but simply the fact that most woman focus on family later on in their careers. This coincides with the time that could have seen them being promoted to senior positions. It is not that they leave the industry (which would decrease the number of woman) but
merely do not put in the extra time needed to succeed in these senior positions. As in most companies the general view regarding these senior positions is that work should come first which conflicts with family priorities."

"I believe that the term is correct in that very few women are represented higher up in the organogram in construction companies. I believe that this is because women in construction are not given equal career opportunities in the industry that would directly result in their promotion to positions of senior origin. I do not believe that this will change in the immediate future."

"The appointment of a senior position requires years of loyalty and hard work, including the willingness to work wherever you are required to. A lot of women would automatically be held back as most women need to concentrate on their family responsibilities for a number of years during their career. A woman without a dependent husband and children would be able to join the ranks of the men more easily."

"I don't agree with the statement. There are a lot of women in top construction positions. In South Africa, women all over are rising to senior positions in all industries due to the upliftment of our gender in general."

"It depends on the attitude of the women. There are too many that think they are entitled to it, and not necessarily earning it."

"To some extent this is true but I think it's also linked to the 'traditional' roles that women are expected to fulfil for example, not to be assertive like their male counterparts that I think can lead to a woman being perceived as weak and unable to lead others. I think this can only change if women are encouraged to believe in their worth as employees and as intellectuals."

"Yes, it will change. Woman in the industry are usually highly qualified individuals with a great deal of potential. Together with experience, determination, confidence
and sound judgment, it is a recipe for success, not only for the company, but for the industry as a whole."

“Yes. More and more women are joining the construction industry which will bring about change. Currently there are many female architects, quantity surveyors and engineers at senior levels.”

“I agree, but if a female is determined to succeed she can achieve seniority in the construction industry. I can’t see it changing in the near future.”

“I do not think it will change unless government has an active role to play in this. I hope it does change. I have noticed from experience that men do not want women to excel in the industry. They see women as a threat and have a "no woman can do the job better than a man" attitude.

“As more women enter the industry, the representation of women in senior positions will also increase but it will stay a male dominant industry due to the physical constraints.”

“The industry is male dominated, but it doesn’t necessarily need to stay that way. I think actual physical labour is better suited for men. I’ve noticed more women are joining the ‘lighter’ trades such as painting. Site office work and professional offices are more preferred by women. I don’t think more women in the industry will improve its image because the building industry is what it is. Nothing will ever change that. It is hard work, always changing, full of conflict but also exciting, regardless of gender. The SA government is already doing good things to promote women in this industry and more initiatives are always welcome. I do not think women are intimidated by all the men in this industry and I am talking about all the women I know. They knew fully well that they would be in the minority when they first started out, but if this is your chosen path then nothing should intimidate you, nothing should be a surprise. You must realise that the ablutions on site are not what you are normally used to. It is expensive to have an air conditioner in a site office so fans will have to do on those
hot days. Working in a corporate environment is better, although not as exciting as site. Yes, I believe that there are more women in other industries than in construction, because women in construction are still relatively new in South Africa. Give it some time and maybe men and women will be 50/50 or more, who knows."

6.2.3.20 Is there anything else that you wish to say that you feel is important to the topic?

The following replies were received to the question asked in 6.2.3.20:

- "Women should not try to be more like men but rather be themselves. Both sexes have their strong points and we should respect each other for that."

- "Do not let others in the industry undermine you. Go out there with pride and ensure that your voice is heard!"

- "Keep abreast of new developments, obtain sufficient information, become technologically literate and continue forming linkages and networks with those who will prove to be a resource, which will in turn enhance your participation."

- "Women must be equipped with business skills, technical skills and finance skills to enable them to have sustainable businesses."

- "Taking time off from work to have children is always a problem in the industry and this problem has to be addressed and not lead to a woman's disadvantage."

- "It is unnecessary to compromise your femininity to have success in the industry. At the end of the day, your competence counts."
• “Any women can do whatever they like to do. The question should actually be: Are you trying to be the best at what you do or are you just doing it because you can?”

• “Women have to work twice as hard to be seen as being half as good as their male counterparts. As a woman in construction you have to be strong-willed, thick-skinned and very determined to beat the men at their own game.”

• “Women are physically not as strong as men. It would be detrimental to the whole industry if government now forced companies to employ a certain quota of women in the labour force, just to promote women in construction with no regard for productivity.”

• “In a country where women make up more than 50% of the population and 42% of its workforce it is a pathetic excuse that in 2010, only 4.5% of the CEO’s and MD’s of JSE listed companies were women.”

• “The industry is ‘frightening’ to women. We require support to understand that we are not lacking in anything. Experience can be gained. Men use experience to their advantage. ‘I have been in construction for 20 years’ will put off any women starting out. Women have the aptitude for technical knowledge. They are often good managers. The more visible women are, the more comfortable other women will feel in joining the industry. Government has to take the need for ‘real’ empowerment in the construction industry seriously.”

• “Being a wife and mother of young children, trying to work for the large construction companies became difficult for me due to the constant relocation and expected working hours. However, should I have stayed with a smaller local based firm or consultancy most of my issues could have been avoided.”
• "Can women really put in as many hours to reach the top as men can? I don't think so. We have kids, houses and families to take care of. We would be able to if we didn't have these responsibilities."

• "Sometimes there is a time to stop playing victim. Stop finding out if something is happening and start acting. We are very aware that the industry is male dominated. We are aware that there are very few females that enter the industry and even fewer that stay in it. We need to start devising plans to attract and retain."

• "The construction industry to me is like any other industry and it depends on where your interests lie. There is a place for anyone and everyone who is determined and seriously interested. If you want to rise in the ranks and you have the capabilities, you certainly will."

• "I have had a wonderful career in the building industry, and would encourage other women to follow a career in the building industry."

• "I have worked both on site and in a professional environment. It has never bothered me that there are more men than women - just as there are more female nurses than male nurses. It doesn't matter. If you're good enough, you will get the job and if you do a good job, you will be promoted. I know of a few women who head up the QS departments in construction companies so it is happening for us."

• "Women are discriminated against in all professions, not just the construction industry. It is up to the individual to select a career path that suites her and to work as an equal to others. What I have learned is that if I view myself as an equal, others will too. When at work, I am a Quantity Surveyor and not a 'woman'. You draw the distinction, not others."
• "We're getting there! Day by day we are making progress and women are beginning to make their mark in the construction industry. We still have a long way to go but I can tell you knowing the women we work with and the younger women coming out of tertiary now...the future looks very good! There has not been a better time in history for women in this sector. The time is now!"

6.3 Conclusion

Women continue to be underrepresented at all levels of the construction industry, suffering both occupational and organizational segregation. The barriers that prevent the entry of women into the industry begin in early socializing and education, and continue throughout training and recruitment. Barriers are enhanced by an industry that continues to foster a male dominated image and remains entrenched in a culture which undermines the value of women.

The myth is that the construction industry is all about the site and the head office. In reality it is highly fragmented with a long and complicated supply chain with significant off-site prefabrication and manufacturing sectors. In addition there are a high number of small, self-employed subcontractors. The reality is that the construction industry is complex. It would be hard to define where the construction industry jobs start and end, which makes it difficult to account for all the people employed within it. The contributions of women in the supply chain like administration, legal areas (such as specialist lawyers), manufacturing distribution-design and fixing etc. need to be recognized.

Whilst it is not clear how many women work in the whole industry, it is very clear that there could be many more if the industry had better recruitment and retention policies. The main factor that clearly prevents the retention of women in the construction sector remains the organizational work culture of the industry, which needs to become more flexible to encompass a good work-life balance.

Furthermore, if the construction industry is to encourage women to enter and remain in the industry, it must ensure that the higher education curriculum maintains the interest of women as well as men, and that the organizational culture in construction
education and the workplace is welcoming to, and inclusive of, women. Firstly, women also have to cope with being a student in the workplace, and it is not always clear whether individuals are treated in a certain way as a result of their gender or student status. Secondly, women embarking on a career in construction will have positive, uncritical, perceptions of the industry; otherwise they are unlikely to have chosen this career path. However, these views may change with time.
Chapter 7: Conclusion and recommendations

7.1 Introduction

This research paper has presented the findings from the interviews and survey conducted amongst female entrepreneurs and consultants in the construction industry, focusing on the challenges faced by them. This chapter highlights the important issues that need to be addressed in South Africa and abroad in order to help and promote women in construction. The findings have been presented in respect to the research objectives and literature review.

The important findings of the study and recommendations are as follows:

7.2 'Glass ceiling/Glass wall'

The underrepresentation of women in the occupational hierarchy manifests in two ways:

'Glass Wall' - the traditional gender split in the sectoral pattern of employment. The segregation of women into traditional roles has persisted for some time, with women being more likely to work in administrative and secretarial positions, personal services, and sales occupations, and men more likely to work in manufacturing and production.

'Glass Ceiling' - the representation of women in many industries decreases with an increase of seniority of the post or position. Refer to Figure 7.1.
This phenomenon has also been described by the Glass Ceiling Commission in the USA (1995) as:

"...invisible, artificial barriers that prevent qualified individuals from advancing within their organization and reaching their full potential. The term originally described the point beyond which female managers and executives, particularly white women, were not promoted. Today it is evident that ceilings and walls exist throughout most workplaces for minorities and women. These barriers result from institutional and psychological practices, and limit the advancement and mobility opportunities of men and women of diverse racial and ethnic backgrounds".

Figure 7.1: Glass ceiling effect

Source: (Mavridis, 2010)

The 'Glass Ceiling' phenomenon - women can see the opportunities but are unable to progress in their careers (Gurjao, 2005).

While for men the 'glass ceiling' may be just a myth, for many women it is a source of actual frustration and can potentially spell the end of their career unless they can find a way to break through (Agherdien et al, 2008). Women are moving into high
growth sectors of the economy to a greater extent than men. However, the workplace culture is changing very slowly with women still not rising rapidly to senior positions.

The barriers that prevent the entry of women into the industry begin in early socializing and education, and continue throughout training and recruitment. These barriers are further exacerbated by the industry as it continues to foster a male-only image and remains entrenched in a culture that undermines the value of women (Fielden et al., 2000). Factors affecting the retention of women in the industry may be classified into two dominant categories which are private life demands and working environment (Gilbert and Walker, 2001).

Studies of the role of women in construction in developing countries have examined the cultural dimensions of women in the workforce. They show that the role of women in construction in developing countries is completely different to that of the UK. Therefore the situations are not comparable. With up to 50 per cent of the production workforce being female, women in these countries constitute the informal economy and are generally integrated into the workforce at the bottom end of the job hierarchy, as unskilled helpers or "head-load carriers" within construction. In developed countries, the initiatives for women entering the construction industry are driven by issues of equality and predictions of a shortage of traditional skilled white male entrants, whereas in developing countries women are involved in construction trades as unskilled labourers. They work to alleviate poverty and the employer gains by operating with reduced costs. These women are under-paid or sometimes not paid at all because the payment is sometimes given to the husband.

Lack of part-time quality work reinforces the "glass ceiling", leading women to seek employment in the "5 Cs" namely caring, cashiering, catering, cleaning and clerical work, which are the low paid under-valued occupations (Gurjao, 2005). Women occupy junior and supporting positions within high status professions (Dainty 1998). The 'glass ceiling' - the situation where women can see, but not reach higher level jobs and are prevented from progressing in their careers - still exists in many
occupations and industries, including design and construction. There are very few partners and directors of architectural, quantity surveying, engineering and major construction companies in South Africa and abroad.

Gender is fundamental to the culture of organizations according to known studies within other sectors (Dainty et al., 2000). Organizations also form ‘gender cultures’ known to be hierarchical, patriarchal, sex-segregated, sexually divided, sex-stereotyped, sex discriminatory, sexualized, sexist, misogynist, resistant to change, and contain gendered power structures (Dainty et al., 2000). Masculinity forms a key element of any corporate culture (Dainty et al., 2000). It can be more difficult for women to gain promotion and enter higher level occupations than men, a common case for both atypical and typical areas of work.

7.3 Leaky pipeline

Figure 7.2: Leaky pipeline effect

1. At risk due to lack of support
2. Support from family and school
3. At risk following motherhood
4. Successful interventions
5. At risk due to women and science initiatives
6. Strategies for success in early career
7. At risk due to isolation and exclusion
8. Strategies for success in senior positions

Source: (European Communities, 2009)

Women also often find a chilly climate at higher levels with unequal opportunities, isolation and exclusion due to the usual clichés and stereotypes of a man’s world (European Communities, 2009). Figure 7.2 illustrates the obstacles which women face from the very beginning in their career, starting with a lack of support from family and school and up to the need of specific strategies to succeed in senior
positions. These obstacles prevent many women from pursuing professional careers.

Whilst recruitment remains important, there is a knowledge gap in translating qualifications into employment, and employment into retention. This is described as the "leaky pipeline" concept (Gurjao, 2005). Attraction by itself is not the key to increasing women in the construction workforce. Recruitment must be followed by induction of the new employee in order to improve retention levels. Job satisfaction as a result of opportunities and promotion is more likely to retain staff. For women in older age groups, part-time and flexible working women, the real barrier is the balancing of work and family life, just like other industries.

The barriers that prevent the entry of women into the industry begin in early socializing and education, and continue throughout training and recruitment. This research shows that there are ongoing studies on how the industry can become more inclusive, but the focus so far has been on attracting more women.

### 7.4 Frequently asked questions

**What challenges do women face whilst studying?**

The construction industry is still male dominated which intimidates many women today, especially on construction sites. For many women, studying means leaving home and family, which is a big sacrifice and challenge. Being away from home means less day-to-day family support and encouragement. This is where self motivation comes into play and many women find that this is difficult to maintain. Many of the women stated that there was a difference between what was taught in class and what actually happened on site. Language was also a barrier at Technikons and Universities as English is generally the primary medium.
What can be done to assist young upcoming women and encourage them to pursue construction related careers and businesses?

There should be an equal opportunity policy that is published, understood and operated. In general, the construction industry should promote and draw women into the industry by advertising more through media such as websites, more magazines (such as the Building Women Magazine), local newspapers, providing more bursaries, promoting the industry at schools during career week or construction week, etc.

BSc students are preferred over B Tech students in many instances which presents a problem. School visits and bringing girls on site should be promoted as well as increasing the site visits at tertiary level. Female role models should have more exposure by using things such as success stories of other females in the industry. Good and continuous training should be provided. Men and women should be paid equally. Progress of women should be monitored and the reasons why they leave should be addressed. Women should be represented at all levels, and in all areas.

What can be done to improve the climate on a construction site / office?

Women should dress appropriately and be properly inducted. Company induction: Men must be aware that women are on site and must understand that respect works both ways. More attention should be given to a 'Sexual Harassment' policy. Professionalism must be promoted on site as well as in the office environment. Senior management must lead the way and encourage this.

What are barriers to excelling/moving up in the company or industry?

Older men are afraid to share their knowledge as this will develop their competition. Many women had to tender their resignation before they were noticed or promoted. Long working hours versus the balancing of family responsibilities is a major challenge for women who have children. Many men still feel that the woman's place
is at home. Maternity leave is generally unpaid in the industry. Mentoring systems need to be established for women. This has to be promoted within companies and businesses in order to help women in the industry.

How can women work together to support each other and empower themselves?

Women need to get together and have frequent workshops such as "Khuthaza", which is an extremely valuable organization at present. Women are taught at these workshops to assist, support and help each other where they can, either financially or technically.

7.5 Support organizations for women in construction

7.5.1 Khuthaza

7.5.1.1 Background

Khuthaza meaning "encourage" in Zulu, is a non-profit organization driving the empowerment of women in the housing and construction sectors. Known previously as Women for Housing, they have recently rebranded and are repositioning the company within the sector.
Khuthaza facilitates career and business related opportunities for women within the housing and construction sectors. Through advocacy, training and support they aim to empower women to play a leading role in these industries. Khuthaza is a registered Section 21, non-profit company which was first established as a volunteer network in 1995. Experience over the past several years has demonstrated the need for an organisation to support and advocate for the empowerment and integration of women in the housing and construction sectors (WFH, 2007).

Their existence as an organization provides the cornerstone upon which many women in the industry are building their careers and businesses. In that regard, they play a pivotal role as a development facilitator. Khuthaza’s skills development mandate includes student development, professional development, contractor development and the cultivation of leadership within the various built environment disciplines (Khuthaza, 2011).

The growing network extends across the housing and construction professions, housing finance institutions, government, non-governmental organisations (NGOs), and academic institutions. These women have the experience, the skills, the networks, and the influence to realise the development of women’s involvement in the sector. While the organisation is small in structure, they have strong partnerships within the industry that enable them to play a meaningful role. The organisation’s work has been recognised by the industry on a number of occasions, most recently with a Govan Mbeki National Housing Award presented by Minister Sisulu.

Opportunities for women in the fields of housing and construction have been limited in the past but are increasing significantly in the current economy. This is supported by a booming construction sector, government promotion of women’s integration within all aspects of the economy, the Construction Charter, and Black Economic Empowerment policies as a whole. A growing number of women are showing keen interest in the housing and construction sectors. Their determination is also a strong, positive factor in the pursuit of equal access to opportunities.
It is accepted within South Africa and internationally that women must be at the centre of housing delivery as economic participants, decision makers, and housing consumers in order to build sustainable, viable settlements. Government has recognised these roles for women and has committed to pursuing the promotion of women and women-owned businesses through its policies and programmes. Khuthaza seeks to increase the interaction between women working in different aspects of housing through their network, thereby increasing awareness of the various roles women are playing and the sharing of their experiences. The organisation also provides a common ground from which women can advocate for opportunities, share their achievements, and engage in healthy debate.

Khuthaza seek a high level of diversity in all respects. Their Board of Directors, members and constituents are diverse in their socio-economic, educational, racial, religious, and professional backgrounds. They seek to share with each other their experiences, skills, and motivation and recognise that they each have something to share and to learn (WFH, 2007).

7.5.1.2 Information dissemination and advocacy

Khuthaza aims to serve as a central source of information for women in the industry. They distribute information via email newsletters, the website, by telephone and via SMS. Advocacy is an important aspect of their work.

In advocating for opportunities for women in the sector Khuthaza:

- Works closely with the Department of Housing.
- Interacts regularly with industry role players and housing institutions.
- Sits on a number of industry related committees and councils.
- Has been integrally involved in the development of the Construction Charter and is structuring its work to support implementation of the Charter at all levels.
7.5.1.3 The Khuthaza network

Khuthaza has a network of women, currently numbering close to 2000, involved in all aspects of housing and construction (WFH, 2007):

- Students
- Developers, Contractors, Subcontractors
- Academic Institutions
- Government
- Technical Professions (Engineers, Architects, Planners, Project Managers, Quantity Surveyors, etc.)
- Financial Institutions
- Housing Organisations
- Manufacturers and Suppliers
- Consultants and Researchers
- Real Estate and Property Management
- Women in Construction Related Trades
- Training Institutions

7.5.2 South African Women in Construction (SAWIC)

7.5.2.1 Background

The South African Women in Construction (SAWIC) initiative was founded in 1997 in order to empower women to gain access to contracts, training, finance and networks in the construction industry. South African Women in Construction (SAWIC) is a National Association of female entrepreneurs, including women employed in all areas of construction, from the skilled trades to business ownership, with
International Affiliation: to the National Association of Women in Construction (NAWIC) in America and Australia (SAWIC, 2011).

This year SAWIC celebrates the 14th anniversary of the founding of this national network of women in the industry. SAWIC is strongly positioned, to act as a conduit to support South Africa's broad-based black economic empowerment initiatives. Black women constitute 90% of their membership and they directly benefit from the workings of the organization. SAWIC has strategic primary partnerships with the Independent Development Trust (IDT) and the Development Bank of South Africa (DBSA) and engages as a partner and member with various other entities.

SAWIC is a key member spearheading the Construction Charter Council and is a founding member of Construction South Africa. The individuals representing SAWIC bring a wealth of expertise and experience to business. SAWIC has been involved at a management level in its partnerships with the IDT and DBSA. The majority of SAWIC's members are leaders within their communities and industry and play executive roles within their own businesses and in projects in which they are involved. The affiliation of SAWIC with NAWIC ensures access of their members to international literature, training programs, networks and best practice. SAWIC currently services more than 2000 female contractors country-wide.

7.5.3 South African Women Entrepreneurs' Network (SAWEN)

7.5.3.1 Background

The establishment of South African Women Entrepreneurs Network (SAWEN) is a reaction to the fact that female entrepreneurs in South Africa continuously face a
wide array of obstacles in starting, growing and sustaining their own enterprises (DTI, 2011). This Department of Trade and Industry (DTI) initiative is a networking forum for individuals and organisations that are committed to the promotion and advancement of women entrepreneurs (DTI, 2011).

7.5.3.2 Objectives of SAWEN

The following is a list of SAWEN’s objectives taken from the following source (DTI, 2011):

• To provide a national vehicle that brings women together and addresses the challenges faced by them.

• To lobby government, public and private institutions on such issues. However, this is not limited to policy, legislation and/or proposed legislation affecting either directly or indirectly the trade and commerce activities of women entrepreneurs.

• To align SAWEN with other bodies or organisations with similar business at both a national and international level, and to leverage the relationships arising out of these alignments for the benefit of its members.

• To facilitate access to business resources, information and opportunities for South African women entrepreneurs in a way that promotes their effective participation in the global economy.

• To profile and affirm women in business leadership positions in both the public and private sectors.
7.5.3.3 SAWEN's Clients

The primary clients of SAWEN are any female South African citizens owning or managing an enterprise as part of generating profit, thus contributing towards growing the South African economy. Secondly it is aimed at any woman who aspires to start their own business.

7.6 Take a girl child to work day

Figure 7.3: Female scholars

Source: (Building Women Magazine, June/July 2007)

Take a Girl Child to Work Day is an annual corporate social investment event, held in South Africa since 2003 (Wikipedia, 2011). Many companies arrange for school pupils, usually from disadvantaged backgrounds, to spend the day at their place of work on the last Thursday of May. The initiative is organized by Cell C, a cellular
service provider, and endorsed by the South African Department of Education. Despite advances in legislation, the majority of women in South Africa still suffer from gender inequality as they lack the skills to make them economically independent. Women remain underrepresented in the formal economy, and more so in corporate leadership positions. This is because there are career opportunities that were previously not accessible to women, and other opportunities that individual women may not be aware of (Wikipedia, 2011).

Thus, the goal of the *Take a Girl Child to Work Day* initiative is to 'deepen the thinking of the girl child with regard to their infinite roles in society, enhance her self-esteem, inspire and motivate her to reach her full potential and through exposure to diverse careers and positive role models assist her to prepare for the world of work' (Wikipedia, 2011).

Cell C believes that the impact will be far-reaching, as 'benefits will be shared as she passes them onto her children, her community and her country'. This year's event was scheduled for the 26th of May 2011 and the theme is: 'Today a Girl, Tomorrow a Leader', which recognizes that given the opportunities, resources, necessary and appropriate support, every young girl has the potential to be a leader in their own right (Cell C, 2011).

### 7.7 Recommendations

Work-family conflict is defined as a form of inter-role conflict whereby work and family demands cannot be met simultaneously and is an on-going problem for women with career aspirations (Lingard and Lin, 2003). Maternity leave is unpaid by many organizations which poses a big problem. Government needs to revise at these policies and companies need to revise at this benefit and see it as a way of retaining women in the construction industry. Refer to *Figure 7.3* for a complete recruitment and retention process.
Mentoring may provide women in construction with support in attaining their career and personal goals (Lingard et al, 2003). Mentoring is recommended as a tool to help women to break the so-called 'glass ceiling' and has been used to help women progress their careers in organizations in which they were underrepresented.

The non-availability of proper ablution facilities on construction sites for women has been identified as a major problem. The use of abusive language on site with women is frustrating and more respect needs to be shown. Site managers are known to be the worst. Women are not treated as equal to men in the same
positions. Women also feel that men undermine them on site and are afraid of giving them responsibilities. Communication is difficult with the men on site. Many of the women said that they would like to gain the experience and then start their own companies. Assertiveness needs to be developed. Most women said that they love construction and really enjoy learning.

Government has introduced certain legislation to improve gender equality in South Africa and has also established a number of programmes aimed at promoting the participation of women in the construction industry. However from the survey, most women (88%) still believe that the South African Government needs to create more initiatives to attract women into the construction industry. From the interviews and completed questionnaires, it was confirmed that more women (52%) agree that government is doing its best to promote the upliftment of women in the construction industry, but some went on further to say that most of it is verbal and that government needs to act more. Many women stated that they would like to see the government providing financial support to organizations such as Khuthaza and supporting training and educational programmes which will assist them to progress in the industry. While government may have assisted with job opportunities and exposure in the industry, government should still focus on skills development of female entrepreneurs, which in turn will encourage sustainable businesses and will also help these businesses to grow faster.

And finally, when asked what the companies could do to retain them, the general reply was:

- Give me exposure.
- Treat me equally.
- Give me the responsibility and allow me to begin making decisions.

None of the candidates mentioned ‘money’ as a top priority.
This research identified the most common problems faced by women in the construction industry today, both nationally and internationally. The extent of the gender-based issues that have placed constraints on the development and advancement of women in the construction industry was determined.

7.8 Addressing the research objectives

The objectives of the research were addressed as follows:

**Objective 1:** To provide a South African and International comparison of the key issues faced by women in the construction industry.

- A few random countries in Africa and the rest of the world were selected and studied to ascertain the levels of participation of women in the construction industry abroad as well as the existing constraints that affect the performance of women.
- The research was conducted with reference to existing theoretical literature, as well as published and unpublished South African and International research.
- Countries in the "rest of the world" included the United Kingdom (UK), India, Singapore and Australia. The findings from the literature review for these countries are shown in chapter 2.
- Countries in Africa included South Africa, Nigeria, Botswana and Ghana. The findings from the literature review for these countries are shown in chapters 3 and 4.

*Figure 7.4* shows the geographical location of the above-mentioned countries.
Objective 2: To identify the challenges faced by women in the South African construction industry, and to discuss what support and government initiatives are currently in place to support women contractors.

- The findings from the literature review for South Africa is shown in chapter 4.
- Chapter 4 highlights the challenges faced by women in the South African construction industry.
- Chapter 4 also clearly highlights the support and government initiatives which are currently in place to support women contractors.

Objective 3: To determine the extent of the gender-based issues that has placed constraints on the development and advancement of women in the South African construction industry.

- A survey was completed and interviews were also held with key women in the South African construction industry.
• A self-administered questionnaire was completed by one hundred female subjects.
• The subjects comprised of women who either owned or worked for construction companies, suppliers, subcontractors, manufacturers and consultants in the construction sector of all provinces in South Africa.
• The findings from the survey, including the gender-based issues experienced, are shown in chapter 6.

7.9 Limitations and areas for further research

• The research was not limited to selected provinces and the survey was carried out with female consultants and contractors throughout South Africa. However there wasn’t equal numbers of participants in every built environment discipline. The interviews for the survey were carried out with women in the Gauteng province only. Similar studies and surveys could be conducted separately within the individual provinces.

• The research focused on the construction industry as a whole. Studies can be done with women within the various built environment disciplines in order to ascertain a more accurate analysis with regard to statistics. For example, Allyson Lawless’s published book titled ‘Numbers & Needs’ focuses on the civil engineering profession.

• Research into possible solutions to the financing challenges faced by female contractors today. What can be done to assist these women as start-up finance is extremely difficult to come by, which prevents many small women-owned contracting companies from getting off the ground.

• Further research is also required to investigate and focus on female students experiences in the industry, while studying and after graduation, in order to
explore whether women's coping strategies become clearer with time, and whether the culture of the industry deters them from pursuing their careers.

7.10 Conclusion

This chapter has provided an analysis of the research study. It evaluated the research propositions with reference to the objectives, literature review and the field data gathered. Conclusions were drawn, limitations stated and recommendations and areas for future research were highlighted.

"Women have intrinsic values – they are quietly determined, have learnt to read others and understand them and make good team leaders. Women should be recognized for their strong qualities, and society should appreciate the added value women offer." (Agherdien et al., 2008)
References


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Annexures

Annexure 1: Support Organizations for Women in Construction

<table>
<thead>
<tr>
<th>Organization</th>
<th>Details</th>
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| South African Women Entrepreneurs Network (SAWEN) – launched July 2001 | SAWEN identifies the origin of women entrepreneurs' problems as:  
  - **Gender** - despite the fact that women-owned enterprises are contributing an increasing share to national revenue, they are generally perceived to lack the capacity of their male equivalents.  
  - **Size** - Nearly all women-owned enterprises belong to the lower end of the SMME category, being either very small or micro sized companies. Men are predominant in the more lucrative sectors. Approximately 70% of informal businesses in South Africa are either owned or controlled by women.  
  
SAWEN seeks to affiliate all women enterprise groups, co-operatives, organizations and initiatives into a national umbrella body that will represent and articulate the aspirations of all women entrepreneurs (potential and existing) that operate within the South African SMME sector, as well as lobby for their support needs. It also seeks to target rural women. Since its launch in 2001, it has established a number of provincial chapters. |
<p>| Women in Oil and Energy in South Africa (WOESA) - launched March 2002 | Facilitates the participation of women in business ventures in the oil, gas and other energy sectors. |
| Technology for Women in Business (TWIP) | Aimed at enhancing the accessibility of science and technology to women in business, in particular SMMEs. It is a national programme under the auspices of the Department of Trade and Industry (DTI). The CSIR, as contracted by DTI, acts as an agent for DTI to implement the |</p>
<table>
<thead>
<tr>
<th><strong>South African Women in Construction (SAWIC) – launched August 1999</strong></th>
<th>TWIB programme. Promotion and advancement of women in construction; of education and contribution to the betterment of the construction industry and the enhancement of the entrepreneurial development of women-owned enterprises in construction.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Khuthaza – launched 1995</strong></td>
<td>The organization now known as Khuthaza has been operating as Women for Housing since 1995. Khuthaza is a section 21 (non-profit) company supporting the development of women in the housing and construction sectors. Their work contributes to the vision of an economic and social landscape enriched by the contributions of women as equal participants across all industries and levels of development. Khuthaza is a catalyst for change and socio-economic development. Khuthaza encourages the entrance of women into the built environment sectors and the development of thriving careers and businesses therein. They support government initiatives relating to housing and infrastructure delivery, the maintenance and growth of the construction industry and Broad Based Black Economic Empowerment.</td>
</tr>
</tbody>
</table>

* Added by Author

Source: (ETU, 2010)
Annexure 2: Institutions providing finance to SMMEs in South Africa

<table>
<thead>
<tr>
<th>National</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Contractors Finance Corporation</td>
<td>• Business Partners (formerly the SBDC)</td>
</tr>
<tr>
<td>• Business Partners (formerly the SBDC)</td>
<td>• Commercial Banks</td>
</tr>
<tr>
<td>• Community Projects Funds - CPF-SP</td>
<td>• Community Projects Funds - CPF-SP</td>
</tr>
<tr>
<td>• Development Bank of South Africa</td>
<td>• Development Bank of South Africa</td>
</tr>
<tr>
<td>• Industrial Development Corporation - (IDC)</td>
<td>• Industrial Development Corporation - (IDC)</td>
</tr>
<tr>
<td>• International Tourism Marketing Assistance Scheme - (ITMAS)</td>
<td>• International Tourism Marketing Assistance Scheme - (ITMAS)</td>
</tr>
<tr>
<td>• Khula Credit Guarantee Scheme</td>
<td>• Khula Credit Guarantee Scheme</td>
</tr>
<tr>
<td>• Khula Micro Credit Outlets</td>
<td>• Khula Micro Credit Outlets</td>
</tr>
<tr>
<td>• Khula Retail Financial Intermediaries (RFIs)</td>
<td>• Khula Retail Financial Intermediaries (RFIs)</td>
</tr>
<tr>
<td>• Khula Thuso Mentorship Scheme</td>
<td>• Khula Thuso Mentorship Scheme</td>
</tr>
<tr>
<td>• Land Bank</td>
<td>• Land Bank</td>
</tr>
<tr>
<td>• Sizanani Scheme</td>
<td>• Sizanani Scheme</td>
</tr>
<tr>
<td>• Zimele</td>
<td>• Zimele</td>
</tr>
<tr>
<td>• Business Finance Promotion Agency (Khula RFI)</td>
<td>• Business Finance Promotion Agency (Khula RFI)</td>
</tr>
<tr>
<td>• Community Entrepreneurial and Business Initiative</td>
<td>• Community Entrepreneurial and Business Initiative</td>
</tr>
<tr>
<td>• Eastern Cape Development Corporation</td>
<td>• Eastern Cape Development Corporation</td>
</tr>
<tr>
<td>• FNB Momentum Umsobomvu Progress Fund</td>
<td>• FNB Momentum Umsobomvu Progress Fund</td>
</tr>
<tr>
<td>• Marang Financial Services</td>
<td>• Marang Financial Services</td>
</tr>
<tr>
<td>• Free State Development Corporation</td>
<td>• Free State Development Corporation</td>
</tr>
<tr>
<td>• Remmogob Business Finance</td>
<td>• Remmogob Business Finance</td>
</tr>
<tr>
<td>• African Contractors</td>
<td>• African Contractors</td>
</tr>
<tr>
<td>• Anglo Platinum Corporation</td>
<td>• Anglo Platinum Corporation</td>
</tr>
<tr>
<td>• Artpac Lending Services</td>
<td>• Artpac Lending Services</td>
</tr>
<tr>
<td>• Basani Business Development Services</td>
<td>• Basani Business Development Services</td>
</tr>
<tr>
<td>• FNB Momentum UYF Progress Fund</td>
<td>• FNB Momentum UYF Progress Fund</td>
</tr>
<tr>
<td>• Khethani Business Finance</td>
<td>• Khethani Business Finance</td>
</tr>
<tr>
<td>• Land Bank Marketing Department</td>
<td>• Land Bank Marketing Department</td>
</tr>
<tr>
<td>• Marang Financial Services</td>
<td>• Marang Financial Services</td>
</tr>
<tr>
<td>• Sankofa Financial Services</td>
<td>• Sankofa Financial Services</td>
</tr>
<tr>
<td>• The Nations Trust</td>
<td>• The Nations Trust</td>
</tr>
<tr>
<td>• Tusk Construction Support</td>
<td>• Tusk Construction Support</td>
</tr>
<tr>
<td>• FINCA</td>
<td>• FINCA</td>
</tr>
<tr>
<td>• FNB Momentum UYF Progress Fund</td>
<td>• FNB Momentum UYF Progress Fund</td>
</tr>
<tr>
<td>• Ithala Development Finance Corporation</td>
<td>• Ithala Development Finance Corporation</td>
</tr>
<tr>
<td>• Khethani Business Finance (Khula RFI)</td>
<td>• Khethani Business Finance (Khula RFI)</td>
</tr>
<tr>
<td>• KwaZulu-Natal Development Foundation</td>
<td>• KwaZulu-Natal Development Foundation</td>
</tr>
<tr>
<td>• Marang Financial Services</td>
<td>• Marang Financial Services</td>
</tr>
<tr>
<td>• African Contractors</td>
<td>• African Contractors</td>
</tr>
</tbody>
</table>

164
<table>
<thead>
<tr>
<th>Province</th>
<th>Institutions</th>
</tr>
</thead>
</table>
| Mpumalanga    | • Anglo Platinum Corporation  
• Artpac Lending Services  
• Basani Business Development Services  
• FNB Momentum UYF Progress Fund  
• Khethani Business Finance  
• Land Bank Marketing Department  
• Marang Financial Services  
• Sankofa Financial Services  
• The Nations Trust  
• Tusk Construction Support  |
| Northern Cape | • Beehive Entrepreneurial Development Centre  
• Ekukhanyeni Finance Facility (Khula Micro Credit Outlet)  
• Emerging Entrepreneurs Finance Service Centre  
• Marang Financial Services  
• Middleburg Micro Credit Outlet  
• Mpumalanga Economic Empowerment Corporation - (M.E.E.C)  
• Siyakhula Micro Business Finance (Khula Micro Credit Outlet)  |
| Western Cape  | • FNB  
• Momentum  
• UYF Progress Fund  
• Khethani Business Finance (Khula RFI)  
• Landelijke Ontwikkelingsmaatskappy  
• Nations Trust (Khula RFI)  
• New Business Finance  |

Source: (ETU, 2010)
It’s a tough job but I’m not complaining

When recruitment for construction work at the Peter Mokaba Stadium started, she landed a job as a labourer, one of 400 on site.

“Every day I worked where my children, friends and home would get their bread. I didn’t worry so much about myself. The children were my concern.”

She started a change of life through this job. She won’t give up and will not take anything for granted or underestimate the importance of being employed.

May 2010

Source: (Sunday Times, Countdown 2010, August 26, 2010)
Mother proud to be building a better future

A PHONE call from her cousin brought Maggie Mothiba the best news she had heard all year.
The call was to tell her there were job opportunities in Polokwane.
Mothiba didn't hesitate to embark on the 100km trek from Tshane to Turfloop, leaving her daughter Mpho with a family friend.

Landing the job was a fulfillment of a dream — days had been dark for the woman who had previously depended on survival work as a domestic worker.

"I passed matric in 2002 but could not study further because of a lack of funds. I have no parents.

"So you can understand why I was beside myself with joy when I got the job. I don't need hand-outs anymore."

Working on a construction site is the closest she can get to her dream of becoming an architect.

"I enjoy the work. It gives me a sense of empowerment because the future of my baby left me the moment I fell pregnant. By doing this, I am proving to myself that I don't need to be dependent on a man."

But her big break is not without its challenges.

Because of the distance between her house and place of employment, Mothiba cannot afford to travel to and from work from Monday to Friday.

Neither can she be closer to her workplace because, she claims, some locals are exploiting the situation by charging astronomical fees for accommodation.

"I can't afford to stay in Polokwane because people want R1000 for rent and I earn R900. It is not even decent accommodation. There is no way I am paying that much for a shack."

The 26-year-old opted to rent a room in Turfloop for R250 instead. "At least I can save R150 towards my daughter's education. I want her to be better educated than me so that she can have a better-paying job. I can't stay with my cousin because she has a two-room house and lives with her children.

"I don't want to be a burden to her, she has done enough by helping me get employed. But I appreciate this job — it feels like killing two birds with one stone. I am benefiting from it to secure my child's future.

"At the same time, I am doing something for my country. What more can I ask for?"
Annexure 5:  Survey Questionnaire

PO Box 524
Auckland Park
2006
South Africa
Phone: +27 (0) 11 559-4555
Website: http://www.uj.ac.za

For submission of completed questionnaires or any further questions, you may contact the research project leader: Mr. M. S Moodley (CSIR)
Contact number: (012) 841 2396 or 083 227 4532
Facsimile: (086 556 8296)
Email: mmoodley@csir.co.za

The purpose of this questionnaire is to gain an insight into women within the South African Construction Industry and in doing so, to realize and highlight the “challenges” and “gender-based issues” faced by these women today.

Your participation is extremely important for the success of this study and therefore you are invited to participate by responding as fully as you possibly can to the following survey which should take you about 10 minutes to complete.

Instructions
1. Complete using a pen (not a pencil).
2. Mark with an X in the block you select where this choice is offered.
3. Complete all questions as accurately and fully as possible.
4. This questionnaire is intended to be filled in by females only. Responses from males will be disregarded.

Mark one box only i.e., the most suitable/appropriate choice:

Example:

Are you a South African citizen?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>
1. Select one:

<table>
<thead>
<tr>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
</table>

2. What position do you hold in your organization? Tick one box only.

<table>
<thead>
<tr>
<th>Employee</th>
<th>Manager</th>
<th>Associate / Senior Manager</th>
<th>HOD / Partner / Director</th>
<th>Senior Partner / Managing Director / CEO</th>
</tr>
</thead>
</table>

3. How long have you been in business-employed in the construction industry?

<table>
<thead>
<tr>
<th>Less than one year</th>
<th>Two to five years</th>
<th>Six to Ten years</th>
<th>More than 10 years</th>
</tr>
</thead>
</table>

4. How old are you?

<table>
<thead>
<tr>
<th>20 to 30</th>
<th>30 to 40</th>
<th>40 to 50</th>
<th>Older</th>
</tr>
</thead>
</table>

5. What formal education and training do you have?

<table>
<thead>
<tr>
<th>Matric</th>
<th>Diploma</th>
<th>Honours Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short Course</td>
<td>Degree</td>
<td>Masters Degree</td>
</tr>
<tr>
<td>Certificate</td>
<td>Post Graduate Diploma</td>
<td>PhD or equivalent</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

If “Other” please specify:

________________________________________

169
6. **What is your organization's key focus in the construction industry?**

<table>
<thead>
<tr>
<th>Contractor</th>
<th>Architect</th>
<th>Project Manager</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturer</td>
<td>Engineer</td>
<td>Land Surveyor</td>
</tr>
<tr>
<td>Sub Contractor</td>
<td>Quantity Surveyor</td>
<td>Client</td>
</tr>
<tr>
<td>Supplier</td>
<td>Other</td>
<td></td>
</tr>
</tbody>
</table>

If “Other” please specify: ____________________________

7. **Which province does your organization conduct most or all of its business?**

<table>
<thead>
<tr>
<th>Gauteng</th>
<th>Mpumalanga</th>
<th>Northern Cape</th>
</tr>
</thead>
<tbody>
<tr>
<td>KwaZulu-Natal</td>
<td>Limpopo</td>
<td>Western Cape</td>
</tr>
<tr>
<td>Free State</td>
<td>Eastern Cape</td>
<td>North West</td>
</tr>
</tbody>
</table>

8. **How many female workers work in your organization?**

<table>
<thead>
<tr>
<th>1 to 5</th>
<th>16 to 20</th>
<th>31 to 40</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 to 10</td>
<td>21 to 25</td>
<td>41 to 50</td>
</tr>
<tr>
<td>11 to 15</td>
<td>26 to 30</td>
<td>More than 50</td>
</tr>
</tbody>
</table>

9. **What is the average value of projects that your organization takes on?**

<table>
<thead>
<tr>
<th>R20k</th>
<th>R50k</th>
<th>R10 million</th>
</tr>
</thead>
<tbody>
<tr>
<td>R50k</td>
<td>R1 million</td>
<td>R20 million</td>
</tr>
<tr>
<td>R100k</td>
<td>R5 million</td>
<td>More than R20 million</td>
</tr>
<tr>
<td>Not Applicable</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

10. **What is the average number of projects that your organization completes per year?**

<table>
<thead>
<tr>
<th>5</th>
<th>20</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>25</td>
</tr>
<tr>
<td>15</td>
<td>More than 25</td>
</tr>
</tbody>
</table>

11. **Does your organization have equal opportunities and rights for men and women?**

<table>
<thead>
<tr>
<th>No</th>
<th>Yes</th>
</tr>
</thead>
</table>

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12. What attracted you to the construction industry?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

13. In general, the Construction Industry in South Africa is “male dominated”. Did this in any way have a negative impact on your studies, career or your business?

[ ] No  [ ] Yes

If your answer above is "Yes", please explain your response:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

14. Have you experienced any “gender discrimination” or have you ever been “harassed” at work?

[ ] No  [ ] Yes
If “Yes” please state how:

<table>
<thead>
<tr>
<th>Sexual harassment</th>
<th>Disrespect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treated unfairly</td>
<td>Limited opportunity for career growth</td>
</tr>
<tr>
<td>Inequality</td>
<td>Other</td>
</tr>
</tbody>
</table>

If “Other” please explain your response:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

15. Do you feel that the South African Government is doing its best to promote the upliftment of women in the construction industry?

No  Yes

If your answer above is "No", please explain your response:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

16. The construction industry is male dominated and should remain that way.

Agree  Disagree

17. Women can build successful careers within the construction industry.

Agree  Disagree

18. Women in construction do not get the same respect as men.

Agree  Disagree
19. The construction industry is more suited for men.
   Agree [ ] Disagree [ ]

20. Women are likely to be sexually harassed on construction sites.
   Agree [ ] Disagree [ ]

21. Women are not strong enough to handle physical construction work.
   Agree [ ] Disagree [ ]

22. Increasing the number of women in the industry will improve the image of the construction industry.
   Agree [ ] Disagree [ ]

23. The South African Government needs to create more initiatives to attract women into the construction industry.
   Agree [ ] Disagree [ ]

24. Women are intimidated by the fact that there are more male professionals in construction.
   Agree [ ] Disagree [ ]

25. Women generally prefer careers in other industries e.g. Medical, IT, Commerce, etc.
   Agree [ ] Disagree [ ]

26. Would you encourage other women to follow your example and join the construction sector?
   No [ ] Yes [ ]

27. Do you prefer to be:
   Office based [ ] Site based [ ] Both office and site based [ ]
28. Of the reasons below, which one in your opinion, do you feel has the most impact for discouraging women to work on construction sites:

<table>
<thead>
<tr>
<th>Extreme temperatures</th>
<th>Inadequate toilet / ablation facilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harsh working environment</td>
<td>Lack of respect by the male counterpart</td>
</tr>
<tr>
<td>Personal hygiene</td>
<td>Women are not physically capable of carrying out the tasks required</td>
</tr>
<tr>
<td>Traditionally women are not allowed or expected to work on construction sites</td>
<td>Other</td>
</tr>
</tbody>
</table>

If "Other" please explain your response:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

29. The term "Glass Ceiling" refers to the fact that the representation of women in the construction industry decreases with an increase in seniority of the position. What is your view on this? Do you think that this will change in the future?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

30. Is there anything else that you wish to say which you feel is important to the topic?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Thank you for your time and for helping to better understand the issue of gender equity within the South African Construction Industry.