

WOMEN ENTREPRENEURS' PERFORMANCE: MICROFINANCE
FACTORS WITH MEDIATING EFFECT OF OPPORTUNITY AND
MODERATING EFFECT OF ATTITUDE

By

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ABSTRACT

The purpose of this study was to investigate the relationship between micro-finance related factors (credit, savings, training and social capital) offered by micro-finance institutions and women entrepreneurs' business performance with mediating influence of opportunity for entrepreneurial activity and the moderating influence of attitude towards micro-finance. However, the hypotheses were restated to reflect the component factors that resulted from the Exploratory Factor Analysis. For example, loan access represented credit, skill acquisition represented training, bonding represented social capital, opportunity for business improvement represented opportunity for entrepreneurial activity, ability to expand business and self-confidence in doing business represented attitude towards micro-finance, and women entrepreneurs' sales performance represented women entrepreneurs' business performance. A total of 280 women entrepreneurs participated in the survey through mail questionnaire; out of which 172 questionnaires were usable. However, after data cleaning, only data for 161 respondents were finally used for the data analysis. Descriptive statistics, multiple, linear and hierarchical regression analyses were used for data analysis and hypotheses testing. The study found that there were significant positive relationships between: loan access, skill acquisition and bonding; and women entrepreneurs' sales performance which met Research Objective 1; skill acquisition and women entrepreneurs' sales performance which met Research Objective 2; loan access and opportunity for business improvement of women entrepreneurs, skill acquisition and opportunity for business improvement of women entrepreneurs which met Research Objective 3; opportunity for business improvement and women entrepreneurs' sales performance which met Research Objective 4; opportunity for business improvement of women entrepreneurs partially mediated the relationship between loan access, skill acquisition and bonding; and women entrepreneurs' sales performance since only skill acquisition was significant which met Research Objective 5; ability to expand business partially moderated the relationship between loan access, skill acquisition, bonding and opportunity; and women entrepreneurs' sales performance which met Research Objective 6. The study concludes that micro-finance factors are positively related to women entrepreneurs' business performance as the models were, collectively, significant.

Keywords: Microfinance, women entrepreneurs' business performance.

ABSTRAK

Tujuan kajian ini adalah untuk mengkaji hubungan antara faktor-faktor yang berkaitan dengan kewangan mikro (kredit, simpanan, latihan dan modal sosial) yang ditawarkan oleh institusi mikro kewangan dan prestasi perniagaan usahawan wanita dengan pengaruh pengantara peluang untuk aktiviti keusahawanan dan pengaruh penyederhana iaitu sikap terhadap faktor-faktor mikro kewangan. Walau bagaimanapun, hipotesis telah dinyatakan semula untuk menggambarkan faktor komponen yang berlaku akibat daripada Analisis Faktor Tinjauan. Sebagai contoh, akses kepada pinjaman mewakili kredit, pemerolehan kemahiran mewakili latihan, ikatan mewakili modal social, peluang untuk peningkatan perniagaan mewakili peluang untuk aktiviti keusahawanan, keupayaan untuk mengembangkan perniagaan dan keyakinan diri dalam menjalankan perniagaan mewakili sikap terhadap faktor-faktor mikro kewangan, dan prestasi jualan usahawan wanita mewakili prestasi perniagaan usahawan wanita. Seramai 280 usahawan wanita mengambil bahagian dalam kaji selidik melalui soal selidik mel. Daripada jumlah ini, hanya 172 soal selidik yang boleh digunakan. Walau bagaimanapun, selepas pembersihan data, hanya 161 responden yang akhirnya digunakan untuk analisis data seterusnya. Statistik deskriptif, analisis regresi berganda, linear dan hierarki digunakan untuk analisis data dan pengujian hipotesis. Kajian mendapati bahawa terdapat hubungan positif yang signifikan antara: akses pinjaman, pemerolehan kemahiran dan ikatan; dan prestasi perniagaan memenuhi Objektif Penyelidikan 1; pemerolehan kemahiran dan prestasi perniagaan usahawan wanita memenuhi Objektif Penyelidikan 2; akses kepada pinjaman dan peluang untuk peningkatan perniagaan usahawan wanita, pemerolehan kemahiran dan peluang untuk peningkatan perniagaan usahawan wanita memenuhi Objektif Penyelidikan 3; peluang untuk peningkatan perniagaan dan prestasi jualan usahawan wanita memenuhi Objektif Penyelidikan 4; peluang untuk peningkatan perniagaan usahawan wanita bertindak sebagai pembolehubah pengantara sebahagian (*partial mediator*) dalam perhubungan di antara akses kepada pinjaman, pemerolehan kemahiran dan ikatan; dan prestasi jualan usahawan wanita dan memenuhi Objektif Penyelidikan 5; keupayaan untuk mengembangkan perniagaan bertindak sebagai pembolehubah penyederhana sebahagian dalam hubungan antara akses pinjaman, pemerolehan kemahiran, ikatan dan peluang; dan prestasi jualan usahawan wanita dan memenuhi Objektif Penyelidikan 6. Kajian telah menunjukkan bahawa faktor-faktor kewangan mikro adalah secara positif berkaitan dengan prestasi perniagaan usahawan wanita dimana model secara kolektif adalah signifikan.

Kata kunci: Mikro-kewangan, prestasi perniagaan usahawan wanita.

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LIST OF ABBREVIATIONS

MF = Micro-finance

MFIs = Micro-finance Institutions

EFA = Exploratory Factor Analysis

SEM = Structural Equation Modeling

SD = Standard Deviation

CHAPTER 1

INTRODUCTION

1.1 Background of the Study

Women play a crucial role in a country as economic supporters to their families. In Nigeria, women involvement in agriculture before the oil boom of the early 1970s contributed to their economic wellbeing and that of the country (Adepelumi, 2007; Edozien, 2008). However, the government's diversion of attention from agriculture, where women had dominated, and other economic sectors to the production of crude oil as a major export commodity in the early 1970s led to women unemployment. This is because the production of crude oil and its allied services led to the demand for professionals and skilled labor in the oil industry, and due to low educational levels of most women in the country, they could not secure jobs in such industries and so they became neglected (Adepelumi, 2007). Their contribution to the country's economy through agricultural micro-enterprises, before the advent of the crude oil, was noticeable. This is because agriculture was the major foreign exchange earner and employed over 60% of the labor force (May, 2007). Again, due to inefficiency of most Nigerian previous leaders; funds and programs targeted at women's development were diverted to other uses. This further hindered the development of women. Other obstacles that have worked against women include poverty and unemployment (Maduagwu, 2000; Mohd & Hassan, 2008).

Poverty abound in many countries of the world and women are mostly affected as they made up 70% of the world's poor (UNIFEM, 2008) and 84.2% of micro-finance institutions' poorest clients (Okojie, Monye-Emina, Eghafona, Osaghae & Ehiakhamen, 2010). However, poverty is most pronounced in developing countries, Nigeria inclusive, and the micro-finance programs of the Consultative Group to Assist the Poorest (CGAP) focuses on poor women in poor countries (UNCDF/UNDP, 2003). Adequate financing of micro-enterprises in developing countries could help fight poverty in such countries (Okojie et al., 2010).

Again, women are more likely to be affected by unemployment and poverty than males (May, 2007; Porter & Nagarajan, 2005; Roomi & Parrot, 2008) and micro-finance could aid self-employment and reduce poverty among the women (Maduagwu, 2000). Women's self-employment, especially part-time, could also help to augment the low income of women in paid employment in many developing countries (Singh & Belwal, 2007). Entrepreneurial activity is necessary because it could help women to tap opportunities in the market and gain profit to support families (Kuzilwa, 2005). Again, literature supported the fact that women are most exposed in times of economic and natural disasters such as inflation and earthquakes (Otero, 1999). Therefore, their economic empowerment should be boosted as a cushion against such disasters.

Women are disadvantaged due to gender-related discriminations especially in developing countries (May, 2007; Roomi & Parrot, 2008). Some of such discriminations, occasioned by culture, are in the areas of distribution of social wealth such as education and health (Ibru, 2009; ILO, 2009; Otero, 1999), yet women

contribute to the economic development of their countries through their greater involvement in credit schemes (Otero, 1999) and job creation through micro-enterprises and SMEs (Osman, Ho & Galang, 2011). In Bangladesh, Grameen Bank for instance had 95% women borrowers between 1995 and 1998 (Versluysen, 1999). Women also constitute a reasonable percentage of the population of most developing countries (ILO, 2009). For instance, from the 2006 population census in Nigeria, women were 68.3million while men were 71.7million (NWFF, 2008). Therefore, this study supported Ibru (2009); Singh and Belwal (2007) that women entrepreneurs, especially in developing countries, need micro-finance to start or improve business and their subsequent welfare.

Most women enterprises in Nigeria are mostly confined to the informal sector, such as agriculture and retailing (Lawal, Omonona, Ajani & Oni, 2009; Mkpado & Arene, 2007; Okpukpara, 2009). Therefore, supporting them with micro-finance factors could be a means of economic development at the grassroots (Dixon, Ritchie & Siwale, 2005; Maduagwu, 2000; Roomi & Parrot, 2008; Rushad, 2004).

Lack of favorable and efficient financial policy framework hindered enterprise development in Nigeria (Iganiga, 2008; Iheduru, 2002) despite the fact that micro-finance could aid women entrepreneurship productivity (Iheduru, 2002). Though North (1990) argued that efficient institutional financial framework in a country is difficult to achieve, the studies above confirmed that external business environment in Nigeria, like in other countries of the world, poses a lot of challenges to businesses (women enterprises inclusive). This is because the environmental constraints are outside the

control of the business owners. Such constraints include the economic, financial, legal, political and socio-cultural factors, and lack of functional infrastructure (Hubka & Zaidi, 2005; Stephen & Wilton, 2006). These constraints, which are sometimes volatile, normally play a greater role in entrepreneurial activity than personal attributes such as education, motivation and working experience (Kuzilwa, 2005; Shastri & Sinha, 2010; Vob & Muller, 2009). An entrepreneur is only motivated to start a business if the environment is supportive (Stephen & Wilton, 2006). Previous studies concluded that the government of a country has a great role to play in providing an enabling environment for enterprise performance (Chakraborty, 2008; Coleman & Kofi, 2008; Stephen & Wilton, 2006; William & Thawatchai, 2008).

Women' self-employment could be an effective strategy to solve some of these problems (Ibru, 2009; Porter & Nagarajan, 2005; Roomi & Parrot, 2008). However, such businesses could not be devoid of micro-finance due to their unique characteristics; some of which include: smallness in size, limited capital, lack of collateral required by conventional banks, lack of training and low level of education of the women entrepreneurs (Ojo, 2009; Iheduru, 2002).

Women entrepreneurs lack adequate physical capital (credit and savings) for business as well as human capital (training and education) and social capital which force them into quest for micro-finance (Ibru, 2009; Kuzilwa, 2005). This is due to unemployment (Akanji, 2006; Olomola, 2002), low household and business income (Lawal et al., 2009), lack of asset collateral required by conventional banks (Brata, 2004; Lawal et al., 2009) and high interest rates (Mohd & Hassan, 2008), their inability to save (Mkpado &

Arene, 2007), size of the firm, age of the firm and type of industry (Antoncic, 2006; Hedges, Wu & Chua, 2007). For instance, lack of asset collateral necessitated the need for group formation which provided insurance for loan as well as aid in loan monitoring and enforcement (Olomola, 2002). Therefore, since they do not have physical capital as collaterals demanded by conventional banks, they could use social capital demanded by micro-finance institutions (IFC, 2007). Again, in micro-finance, interest rates are normally higher than in the conventional banks so as to cover overhead costs such as personnel costs (Otero, 1999). However, such interest rates are charged on weekly returns; as such it becomes bearable (Olomola, 2002), and beneficial to women entrepreneurs (Tazul, 2007). Women generate less profit, less sales turnover relative to men and have low survival rate due to low start-up capital, and are less efficient and less growth oriented (Harrison & Mason, 2007); hence they need micro-finance factors or services to generate or improve their profit performance.

Micro-finance factors, as used here, refer to the services provided by micro-finance institutions to entrepreneurs to start or improve their businesses. These include credit services such as loan and saving, and non-credit services such as training and social capital (Brau & Woller, 2004; Carter & Shaw, 2006; Rhyne & Otero, 1994).

The fundamental products and services of micro-finance institutions world-wide were credit, savings and insurance (Brau & Woller, 2004). The term micro-credit gave way to micro-finance in the mid-1990s which included credit, savings and insurance (Global Envision, 2006). However, studies have shown that insurance is of low priority to entrepreneurs in developing countries, like Uganda and South Africa, because they could

not afford it due to their low level of income (ILO, 2001; USAID, 2007). As such, this study excluded insurance as a micro-finance factor. The factors mostly measured by previous studies (e.g Kuzilwa, 2005; Ojo, 2009; Olomola, 2002; Peter, 2001) on the performance of women's enterprises were credit, savings, training or social capital or a combination of two or three of these factors. Studies have also shown that supervision is embedded in credit and is mostly performed, in recent times, by micro-credit groups (Akanji, 2006; Mkpado & Arene, 2007) due to its high cost to the micro-finance institutions (Hedges et al., 2007). As such, supervision was not separately measured in this study.

Therefore, this study focused on investigating whether a relationship exists at all between micro-finance related factors (credit, savings, training and social capital) provided by micro-finance institutions and women entrepreneurs' business performance. The direct and indirect relationship between credit, savings, training and social capital offered by micro-finance institutions, and women entrepreneurs' business performance were also investigated. This is because some studies have shown that there is a positive relationship between one or a combination of credit, savings, training and social capital, and women entrepreneurs' business performance (e.g Cheston & Kuhn, 2002; Kuzilwa, 2005; Reavley & Lituchy, 2008; Wycklam & Wedley, 2003) while other studies have argued that micro-finance factors do not lead to women entrepreneurs' business performance (e.g Karnani, 2007). There is scarcity of research that jointly links credit, savings, training and social capital to women entrepreneurs' business performance especially in developing countries like Nigeria. The examination of the mediating effect of opportunity for entrepreneurial activity on the relationship between credit, saving,

training and social capital; and women entrepreneurs' business performance was also a concern of this study. The moderating effect of attitude towards micro-finance on the relationship between credit, saving, training, social capital and opportunity; and women entrepreneurs' business performance was also investigated. Therefore, the discussions above provided a justification for this study.

1.2 Statement of the Problem

Despite the crucial role of women entrepreneurs in economic development of their families and countries; it is, however, discovered that women entrepreneurs' business performance is lower than their male counterparts (Akanji, 2006; Carter & Shaw, 2006; Harrison & Mason, 2007). Shane (2003), Coleman and Kofi (2008) argued that low entrepreneurial activity in a country is mostly due to lack of access to micro-finance. Women entrepreneurs, mostly in developing countries, lack credit for their entrepreneurial activity which leads to low income and subsequent poor standard of living (Ibru, 2009; Iganiga, 2008; Iheduru, 2002; Kuzilwa, 2005; May, 2007; Okpukpara, 2009), whereas the rate of women participation in the informal sector of the Nigerian economy, for example, is higher than males (Akanji, 2006; Akinyi, 2009). In UK and USA, women entrepreneurs' business performance was lower than their male counterparts (Carter & Shaw, 2006). Lack of capital to start or run business led them to request for credits from micro-finance institutions (Ibru, 2009; Kuzilwa, 2005). This is due to poverty, unemployment, low household and business income, and inability to save (Akanji, 2006; May, 2009; Porter & Nagarajan, 2005; Roomi & Parrot, 2008).

Women entrepreneurs lack the ability to save, mostly in developing countries (Mkpado & Arene, 2007; Versluysen, 1999), yet savings are needed to protect income, act as a security for loan and could be re-invested in the business (Akanji, 2006). Savings as a micro-finance factor enables people with few assets to save, since they could make weekly savings as well as contribute to group savings. While group savings is compulsory, individual savings is optional (Mkpado & Arene, 2007; Otero, 1994; Versluysen, 1999). Micro-finance institutions provide this optional savings' service to women entrepreneurs to enable them cultivate savings' habit and build future resources which could be used to settle business and family issues (Mkpado & Arene, 2007).

It had been reported that women entrepreneurs, especially in developing countries, lack training (IFC, 2007) and entrepreneurial process is a vital source of developing human capital as well as plays a crucial role in providing learning opportunity for individuals to improve their skills, attitudes and abilities (Cheston & Kuhn, 2002; Brana, 2008; Shane, 2003). Again, the relationship between training and women entrepreneurs' business performance, especially in developing countries, had not been adequately addressed in the literature. Taking cognizance of the peculiar situations of most women in developing countries in terms of poverty, low educational levels and other societal discriminations (Porter & Nagarajan, 2005; Roomi & Parrot, 2008); training is a very important micro-finance factor for women entrepreneurs as it could provide the skills and experience needed for business (Akanji, 2006, Cheston & Kuhn, 2002; Kuzilwa, 2005). To buttress his criticism of micro-finance as a welfare improvement program of the government, Karnani (2007) argued that, women who constituted the majority of micro-finance institutions' clients, did not have specialized skills and so could not make good use of

micro-finance, hence they needed training. It is also reported that paid employment provides prior business experience that is vital for enterprise activity, yet women entrepreneurs mostly in developing countries lack this (Brana, 2008). This further strengthened the need for skill acquisition training as a micro-finance factor for the women entrepreneurs. Again, there were suggestions from literature of the need to study joint relationship between credit and training, and women entrepreneurship performance in developing countries because of low educational levels of women entrepreneurs in low-income countries (Akanji, 2006; Harrison & Mason, 2007; Ibru, 2009; Kuzilwa, 2005; Peter, 2001; Tazul, 2007).

Education is related to training, and women entrepreneurs in high-income countries are better educated than those in low income countries (Ibru, 2009). Literature confirmed that skill training and tertiary education had positive relationship with women entrepreneurs' business performance (Akanji, 2006; Cheston & Kuhn, 2002; Kuzilwa, 2005). Many women lack this especially in developing countries (Ibru, 2009), whereas the exploitation of entrepreneurial opportunity depends on the entrepreneur's level of education, skills or knowledge acquired through work experience, social network and credit (Shane, 2003); hence training as a micro-finance factor especially in developing countries could lead to business performance.

Lawal et al. (2009) and Shane (2003) argued that social capital is vital for start-ups and growing firms. However, women entrepreneurs especially in developing countries lack social connections that are a source of information for access to micro-finance factors (Olomola, 2002). Again, social capital had been widely measured and found to have

positive relationship with the performance of women enterprises in developing countries (e.g Brata, 2004; Lawal et al., 2009; Mkpado & Arene, 2007; Olomola, 2002).

Many studies were available on the relationship between one or a combination of credit, savings, training and social capital, and women entrepreneurs' business performance (e.g Cheston & Kuhn, 2002; Kuzilwa, 2005; Reavley & Lituchy, 2008; Wycklam & Wedley, 2003) but there was scarcity of research that empirically and jointly links credit, savings, training and social capital to women entrepreneurs' business performance especially in developing countries like Nigeria. Women entrepreneurs in developing countries lack credit, savings, training and social capital to exploit entrepreneurial opportunity and make profit (Akanji, 2006; Cheston & Kuhn, 2002; Ibru, 2009; Kuzilwa, 2005; Peter, 2001; Olomola, 2002), whereas the decision to exploit business opportunity could lead to the demand for micro-finance factors, the acquisition of micro-finance factors could also lead to entrepreneurial opportunity (Shane, 2003) and the appropriate use of these factors could lead to business performance (Brana, 2008; Koontz & Weihrich, 2006; Salman, 2009; Shane, 2003).

Limited studies were available on opportunity for entrepreneurial activity mediating the relationship between micro-finance factors and women entrepreneurs' business performance (e.g Shane, 2003; Tata & Prasad, 2008). Micro-finance factors could not lead to business performance without opportunity for entrepreneurial activity (Shane, 2003). Brana (2008) reported that micro-finance creates business opportunity for entrepreneurs in order to generate income. Again, Financial Management studies agree that funds could only be sourced to finance a predetermined project, business or contract

(e.g Van Horne, 1980). As such, micro-finance could only lead to business performance when there is the tendency to engage in new business or business expansion (Antoncic, 2006; Shane, 2003). This implies that opportunity for entrepreneurial activity is a mediating variable in the relationship between micro-finance factors and enterprise performance.

Limited studies were also available on attitude towards micro-finance moderating the relationship between micro-finance factors, opportunity for entrepreneurial activity, and women entrepreneurs' business performance. Though Crisp and Turner (2007); Ajzen (1991) studied the relationship between attitude and behavior but their studies were not related to micro-finance. Fernando (2006) concluded that women entrepreneurs have negative attitude towards micro-finance as a means of achieving business performance due to the several myths inherent in micro-finance. For example, loan repayment does not imply increase in income or good business performance as generally believed since group members usually bailout a loan-defaulting member. However, Asikhia (2009) found a significant positive relationship between entrepreneurs' expectations of their micro-finance banks' services and present relationship, and a significant relationship between their expectations and future decisions. It is therefore arguable that women entrepreneurs' ability to access micro-finance in order to achieve business performance depends on their attitude towards micro-finance. That is, if women entrepreneurs have negative attitude towards micro-finance (in terms of long loan process, high interest rate or inadequate loan), then micro-finance factors may not lead to their business performance. Alternatively, if they have positive attitude towards micro-finance, then micro-finance factors may lead to their business performance.

Micro-finance and entrepreneurship performance is vital to Nigeria due to her poor economic indices portrayed by low GDP growth rate, high population, high birth rate and low death rate, high poverty and high unemployment (ILO, 2009; NBS, 2007; CIA, 2009). In the light of this, the Nigerian government has encouraged vulnerable women to form Women Cooperative Societies, as groups, so as to access micro-finance for business activities or improvements. Such enterprises would serve as a tool for improving their quality of life in particular and economy of the country in general.

In summary, women entrepreneurs' business performance is lower than their male counterparts (Akanji, 2006; Carter & Shaw, 2006; Harrison & Mason, 2007) and they lack micro-finance factors for entrepreneurial activity due to unemployment and poverty, low household and business income, inability to save, low educational level, and gender-related discriminations mostly in developing countries. This situation led to subsequent poor standard of living. Therefore, this study examined whether a relationship exists between micro-finance factors (credit, savings, training and social capital) and women entrepreneurs' business performance in Nigeria. It also investigated the nature of the relationship between micro-finance factors (credit, savings, training and social capital) and women entrepreneurs' business performance in Nigeria. The mediating and moderating variables which have not received adequate attention in the literature were also empirically examined.

It is hoped that the results of the study and the policy implications or recommendations that would be proffered would help to address the issues raised in this study.

1.3 Research Questions

In order to examine the relationship between micro-finance factors and women entrepreneurs' business performance, this study tried to answer the following questions.

1. Is there a relationship between micro-finance related factors (credit, savings, training and social capital) offered by micro-finance institutions and women entrepreneurs' business performance?

Before investigating the nature of the relationship between micro-finance related factors and women entrepreneurs' business performance, it was necessary to verify whether a relationship exists at all between these factors and women entrepreneurs' business performance. The result at this stage would dictate whether or not further analyses were necessary.

2. What relationship exists between credit, savings, training and social capital offered by micro-finance institutions; and women entrepreneurs' business performance?

This research question was designed to verify the nature of the relationship that exists between the micro-finance related factors and women entrepreneurs' business performance.

3. What relationship exists between credit, savings, training and social capital; and opportunity for entrepreneurial activity (new business or business expansion) of women entrepreneurs?

This research question was designed to verify the nature of the relationship that exists between the micro-finance related factors and opportunity for entrepreneurial activity of women entrepreneurs.

4. What relationship exists between opportunity for entrepreneurial activity and women entrepreneurs' business performance?

This research question was designed to verify the nature of the relationship that exists between the opportunity for entrepreneurial activity of women entrepreneurs and women entrepreneurs' business performance.

5. Does opportunity for entrepreneurial activity mediate the relationship between credit, savings, training and social capital; and women entrepreneurs' business performance?

This research question was designed to verify whether opportunity for entrepreneurial activity of women entrepreneurs mediates the relationship between micro-finance related factors and women entrepreneurs' business performance.

6. Does attitude towards micro-finance moderate the relationship between credit, savings, training, social capital and opportunity for entrepreneurial activity; and women entrepreneurs' business performance?

This research question was designed to verify whether attitude towards micro-finance moderates the relationship between micro-finance institution's credit,

savings, training, social capital and opportunity for entrepreneurial activity; and women entrepreneurs' business performance.

1.4 Research Objectives

The specific objectives of this study, derived from the identified research gap in the literature, were stated as follows:

1. To determine whether there is a relationship between micro-finance related factors (credit, savings, training and social capital) offered by micro-finance institutions and women entrepreneurs' business performance?
2. To determine the relationship between credit, savings, training and social capital; and women entrepreneurs' business performance.
3. To determine the relationship between credit, savings, training and social capital; and opportunity for entrepreneurial activity of women entrepreneurs.
4. To determine the relationship between opportunity for entrepreneurial activity and women entrepreneurs' business performance.
5. To determine whether opportunity for entrepreneurial activity mediates the relationship between credit, savings, training and social capital; and women entrepreneurs' business performance.
6. To determine whether attitude towards micro-finance moderates the relationship between credit, savings, training, social capital and opportunity for entrepreneurial activity; and women entrepreneurs' business performance.

1.5 Significance of the Study

The study intended to bridge the research gaps identified in the literature and make some significant contributions both theoretically and practically.

Theoretical contributions: Davidsson and Wiklund (2009) identified three areas of a research's contribution as: empirical, conceptual and methodological. In line with this, this study provided empirical evidence on the relationship between credit, training and social capital offered by micro-finance institutions; and women entrepreneurs' business performance in Nigeria. There was scarcity of research that linked credit, savings, training and social capital to women entrepreneurs' business performance, especially in developing countries. Therefore, there was the need for more research in this area. This is because skill acquisition training, for example, is very necessary to provide the human capital needed by poor and low educated women entrepreneurs in developing countries. The provision of credit, savings, training and social capital could provide opportunity for women entrepreneurs to start, expand or improve their businesses which could invariably lead to good business performance.

The relationship between training and women entrepreneurs' business performance, from the regression results for example, has strengthened the entrepreneurship literature by placing more emphasis on training as a means of acquiring skills and experience for entrepreneurs with low educational levels.

The conceptual model was another contribution to the body of knowledge; especially the introduction of the mediating and the moderating variables. The mediating variable, opportunity for entrepreneurial activity in terms of new business or business expansion, measured the indirect relationship between micro-finance factors and women entrepreneurs' business performance. The moderating variable was used to determine what influence attitude towards micro-finance had on the relationship between micro-finance factors and opportunity for entrepreneurial activity; and women entrepreneurs' business performance. These two variables contributed immensely to strengthen the existing theories on entrepreneurship. Therefore, this study strengthened the existing literature on micro-finance and women entrepreneurs' business performance by providing an empirical measurement of the relationship between credit, savings, training and social capital; and women entrepreneurs' business performance. The introduction and measurement of the mediating and the moderating variables were the unique contributions of this study.

The study has helped us to understand better how micro-finance factors could help women entrepreneurs and contribute to their business performance.

To improve the quality of lives especially among poor women, a systematic research dealing with women entrepreneurs' business performance was highly needed. This study provided such a research.

The study has a methodological contribution by adopting a quantitative (survey using questionnaire) method as the research methodology. Hierarchical regression analysis was the major statistical tool for testing the hypotheses.

The study is a reference material for future researchers on micro-finance and/or entrepreneurship.

Practical/Policy contributions: The result of this study would help the government of Nigeria to take appropriate decision and policy action to create an enabling environment and financial supports for women entrepreneurs. For example, the government could provide differential ratios of credit and training to be given to men and women; just as it is done in admission into courses in Nigerian Universities. The study would also help the government to know the appropriate micro-finance factors to be packaged to women entrepreneurs. It would again foster a sustainable economic development in Nigeria.

Micro-finance institutions would utilize the findings of this study to formulate better action plan to achieve their goals and objectives and those of the government. It would also help them to discover the effect of their services, credit and non-credit, on the performance of their clients' businesses as well as improve their products and services to their clients. The management of micro-finance institutions needs information to improve practice. This study would provide such information.

Women entrepreneurs would benefit as more attention would be given to them by the micro-finance institutions, in terms of better access to micro-finance factors, and by the

government of Nigeria, in terms of favorable economic and other policies regarding entrepreneurships. This would enable them improve their performance.

1.6 Scope of the Study

The study focused on Nigeria, and concentrated on the relationship between credit, savings, training and social capital; and women entrepreneurs' business performance. Credit, savings, training and social capital were the micro-finance (independent) variables while women entrepreneurs' business performance was the dependent variable.

The study also focused on full time, self-employed women who were owner-managers. This is because the performance of women enterprises could lead to poverty reduction, economic and social wellbeing of the women entrepreneurs as well as boost their status in the family and community at large (Akanji, 2006).

It again focused on the urban poorest because they are more likely to be borrowers while rural borrowers are among the poorest of all borrowers (Brau & Woller, 2004). Grameen Bank of Bangladesh was criticized for focusing on the village poor while excluding the poorest of the poor from her client list due to their frequent drop outs and inability to repay their loans (Rushad, 2004; Tazul, 2007). Also urban poorest were chosen due to the type of industry preferred by women micro-entrepreneurs. Most women entrepreneurs engaged in food retailing, other personal services, distributive trade, manufacturing and knowledge services; and such businesses are active in the urban centers (Carter & Shaw, 2006; Riding, 2006).

The study also focused on women entrepreneurs who had at least three years business experience because three years business experience is sufficient to assess an entrepreneur (Antonicic, 2006; Carter & Shaw, 2006; Harrison & Mason, 2007; Hedges et al., 2007; Kuzilwa, 2005; Salman, 2009). This is because in the first year, the entrepreneur ends up introducing himself/herself to the market while doing some assignments and is still in debt. In the second year, he/she starts to break-even and can partially pay off debts. In the third year, he/she pays off debts and begins to draw reasonable profits. This process is very typical; as such, committing to anything less than three years could be a critical mistake (Salman, 2009).

Though the study focused on private-sector micro-finance institutions in Nigeria, made up 793 micro-finance institutions (CBN, 2009), it limited its scope to three micro-finance institutions spread across the three regions of Nigeria. Nigeria has three regions (North, East and West) which are further divided into six zones: North-East, North-West, North-Central, South-East, South-West and South-South. The selected banks were Elim Micro-finance Bank Limited, Lagos; Ekondo Micro-finance Bank Limited, Calabar; and DEC Micro-finance Bank Limited, Bauchi. These banks were selected from the Directory of Micro-finance Banks in Nigeria because they were homogenous in terms of the products and services offered. They were also selected one each from the three regions in Nigeria (West, East and North) to represent the whole country and for more meaningful results. The study examined the activities of the women entrepreneurs in Nigeria from 2008 to 2009.

1.6.1 Assumptions of the Study

Enterprise profit is owner's profit and it is a reward for assuming risk (Shane, 2003). Therefore, this study assumed that the performance of women-owned enterprises is the performance of women entrepreneurs. Second, any other factors outside consideration of this study that could influence women entrepreneurs' business performance were held constant.

1.6.2 Definition of Terms

Micro-finance factors = services provided by Micro-finance Institutions to entrepreneurs such as credit, saving, training and social capital

Credit = Micro-finance' credit or credit services provided by micro-finance institutions

Savings = Micro-finance' savings

Training = Micro-finance' training

Opportunity = Opportunity for entrepreneurial activity or entrepreneurial opportunity

Attitude = Women entrepreneurs' attitude towards micro-finance as a means of achieving their business performance

Women entrepreneurs = Micro-finance women participants

Women entrepreneurs' business performance=Performance of women entrepreneurs' businesses

Social capital = Micro-finance' social capital

1.7 Organization of the Thesis

Chapter one is as discussed above. The remainder of the thesis is organized as follows: Chapter two provides a discussion on the previous entrepreneurship programs of the Nigerian government. Chapter three provides a discussion on micro-finance related factors (credit, savings, training and social capital) and women entrepreneurs' business performance as a means of poverty reduction and economic growth from different theoretical perceptions of previous researchers. That is, a review of related literature on the study. Chapter four discusses the methodology adopted in data collection and analysis while chapter five presents and analyzes the results of the survey study (findings). The thesis ends with chapter six which is discussion, conclusion and recommendation.

CHAPTER 2

ENTREPRENEURSHIP DEVELOPMENT PROGRAMS IN NIGERIA

2.0 Overview of the Chapter

The purpose of this chapter is to provide a background information or knowledge of micro-finance and women entrepreneurship development in Nigeria. That is, the effort of the government so far in entrepreneurship development in Nigeria. Therefore, the chapter discusses the previous programs of the Nigerian government on entrepreneurship development. A critique of these previous programs is offered. The roles of the National Directorate of Employment (NDE) and the National Poverty Eradication Program (NAPEP) as the most active programs in entrepreneurship development are stressed. The chapter ends with the current micro-finance policy of the Nigerian government.

2.1 Nigeria's Previous Programs on Entrepreneurship Development

In an attempt to develop entrepreneurs in Nigeria, the previous governments initiated various programs to provide jobs to the teeming population in order to reduce unemployment and enhance economic growth of the country. Such previous programs include: the National Accelerated Food Production Program (NAFPP) of 1972, the Operation Feed the Nation (OFN) of 1976, the Green Revolution (GR) of 1979, and the Go Back to Land Program (GBL) of 1983. The aim of these programs was to encourage

farmers, especially the rural farmers; women being the most active (Adepelumi, 2007), boost food production and make young people interested in agricultural ventures as means of earning incomes.

The Better Life for Rural Women (BLRW) was introduced in 1986, while the Family Support Program (FSP) was introduced in 1991, and the Family Economic Advancement Program (FEAP) was introduced in 1991. The aim of these programs was to empower women, mostly the rural women entrepreneurs through skill acquisition and micro-credit in form of crop seedlings and cash loans.

The National Directorate of Employment (NDE), introduced in 1987, was to provide self-employment to Nigerians; particularly the male and female youths through micro-finance in form of skill acquisition training and loans. The National Poverty Eradication Program (NAPEP) of 2001, and the National Economic Empowerment and Development Strategy (NEEDS) of 2004 were aimed at poverty reduction and economic empowerment of Nigerians through job creation, especially to the poor citizens and local entrepreneurs; women inclusive.

The Agricultural Credit Guarantee Scheme (ACGS) of 1977, the Nigerian Agricultural and Co-operative Bank (NACB) of 1973, the Nigerian Agricultural Insurance Corporation (NAIC) of 1988, and the Nigerian Agricultural Co-operative and Rural Development Bank (NACRDB) of 2000 which was a merger of NACB of 1973, Peoples Bank of Nigeria (PBN) of 1989 and FEAP of 1991 were aimed at agriculture-related enterprises.

The Nigerian Bank for Commerce and Industry (NBCI) of 1973, the Community Bank (CB) of 1990, the Small and Medium Enterprises Equity Insurance Scheme (SMEEIS) of 2004, and the Bank of Industry (BOI) of 2000 which was introduced through a merger of the National Economic Reconstruction Fund (NERFUND), the Nigerian Industrial Development Bank (NIDB), and the Nigerian Bank for Commerce and Industry (NBCI) were aimed at encouraging entrepreneurs at the urban and rural centers; especially those engaged in commerce-related enterprises with the provision of micro-credits.

The Central Bank of Nigeria's Monetary Policy Circular Number 35 for year 2001 requires banks to set aside 10% of their profit before tax to finance and promote micro and small and medium enterprises in Nigeria.

2.2 A Critique of Nigeria's Previous Entrepreneurship Development Programs

From the view of the Central Bank of Nigeria (CBN) (2003), and the arguments of Iheduru (2002), Ojo (2009) and Okpukpara (2009), it could be concluded that, of all the existing entrepreneurship development programs of the previous Nigerian governments (see Table 2.1 below), the most active ones that address the micro-financial needs of the Nigerian women are the National Directorate of Employment (NDE) and the National Poverty Eradication Program (NAPEP).

Table 2.1
Previous Entrepreneurship Programs in Existence

Schemes	Year of Establishment	Objective	Type of Institution	Ownership	Status
ACGS	1977	Provide funds for agriculture.	Agricultural Finance	Government	Merged
NDE	1987	Create employment.	Public	Government	Existing
NAIC	1988	Insure agricultural products.	Public	Government	Existing
FEAP	1991	Reduce poverty.	Public	Government	Merged
NAPEP	2001	Reduce poverty.	Public	Government	Existing
NEEDS	2004	Reduce poverty.	Public	Government	Existing
SMEEIS	2004	Reduce poverty.	Public	Government	Existing

Source: Iganiga (2008).

ACGS: Agricultural Credit Guarantee Scheme, NDE: National Directorate of Employment, NAIC: Nigerian Agricultural Insurance Corporation, FEAP: Family Economic Advancement Program, NAPEP: National Poverty Eradication Program, NEEDS: National Economic Empowerment and Development Strategy, SMEEIS: Small and Medium Enterprises Equity Insurance Scheme.

Apart from the National Directorate of Employment (NDE) and National Poverty Eradication Program (NAPEP); others have become inactive, merged or failed. In support of this assertion, Adepelumi (2007) argued that such programs failed because they had no clearly defined policy framework with proper plans for poverty alleviation, and were saddled with corruption, selfishness, and political deception. For instance, funds sourced as loans from the International Monetary Fund (IMF) meant to revamp the economy were misappropriated. While Iganiga (2008) argued that such programs yielded limited result due to high operating cost, repayment problems, internal control problems and drop outs. In the same line of argument, Okpukpara (2009) posited that those public

micro-finance programs failed due to poor targeting and unorganized ways of loan administration. In the view of Maduagwu (2000), previous governments only paid lip service to the plight of the poor in Nigeria, while corruption and self enrichment were rampant. The Central Bank of Nigeria (CBN) (2003) stated that, apart from National Directorate of Employment (NDE), Directorate for Food, Roads and Rural Infrastructure (DFRRI) and National Poverty Eradication Program (NAPEP); those other programs failed because they had no established procedures for program's monitoring, implementation and evaluation, as well as lack of mechanism to target the poor or identify the beneficiaries. They also had weak institutional capacity and weak capital base. This study supported the previous studies in Nigeria that most of the previous entrepreneurship programs failed to address the needs of entrepreneurs in Nigeria; mostly the women.

2.3 The National Directorate of Employment (NDE) and Entrepreneurship Development in Nigeria

This program was established, backed by the enabling Act CAP 250 of the laws of the Federal Republic of Nigeria 1999, to design and implement programs to combat mass unemployment in Nigeria. Most of the NDE's programs are in the area of skill training and the provision of micro-credit in collaboration with designated banks. NDE also has Mandatory Attachment Program whereby graduates are attached to private and public organizations to undergo specific training, after which they may be employed by such organizations. The programs cover the 36 states of the Federation, and the training lasts between three months and three years depending on the trade involved. Such training include: vocational skill acquisition training, entrepreneurial training, rural employment

training, labor-based training, women employment training, and enterprise creation. The contribution of the National Directorate of Employment in entrepreneurial development in Nigeria, with respect to small scale enterprises program and rural employment promotion program, is as shown below.

Table 2.2
NDE's Small Scale Enterprises Program

2004	EDP	SYOB	BBT	SSB	TOTAL	ENTERPRISES CREATED	2005 (NOAS)
MALE	28,511	11,307	5,992		45,810		
FEMALE	9,176	3,967	1,116		14,259		
TOTAL	37,687	15,274	7,108	1,710	61,779	75	38,272

Extracted from Annual Report of National Directorate of Employment (2004; 2005)
EDP=Entrepreneurship Development Program; SYOB=Start-Your-Own-Business; BBT=Basic Business Training; SSB=Small Scale Business; NOAS=National Open Apprenticeship Scheme.

Table 2.3
NDE's Rural Employment Promotion Program

2004	RADTS	RHS	LS	CPS	TOTAL
MALE	2,529	2,814	667	687	6,697
FEMALE	433	415	170	172	1,190
TOTAL	2,962	3,229	837	859	7,887

Source: Extracted from Annual Report of National Directorate of Employment (2004)
RADTS=Rural Agricultural Development Training Scheme; RHS=Rural Handicraft Scheme;
LS=Livestock; CPS=Crop Production Scheme

From the above tables, the contribution of NDE to enterprise development is noticeable, though women entrepreneurs were marginalized in all its programs.

2.4 The National Poverty Eradication Program (NAPEP) and Entrepreneurship Development in Nigeria

This program was established to combat poverty and unemployment in Nigeria. NAPEP also co-ordinates and monitors the activities of the other poverty eradication Ministries and Agencies; made up of 17 Federal Ministries and 30 Parastatals (CBN, 2003). The objectives of NAPEP, among others, is to ensure that Nigerians are provided with jobs that enable them have a steady source of income, quality education, high nutritional food and basic health care services, good standard housing, and communication facilities. The program aims at eradicating absolute poverty in Nigeria by end of the year 2010. Providing direct jobs to the citizens helped to reduce crime rates among the youths, reduce unemployment and alleviate poverty. For instance, in 2002, the program created 200,000 jobs for the participants who were formally semi-skilled or unskilled. While in 2003, the program trained 126,128 youths in various skills and 76,332 graduates were trained under the Mandatory Attachment Program (MAP) throughout the country. In addition, a total of 2,497 three-wheeler paggio vehicles (KEKE NAPEP) were sold to beneficiaries at discount prices (CBN, 2003).

The failure of most of the previous entrepreneurship development programs made the government, in recent time, to turn her attention to the private-sector micro-finance institutions by initiating the micro-finance policy to aid entrepreneurship development in the country.

2.5 Current Micro-finance Policy of Nigeria

The government of President Olusegun Obasanjo introduced the micro-finance policy in 2006 to aid entrepreneurship development in Nigeria, while the government of late President Musa Ya'adua introduced the economic empowerment program known as the "7-Points Agenda" in 2007. One on this agenda is poverty alleviation (wealth creation and employment generation) and adequate provision of social infrastructure especially at the grassroots. Since the focus of this study was on micro-finance factors and women entrepreneurs' business performance; therefore the current micro-finance policy of Nigeria was hereby stressed.

The micro-finance policy recognized that the formal financial institutions only served 35% of the economically active population in Nigeria while 65% were often served by the informal financial sector comprises of the NGO micro-finance institutions, which had championed the cause of the micro and rural entrepreneurs since the 1980s, money lenders, credit unions, informal self-help groups (SHGs), rotating savings and credit associations (ROSCAs), friends and relatives (CBN, 2005). Since some of these institutions were not regulated, the Central Bank of Nigeria then came up with the micro-finance policy to promote monetary stability and sound financial system. Such a policy was to harmonize the operating standards of the institutions, provide a strategic platform for the establishment of micro-finance institutions, and promote the appropriate regulation, supervision, and adoption of best practices. The policy was prepared in exercise of the powers conferred on the Central Bank of Nigeria by the provisions of Section 28, sub-section (1)b of the CBN Act 24 of 1991 (as amended) and in pursuance

of the provisions of Sections 56-60 (a) of the Banks and Other Financial Institutions Act (BOFIA) 25 of 1991(as amended). The establishment of this policy was justified by the problems earlier highlighted in this chapter as reasons for the failure of the previous governments' micro-finance programs. Other reasons include: the existence of a huge un-served financial market, economic empowerment of the poor, employment generation and poverty reduction, the need for increased savings opportunity, the utilization of the Small and Medium Enterprises Equity Insurance Scheme' fund, and to serve the interest of local and international communities in micro-financing (CBN, 2005).

2.5.1 Policy Objectives

The specific objectives of the micro-finance policy, according to CBN (2005), are to make financial services accessible to a large segment of the potentially productive Nigerian population which otherwise would have little or no access to financial services, promote synergy and mainstreaming of the informal sub-sector into the national financial system, and to enhance service delivery by micro-finance institutions to micro, small and medium entrepreneurs. Other specific objectives are to contribute to rural transformation, and promote linkage programs between universal and development banks, specialized institutions and micro-finance banks.

2.5.2 Policy Targets

The policy is targeted to cover the majority of the poor but economically active population by 2020 thereby creating millions of jobs and reducing poverty, increase the

share of micro-credit as percentage of total credit to the economy from 0.9% in 2005 to at least 20% in 2020 and the share of micro-credit as percentage of GDP from 0.2% in 2005 to at least 5% in 2020. Other targets are to promote the participation of at least 2/3 of the States and Local Governments in micro-credit financing by 2015, increase the number of linkages among universal banks, development banks, specialized finance institutions and micro-finance banks by 10% annually; and to eliminate gender disparity by providing women's access to financial services by 5% annually (CBN, 2005).

2.5.3 Policy Strategies

The strategies to achieve the objectives were to license and regulate the establishment of micro-finance banks, promote the establishment of NGO-based micro-finance institutions, promote the participation of government in the micro-finance industry by encouraging States and Local Governments to devote at least 1% of their annual budgets to micro-credit initiatives administered through the micro-finance banks. Other strategies were to promote the establishment of institutions that support the development and growth of micro-finance service providers and clients, strengthen the regulatory and supervisory framework for micro-finance banks, and promote sound micro-finance practice by advocating professionalism, transparency and good governance in micro-finance institutions. Yet still, the policy was to mobilize savings and promote the banking culture among low-income groups, strengthen the capital base of the existing micro-finance institutions, broaden the scope of activities of micro-finance institutions (MFIs), strengthen the skills of regulators, operators and beneficiaries of micro-finance initiatives, clearly define the stakeholders' roles in the development of the micro-finance

sub-sector, and collaborate with donors, coordinators and monitor donor assistance in micro-finance in line with the provisions of the policy (CBN, 2005).

2.5.4 Policy Measures for the Establishment of Micro-finance Banks

The private-sector micro-finance banks and institutions that were to be established should be well capitalized, technically sound and oriented towards lending based on cash flow and character of clients. They should either be micro-finance banks license to operate as a unit bank or license to operate in a state. Both could have a national coverage if they meet the prudential requirements. An existing NGO which intended to operate as a micro-finance bank could either incorporate a subsidiary micro-finance bank while still carrying out its NGO operations or fully convert into a micro-finance bank. Micro-finance banks licensed to operate as unit banks should be community-based banks; operating branches or cash centers subject to meeting the prudential requirements and availability of funds to open such branches. The minimum paid-up capital for this category is #20.0 million for each branch. While the micro-finance banks licensed to operate in all parts of the State in which they were registered are authorized to do so subject to the prudential requirement and availability of funds to open such branches. The minimum paid-up capital for this category is #1.0 billion (CNB, 2005).

Both categories of micro-finance banks mentioned above are under the supervision and regulation of the Central bank of Nigeria (CBN), while the Nigeria Deposit Insurance Corporation (NDIC) is to insure the deposits of the micro-finance banks. The micro-finance banks' financial services include credit, deposits, commodity or inventory

collateralization, leasing, and innovative transfer or payment services. They are also to strictly observe their fiduciary responsibility, remain transparent and accountable in protecting savers' deposits (CBN, 2005). For the list of micro-finance institutions in Nigeria, refer to Directory of Micro-finance Institutions (CBN, 2009).

2.6 Chapter Summary

The chapter discussed the previous entrepreneurship development programs of the Nigerian government from 1972 to 2006 when private micro-finance institutions were formalised and licenced to complement the role of public micro-finance institutions in providing micro-financial assistance to entrepreneurs in Nigeria. This was occasioned by glaring inefficiency of most public micro-finance institutions in the country. One of the objectives of the Micro-finance Policy (CBN, 2005) was to make financial services accessible to a large segment of the potentially productive Nigerian population and to provide savings services to enable low-income groups cultivate savings habits. The micro-finance institutions were to provide similar financial services (which include credit, deposits, leasing and payment services) to entrepreneurs to assist their business performance and subsequent economic development. The Nigerian government considered these micro-finance services as vital to enterprise development. However, some studies hold contrary opinion about this. The next chapter looks at the different perceptions of studies concerning micro-finance factors and entrepreneurs' performance.

CHAPTER 3

LITERATURE REVIEW

3.0 Overview of the Chapter

This chapter gave the definition and explanation of the basic concepts of the study and their relationship with women entrepreneurs' business performance. Private micro-finance institutions in Nigeria, and the characteristics of women entrepreneurs that affect performance, were also discussed. Studies on the variables of the conceptual model were discussed. Previous studies globally and specific studies in Nigeria on women entrepreneurs were reviewed. Related researchers' models, the research gap and the underpinning theory for the study were discussed. The conceptual model of the study was presented and discussed, and the chapter ended with the provision of the hypotheses of the study.

3.1 Definition of Micro-finance, Entrepreneur and Women Entrepreneurs' Business Performance

Micro-finance: This was defined as the provision of credit for entrepreneurship success (IFAD, 2006; Lakwo, 2007; Martin, 1999). It was also defined as the provision of credit and savings for entrepreneurship productivity (Ojo, 2009). It was seen as the provision of credit and information for business success (Wycklam & Wedley, 2003). Micro-finance is the provision of credit, savings and training for business success and

entrepreneur's welfare improvement (UNCDF/UNDP, 2003). It was also defined as the provision of credit and training for business success (Kuzilwa, 2005). Micro-finance was seen as the provision of social capital and training for entrepreneurship success (Kickul et al., 2007; Reavley & Lituchy, 2008). It is the provision of credit and social capital for enterprise performance (Brata, 2004; Lawal et al., 2009; Mkpado & Arene, 2007; Olomola, 2002). Micro-credits deals with small loans to poor entrepreneurs while micro-finance extends beyond credits to include other services such as savings, training and other extension services such as supervision (Kuzilwa, 2005). This study, however, defined micro-finance as the provision of credit, savings, training and social capital for women entrepreneurs' business performance.

Entrepreneur: There is no consensus about the definition of entrepreneurship. It could be seen as “an activity involving the discovery, evaluation and exploitation of opportunities to introduce new goods and services, ways of organizing markets, processes, and raw materials through organizing efforts that previously had not existed” (Shane, 2003). Entrepreneur could also be defined as “an individual developing something new” (Hisrich, Peters & Shepherd, 2008). An entrepreneur innovates by bringing a new product or a new way of doing something which may affect or change the old technology or the entire production method. An entrepreneur is a risk-taker with an expectation of profit breakthrough from such a venture; that is, wealth creation (Hisrich et al., 2008). This profit is the reward for the risk undertaken in the business, and a major consideration of most entrepreneurs (Shane, 2003). This study adopted the definition of an entrepreneur by Shane (2003).

Entrepreneurs' Business Performance: This refers to women entrepreneurship performance or the business performance of women entrepreneurs. The definition of entrepreneurship performance is best understood based on performance measures, and there are several definitions regarding performance measures (Peter, 2001). The classical economic measures of business performance generally are survival, profitability and growth (Van Horne, 1980). However, entrepreneurship performance has been measured based on their unique characteristics such as small size, and inability to keep accurate accounting records especially in developing countries. For instance, entrepreneurship performance was measured as sales less costs; that is, net profit (Cheston & Kuhn, 2002; Eversole, 2009; Shane, 2003). Peter (2001) measured entrepreneurship performance as increase in profit, asset, sales and number of employees. Entrepreneurship performance was also measured as net profit, change in output, change in investment, and change in employment (Kuzilwa, 2005). In this case, apart from net profit, the factors mentioned above were used to infer performance. This last definition (Kuzilwa, 2005) was adopted by this study because it suits entrepreneurs in other developing countries like Nigeria who do not keep proper accounting records due to low level of education.

3.2 Explanations on Micro-finance factors and their relationship with Women Entrepreneurs' Business Performance

Credit: Microcredit is the provision of cash and in-kind loan in smaller amount to micro and small entrepreneurs meant to improve their business operations (Asiama & Osei, 2007). While some entrepreneurs may start business with their own personal savings, others may need to borrow from friends and relatives or from micro-finance institutions. Yet still, there may be the need to raise more funds as working capital to finance the

business operations as the business grows or to expand the business. This normally calls for microcredit from micro-finance institutions. Such borrowed funds, when properly utilized for business operations leads to business performance (Martin, 1999; Ojo, 2009).

Savings: In the context of micro-finance, savings is the money saved with a micro-finance bank, mostly by the poor, in order to build up future resources for business and family use (Mkpado & Arene, 2007). To the micro-finance institutions, compulsory group savings guarantees group loan repayment. Whereas, to the entrepreneurs, voluntary, flexible and easily accessible savings instils savings habits in poorer households and provides interest-free funds to finance future business operations and settle family issues such as payment of children school fees (Ojo, 2009; Vonderlack & Schreiner, 2001).

Training: Training is a non-financial service provided by micro-finance institutions to their clients or participants. It is a process of teaching a person a particular skill or type of behavior needed for business and this is mostly required by women entrepreneurs in developing countries due to their low level of education (Akanji, 2006; Harrison & Mason, 2007; Ibru, 2009; IFC, 2007). Training helps the entrepreneurs to acquire the skill, knowledge and abilities to identify and tap entrepreneurial opportunity (Stohmeyer, 2007) which could lead to business performance (Kuzilwa, 2005; Kickul et al., 2007; Reavley & Lituchy, 2008). Training also helps women entrepreneurs to acquire self-confidence, self-esteem and participation in decision-making at household and community levels (Cheston & Kuhn, 2002).

Social capital: Social capital is the formation of network of relationships that enables participants or members to act together and interact effectively as a group in order to achieve their individual and group goals (Mohamed et al. 1997). Micro-finance institutions require this group formation to ensure loan repayment from the participants. On the part of women entrepreneurs, group membership ensures credit access from micro-finance institutions; and if the relationship in such a group is strong, it provides business resources, professional information, social supports and advices to new or old members; and this could lead to business performance (Allen, 2000; Tata & Prasad, 2008).

Women entrepreneurs' business performance: It was earlier assumed in chapter 1 that the performance of the women-owned enterprises is the performance of the women entrepreneurs. Therefore, women entrepreneurs' business performance as used here conveys the same meaning as the business performance of women entrepreneurs. Business performance and entrepreneurship performance are conceptualized differently in the literature. For example, in Economics, business performance was earlier seen as survival, profitability and growth (Kuzilwa, 2005; Shane, 2003; Tata & Prasad, 2008; Van Horne, 1980) while profitability was seen as return on all asset, return on owner's equity, operating profit margin (per unit profit), and net profit (Van Horne, 1980). However, entrepreneurship profit performance was seen as net profit (Cheston & Kuhn, 2002; Shane, 2003); net profit, change in output, change in investment, and change in employment (Kuzilwa, 2005; Peter, 2001).

3.3 Private Micro-finance Institutions in Nigeria

There are two categories of micro-finance institutions in Nigeria; the public and the private. These two complements each other in providing micro-financial services to entrepreneurs in the country. However, most of the public micro-finance programs in Nigeria, which were meant to alleviate poverty by the previous governments, have failed regarding enterprise development (Iganiga, 2008). The most active public micro-finance institutions in Nigeria are the National Directorate of Employment (N.D.E) and the National Poverty Eradication Program (N.A.P.E.P) (CBN, 2003). Therefore, the attention of the Nigerian government, in recent times, has been turned to the private micro-finance institutions as a means of making financial services available to a large segment of potentially productive Nigerian population which otherwise would have little or no access to financial services (CBN, 2005).

The study focused on the private micro-finance institutions because they are relatively new (licensed in 2006). They are also one of the government's agenda known as Vision 2020, aimed at making Nigeria one of the world's top 20 economies. It is also part of her financial sector reforms.

Private micro-finance was also chosen because many previous studies in Nigeria that focused on both informal and formal micro-finance institutions discovered that public micro-finance institutions were not efficient regarding entrepreneurship development (e.g Akanji, 2006; Ibru, 2009; Iganiga, 2008; Iheduru, 2002; Okpukpara, 2009). Studies in other developing countries also supported the fact that public micro-finance

institutions are not efficient (e.g Grahame & Noor, 2005; Rushad, 2004). For instance, public micro-finance institutions in Nigeria have achieved limited results due to high operating costs, repayment problems and drop outs (Iganiga, 2008). They have failed due to lack of favorable policy framework with respect to rural financial markets and grassroots approach to financial intermediation (Iheduru, 2002), due to poor targeting of loan recipients and unorganized ways of loan administration (Okpukpara, 2009) and due to limited knowledge of the poor (Akanji, 2006). It was also reported that public micro-finance institutions only served about 35% of the economically active population in Nigeria while private micro-finance institutions served 65% (CBN, 2005; Ibru, 2009). In developed countries, such as Sweden, it was reported that only few new ventures ever obtained financing from public venture capitalists (Davidsson & Wiklund, 2009).

There were also literature supports of the fact that micro-enterprise development which emerged in the 1980s is private-sector led (Eversole, 2009; May, 2007; Otero, 1999). Many countries use micro-finance factors to assist private micro-enterprises so as to encourage innovations and subsequent economic development at the grassroots (DBR, 2007).

This study focused on women entrepreneurs' business performance, leading to their ultimate economic and social wellbeing, and literature posited that women in less developed countries have significantly higher rates of informal economic participation than their counterparts in developed countries (Allen, Elam, Langowitz & Dean, 2008; Hatcher et al., 2007); hence the need for informal sector micro-finance institutions in less developed countries to cater to their financial needs.

Private-sector micro-finance institutions in Nigeria were inaugurated in 2006 as a result of the financial sector reforms of the Nigerian government in 1987, 1991 and 2000 (Ikhide & Alawode, 2001). They were licensed to operate and assist the government in providing micro-finance for self-employment, poverty reduction and ultimate economic development of the country. This is in support of Rhyne and Otero (1994) who argued that financial sector reforms should be a priority in developing countries; and to function effectively, micro-finance to the poor should be integrated into the financial system of such countries.

Private-sector micro-finance institutions have been formalized to replace the early informal money lenders in developing countries who lent with high interest, for example; Pawn shops in Malaysia, and Esusu in Nigeria (Iheduru, 2002).

Private micro-finance institutions were preferred to the public ones because they fit in with the micro-credit model of micro-finance institutions as represented by the Grameen Bank of Bangladesh, the world's leading micro-finance bank (UNCDF/UNDP, 2003). This model showed that micro-finance institutions mostly lend to the poor who are mostly women, deal with creditors in groups, require creditors to deposit savings in the bank, use group pressure to ensure non-default in loan repayment, and require group credit standing to secure subsequent loans by the group (Tazul, 2007; Versluisen, 1999). The Esusu in Western Nigeria, Isusu in Eastern Nigeria and the Adashi in Northern Nigeria were the early informal micro-finance models in Nigeria that had similarities with the Grameen Bank's model. They have been replaced by the private micro-finance

institutions whose members or clients are required to form groups so as to access loan (Iheduru, 2002).

3.4 Characteristics of Women Entrepreneurs that affect Performance

The characteristics or attributes of women entrepreneurs are regarded as the pull factors in entrepreneurial activity (Hisrich et al., 2008; Kuzilwa, 2005; North, 1990). These include demography (such as age and education), type of employment, type of industry type of company, financial background and work experience (Harrison & Mason, 2007; Peter, 2001; Okpukpara, 2009).

Education is one of the characteristics of women entrepreneurs that could affect their business performance, and literature supports that education and managerial experience may contribute to women's business growth but certainly has positive impact on entrepreneurial performance (Gatewood et al; 2004). They also stated that human capital is not only the result of formal education and training but also include experience and practical learning derived from previous paid employment or managerial position, and it is a vital condition for technological innovation. In a related study; education, experience, age and social networks were also found to have significant positive influence on entrepreneur's business performance in USA (Shane, 2003), yet women entrepreneurs in developing countries have low educational levels than their counterparts in developed countries (Ibru, 2009).

The need for achievement and autonomy, risk-taking, control of business and self-efficacy are vital characteristics of women entrepreneurs (Shane, 2003). Demography, skills and reputation are also vital characteristics of entrepreneurs as single women had

less income and less guarantees for loan, and higher percentage of women entrepreneurs, in France for example, had high school education and were in their early 30s (Carter & Shaw, 2006). In USA for example, most women entrepreneurs had tertiary education followed by high school education (Gatewood et al; 2004).

Family size also affects women's entrepreneurship success. Despite the fact that women with one or two children were likely to participate in entrepreneurial activity, in Pakistan for example, in order to generate income to support their families (Salman, 2009); it was however discovered that most women with family sizes of more than five people were likely to become entrepreneurs (Allen et al., 2008; Lawal et al., 2009); and large family size is common in developing countries (Lakwo, 2007). Again, most women aged between 25-34 years were found in the early- stage entrepreneurship (Allen et al., 2008).

Literature asserted that business experience is one of the vital entrepreneurial characteristics (Antoncic, 2006), and evidences support the fact that a minimum of three years business experience is sufficient to assess an entrepreneur (Antoncic, 2006; Carter & Shaw, 2006; Harrison & Mason, 2007; Kuzilwa, 2005; Salman, 2009).

Other characteristics of women entrepreneurs include: strong desire for independence, innovation, risk-taking, resourcefulness, business skills, knowledge, and networks (Salman, 2009). Business knowledge includes knowledge of top players in the industry, knowledge of product range and market trends. Business skills include technical and managerial skills which could be acquired through training, seminars and workshops. Experience could be acquired through formal education and business knowledge

(Salman, 2009). Innovation and decision-making ability are other characteristics (Cunha, 2007). Ambition, self-confidence and high level of energy have also been recognized as vital entrepreneurial characteristics (Idris & Mahmood, 2003).

Having the right motive of venturing into business has been found to be one of the characteristics of women entrepreneurs. The right motive should be the first determinant before entering into business (Mitchell, 2004; Porter & Nagarajan, 2005; Shane, 2003). Self-evaluation and intuition are also crucial characteristics (Shane, 2003).

However, recent studies have shown that business environment, such as financial, economic and socio-cultural, plays a greater role in the exploitation of entrepreneurial opportunity by women entrepreneurs (Kuzilwa, 2005; Shastri & Sinha, 2010; Vob & Muller, 2009). For example, Kuzilwa (2005) argued that though all conditions for exploiting entrepreneurial opportunity such as education, experience, and energy may exist, but the environmental constraints such as lack of credit may hinder the entrepreneur. Shastri & Sinha (2010) added that societal discriminations may hinder women entrepreneurial activity.

3.5 Studies on Micro-finance Factors and Women Entrepreneurs' Business Performance

The services provided by micro-finance institutions are made up of credit and non-credit services. The credit aspects of micro-finance include credits (loans) and savings. While the non-credit aspects of micro-finance include: training, social capital and insurance, supervision and advice (Carter & Shaw, 2006). It was discovered, from the literature,

that the credit aspect of micro-finance is much appreciated by most researchers while the non-credit aspect has witnessed continuous modifications in line with the researchers' contributions to the body of knowledge of micro-finance or entrepreneurship. This study focused on both the credit services (loans and savings) and non-credit services (training and social capital) of micro-finance institutions with respect to women entrepreneurs' business performance. The study provided empirical evidence of the relationship between credit, saving, training and social capital; and women entrepreneurs' business performance. The empirical evidences of the mediating effect of opportunity for entrepreneurial activity and the moderating effect of attitude towards micro-finance were also provided.

3.5.1 Credit and Women Entrepreneurs' Business Performance

Due to the fact that women entrepreneurs lack adequate physical, human and social capital for business (Ibru, 2009; Kuzilwa, 2005) due to unemployment (Akanji, 2006; Olomola, 2002), low household income (Lawal et al., 2009), lack of asset collaterals required by conventional banks and their high interest rates (Brata, 2004; Mohd & Hassan, 2008) and inability to save (Mkpado & Arene, 2007); there existed the need for the provision of micro-finance factors for them.

Credit was found to have positive impact on women enterprise's profit performance in Kenya (Peter, 2001). Credit, saving and training were found to have positive impacts on asset acquisition, income, investment and self esteem of women entrepreneurs in Haiti, Kenya, Malawi and Nigeria with varying percentages among the countries. For instance,

for the period 1999-2002, income of clients increased by 86.3% in Nigeria; 80% in Malawi; 24.6% in Haiti and 50% in Kenya. Number of clients also increased from 8,849 to 15,474 in Nigeria; 5,754 to 11,758 in Haiti; 2,753 to 41,503 in Kenya but decreased from 7,756 to 5,391 in Malawi (UNCDF/UNDP, 2003). In a related study, credit was found to have positive impact on asset acquisition, income and employment of women entrepreneurs in Nicaragua (Martin, 1999). Also credit was found to have positive impact on income, employment and risk diversification in Croatia (IFAD, 2006). Credit had positive impact on women empowerment but negative impact on women development in Uganda with respect to income and wellbeing (Lakwo, 2007). While credit was found to have significant positive effect on entrepreneurial productivity, it had no significant impact on entrepreneurial development in Nigeria (Ojo, 2009).

3.5.2 Savings and Women Entrepreneurs' Business Performance

Savings usually play a crucial role as insurance for credit since women entrepreneurs lack physical collaterals (Akanji, 2006; Mkpado & Arene, 2007). Savings also inculcate discipline and savings habit or culture in women entrepreneurs, help to build up future resources for business and family use, and act as a pool of funds for the micro-finance institutions (Akanji, 2006; Mkpado & Arene, 2007). Mandatory group savings acts as insurance for loan since they could not be withdrawn until the loan is completely paid (Versluisen, 1999). Savings service is needed as much as credit service by women entrepreneurs and they are willing to pay the high interest rate (Akanji, 2006).

Savings and credit have been found to have positive effect on enterprise productivity in Nigeria (Ojo, 2009). Saving, credit and training, were found to have positive impact on women entrepreneurs' income and wellbeing in Haiti, Kenya, Malawi and Nigeria (UNCDF/UNDP, 2003). Savings and credit were also found to have positive effect on women entrepreneurs' wellbeing in Bangladesh, Indonesia, Ghana, and Mexico (Vonderlack & Schreiner, 2001).

3.5.3 Training and Women Entrepreneurs' Business Performance

Training is a vital micro-finance factor for women entrepreneurs especially in developing countries due to their low level of education (Ibru, 2009). Education produces prior experience which leads to preparedness for entrepreneurial activity (Shane, 2003). Though women entrepreneurs in some developed countries such as USA also lacked prior business experience (Gatewood et al; 2004), women entrepreneurs in most developing countries, lacked such prior business experience due to lack of former paid employment (Brana, 2008). The awareness of the need for training and supports for entrepreneurs in order to stimulate entrepreneurial activity and reduce business failure have been increased among stakeholders in the industry, business and government of many countries (Abdullah et al., 2009). This is because entrepreneurs could be made or trained since the debate on "born and made entrepreneurs" is inconclusive (Abdullah et al., 2009).

Women entrepreneurs, especially in developing countries lacked training (IFC, 2007) and entrepreneurial process is a vital source of developing human capital (Cheston &

Kuhn, 2002; Brana, 2008; Shane, 2003). Taking cognizance of the peculiar situations of most women in developing countries in terms of poverty, unemployment, low educational levels and other societal discriminations (Porter & Nagarajan, 2005; Roomi & Parrot, 2008); training is a very important micro-finance factor for women entrepreneurs as it could provide the skills and experience needed for business (Akanji, 2006, Cheston & Kuhn, 2002; Kuzilwa, 2005). Literature supported the fact that vast majority of micro-finance institutions' clients do not have specialized skills, and so could not make good use of micro-finance factors (Karnani, 2007), hence they needed training. Again, there was the need for formal training because many micro-finance institutions in Nigeria provided informal business training to their clients as they assumed that all clients were already entrepreneurs in business (Ibru, 2009). Recognizing the importance of training as a non-credit aspect of micro-finance, training has been advocated for women entrepreneurs; for instance, in United Kingdom (Harrison & Mason, 2007). Also, Canadian International Development Agency (CIDA), in 2006, focused on vocational training and allocated \$4.5m for training program in Afghanistan (IFC, 2007). Therefore, training is a vital micro-finance factor required by women entrepreneurs especially in developing countries.

Education is also related with training. That is, training is part of education. Women entrepreneurs in high-income countries are better educated than those in low or middle income countries, majority of whom had secondary and tertiary education (Ibru, 2009); except in Pakistan where a higher percentage of women entrepreneurs had tertiary education (Salman, 2009). This showed the importance of entrepreneurial training to women entrepreneurs in low-income countries. Literature asserted that skill training and

tertiary education could lead to entrepreneurial activity (Gatewood et al., 2004; Salman, 2009; Shane, 2003; Stohmeyer, 2007).

Women entrepreneurs in developing countries are mostly confined to the informal sector; especially agriculture and those on paid employment are confined to health and education sectors; therefore lack entrepreneurial experience (IFC, 2007); hence the need for entrepreneurial training.

Training and credit were found to have positive impact on profit performance of women entrepreneurs in Tanzania (Kuzilwa, 2005). Training (skill acquisition) and new technologies were found to have positive impact on enterprise success in Nigeria (Ibru, 2009). Training and health education were found to have positive effect on the profit performance of women entrepreneurs in Ghana (Cheston & Kuhn, 2002). Training and social capital were found to have positive impact on women entrepreneurs' business growth (in New Hampshire and Pennsylvania, U.S.A) in terms of annual sales revenue, start-up funding and future funding over five years (Kickul et al., 2007). Training, social capital and credit were found to have positive impact on women entrepreneurship success in Canada, Northern Ireland, Republic of Ireland, Czech Republic, Poland and Japan (Reavley & Lituchy, 2008). Training, credit and saving were found to have positive impact on women entrepreneurship success and welfare in Haiti, Kenya, Malawi and Nigeria with varying percentages among the countries (UNCDF/UNDP, 2003).

3.5.4 Social capital and Women Entrepreneurs' Business Performance

Most studies regard social networks as occupying a larger portion of social capital while others use them synonymously but the main idea is that social capital entails knowing people in diverse places, so as to access timely information and resources that are beneficial to the business (Lawal et al., 2009; Olomola, 2002; Shane, 2003). Micro-finance institutions require this group formation as a collateral or insurance for micro-credits. The effectiveness of the social networks depends on network diversity, network size and relationship strength or bonding; and social capital provides business information, resources, social supports, and professional information and advice to new or existing enterprises (Allen, 2000; Mohamed et al., 1997; Tata & Prasad, 2008).

Network Diversity/Composition: This involves the number of different groups in which an entrepreneur belongs, the number of different social systems in which her social relationships are based, and the extent to which information sourced from different social networks is similar or different (Tata & Prasad, 2008). For instance, an entrepreneur who belongs to diverse social groups such as the family, work group, community association and religious groups has wide network range but low network densities or ties which are essential for access to information and resources. It was discovered that men had wider networks but lower network ties than women. Such wider networks helped them to access credit and market information faster than women (Allen, 2000; Tata & Prasad, 2008). However, Mohamed et al. (1997) found that women entrepreneurs had higher network diversity than men as they included men in their

networking activities and they actively participated in their networking activities than men.

Network Size/Range: This is the number of members in a social group, and the smaller the number, the stronger the network ties (Allen, 2000). Women entrepreneurs normally form single-gender groups due to demographic and cultural constraints such as educational levels and traditions, especially in developing countries, which limit their ability to have equal access to social capital necessary for business (Tata & Prasad, 2008).

Bonding/Frequency of Meetings: This refers to the level of closeness or ties existing within a social group among the members; which could be assessed by the frequency of their meetings or interactions. Women entrepreneurs have closer ties or longer relationship than men due to the equality of relationship among the group members which helps to sustain the group (Gine & Karlan, 2009; Mkpado & Arene, 2007; Mohamed et al., 1997; Olomola, 2002; Tata & Prasad, 2008). The ability of the group members to access information and resources through their loan group depends on the strength of social bonds and control in the group (Olomola, 2002). Again, Allen (2000) supported previous studies which strongly suggested that the effectiveness of the social networks to provide social support to group members increases when the network is wider and when contact is more frequent; though he added that network composition plays a role as well.

Mohamed et al. (1997) found no difference between men and women regarding network bonding. It was also reported that social networks with strong network bonding were more likely to lead to enterprise performance (Tata & Prasad, 2008).

These studies seemed to suggest a general consensus or opinion that bonding is a critical element of the social capital in helping group members to access timely information and resources as well as loan repayment. While Tata and Prasad (2008) regarded social capital as network diversity, size and bonding; Allen (2000) regarded social capital as social networks made up of group membership or networking (composition and size) and bonding (frequency of meetings). Olomola (2002) equally saw social capital as group membership and regularity of meetings.

Social capital had positive impact on micro-credit group performance in Nigeria (Mkpado & Arene, 2007; Olomola, 2002) and group performance in Philippines (Gine & Karlan, 2009). Social capital also had positive impact on credit access in Indonesia and Nigeria respectively (Brata, 2004; Lawal et al., 2009). There was positive impact of social capital on women enterprise performance in Malaysia, USA and Canada respectively (Mohamed et al., 1997; Tata & Prasad, 2008; Wycklam & Wedley, 2003).

3.5.5 Controlled Variables

Controlled variables, in the measurement and analysis of a study, help to control spurious relationship between extraneous variables. Previous studies considered controlled variables in their measurement and analysis. For example, Kuzilwa (2005)

who studied the role of credit for small business success in Tanzania; controlled education, gender and motivation for success as entrepreneurs' characteristics being independent variables. Brana (2008), who studied credit access, gender and entrepreneurial activity in France, used gender as a dummy or controlled independent variable. Allen (2000), who studied the link between social capital and entrepreneurial activity in USA; controlled gender, education and business experience. Stohmeyer (2007), who studied gender gap and segregation in self-employment: the role of field of study and apprenticeship training in Germany, controlled age and availability of small children in the family. Hedges et al. (2007), who studied deterioration in borrowing terms of small businesses in Canada, submitted that firm-specific characteristics such as the size, age, industrial sector and stage of development could affect credit terms. They went further to say that entrepreneur's personal characteristics such as gender, education, age and years of business experience could affect credit terms. Mayer et al. (2007), who studied skills, capital and connections in terms of regional perspective in USA, controlled firm size. Antoncic (2006), who studied the impact of diversification and corporate entrepreneurship strategy-making on growth and profitability, controlled firm age, size and type of industry.

However, since the unit of analysis of this study was women entrepreneurs, therefore; entrepreneurs' personal characteristics such as education, age and years of business experience were controlled. Gender as a controlled variable was not relevant to this study because the study was concerned with women entrepreneurs only.

3.6 Studies on Opportunity for Entrepreneurial Activity and Women Entrepreneurs' Business Performance: The Mediated Variable

In this study, as in few previous studies for example Tata and Prasad (2008) and Shane (2003)' work, opportunity for entrepreneurial activity was considered a mediated variable. It acts as a link between micro-finance factors and women entrepreneurs' business performance. Opportunity for entrepreneurial activity (as a mediated variable between credit, savings, training and social capital; and women entrepreneurs' business performance) in this study was supported by Entrepreneurship Model of Shane (2003) and other supporting theories as enunciated below.

Opportunity for entrepreneurial activity is the tendency for people to engage in self-employment, new firm formation (new business) or business expansion (Shane, 2003). It is the creation of new business or business diversification in terms of development of new products, services, techniques, strategies and competitive postures (Antoncic, 2006).

In support of other diversifications theories (e.g Pandya & Rao, 1998; Salavou, 2002), Antoncic (2006) said that entrepreneurial activity such as business diversification in terms of new product or service innovation, in most cases, leads to business performance. While studies on Financial Management agree that funds are usually sourced to finance predetermined projects or contracts (VanHorne, 1980).

It has also been reported that micro-finance factors create opportunity for entrepreneurs to generate income (Brana, 2008). The discovery of business opportunity and the

decision to exploit the opportunity leads to a search for external funds, and the acquisition of such funds again creates opportunity for entrepreneurial income-generating activity (Shane, 2003). Proper application of the resources could lead to business performance (Koontz & Weihrich, 2006; Shane, 2003).

Social capital (networks) creates opportunity for entrepreneurial activity which leads to profits (Allen et al., 2008). Yet still, opportunity in the market, identified through innovation, creates the need for micro-finance factors which in turn creates opportunity for entrepreneurial profits (Salman, 2009). Social capital provides opportunity for women entrepreneurs to network so as to access information and resources for business (Tata & Prasad, 2008).

Opportunity for entrepreneurial activity as a mediating variable is vital because business environment, aided by micro-finance, provides opportunities for those who could identify them to start or improve their businesses for profits (Shane, 2003). It is the creation of new business or business diversification in terms of development of new products, services, techniques, strategies and competitive postures (Antoncic, 2006). This, in most cases, leads to business performance (Antoncic, 2006; Pandya & Rao, 1998; Salavou, 2002). Financial Management studies agree that funds are sourced to finance predetermined projects (VanHorne, 1980). Micro-finance provides a catalyst for women borrowers to reposition themselves in order to boost their status in the society (Lakwo, 2007). Micro-finance factors create opportunity for entrepreneurs to generate income (Brana, 2008).

The discovery and decision to exploit entrepreneurial opportunity leads to search for external funds, the acquisition and proper utilization of such funds could lead to business performance (Koontz & Weihrich, 2006; Shane, 2003). Social networks create opportunity for entrepreneurial activity which leads to profit (Allen et al., 2008). Again, entrepreneurial opportunity identified through innovation creates the need for micro-finance factors which in turn creates opportunity for entrepreneurial profits (Salman, 2009).

Micro-enterprise performance was found to be influenced by the configuration of the entrepreneur's social capital as well as their motivation and opportunity to engage in collaborative exchange (Tata & Prasad, 2008). They further concluded that diverse social networks lead to access to business information and resources which invariably leads to successful entrepreneurs' performance. That is, opportunity to engage in collaborative exchange and motivation mediated the relationship between social capital and micro-enterprise performance. However, in this study, motivation is excluded as a mediator because there are some women entrepreneurs who are self-motivated such that without micro-finance factors, they could still achieve better business performance. Secondly, motivation was considered a controlled variable by Kuzilwa (2005); though this study did not consider it as a controlled variable because most previous studies did not control it (e.g Antoncic, 2006; Hedges et al., 2007; Martin, 1999; Peter, 2001; Shane, 2003).

Previous studies such as Koontz & Weihrich (2006) and Shane (2003) concluded that micro-finance factors lead to opportunity for entrepreneurial activity which invariably

leads to business performance. Tata and Prasad (2008) concluded that a strong positive relation exist between network diversity, opportunity for collaborative exchange and women entrepreneurs' business performance. Since Baron and Kenny (1986) suggested that a mediator is necessary when there is a strong relation between predictor and criterion variables; then the inclusion of a mediator in this study was justified. Again, some authors supported the fact that micro-finance factors could lead directly to women entrepreneurs performance (e.g Kuzilwa, 2005; Olomola, 2002) while other authors argued that micro-finance factors could not lead to women entrepreneurs performance without opportunity for entrepreneurial activity (e.g Tata & Prasad, 2008; VanHorne, 1980). This situation necessitated the need for a mediating variable in the relationship between micro-finance factors and entrepreneurship performance. This study provided the mediating variable.

From the abundant evidences above, this study argued that without entrepreneurial opportunity in terms of new business or business expansion, micro-finance factors could not lead to enterprise performance. As such, opportunity for entrepreneurial activity was perceived a good mediator between micro-finance factors and women entrepreneurs' business performance.

3.7 Studies on Attitude towards Micro-finance: The Moderated Variable

Women entrepreneurs' attitude towards micro-finance results from poor level of acceptance and lack of confidence on sustainability of the micro-finance institutions and services due to poor loan administration (Okpukpara, 2009), difficulty and long process

in accessing loan (Lawal et al., 2009; Olomola, 2002). It also depends on their appraisal of the possible effect of the loan on their business operations (Cheston & Kuhn, 2002; Fernando, 2006; Karnani, 2007).

While some studies have shown that most women entrepreneurs have negative attitude towards micro-finance as an aid to business performance and subsequent family wellbeing (e.g Fernando, 2006), several other studies have shown that women entrepreneurs have positive attitude towards micro-finance (e.g Asikhia, 2009; Khandker, 2001). According to Baron and Kenny (1986), such situation calls for a moderator.

Fernando (2006) argued that women entrepreneurs have negative attitude towards micro-finance due to the several myths inherent in micro-finance. For instance, it is generally believed that micro-finance does not require collaterals but the micro-finance institutions take custody of the compulsory group savings. It is also assumed that micro-finance empowers women entrepreneurs but this is at the expense of their forgone household responsibilities, especially in their effort to repay loans. Low interest rate on loan does not really exist because the interest on micro-finance loan is even higher than that of the conventional banks, and the fact that micro-finance banks withhold a certain percentage of the loan as a guarantee against loan defaults. It is erroneously believed that loan repayment means increase in income or good business performance whereas group members usually bailout a member who could not repay her loan on time due to poor business performance. Fernando (2006) concluded that micro-finance should be

considered a temporary measure for women empowerment or poverty reduction and not a cure for it.

Karnani (2007) argued that micro-finance does not lead to women entrepreneurs' business performance and wellbeing due to their low level of education, rather the government should build more industries to create jobs for the women. Micro-finance to the women should be used in conjunction with other poverty intervention programs by the government (Karnani, 2007).

Again, Lakwo (2007) found a weak positive relation between credit and women entrepreneurs' business performance in Uganda especially on asset acquisition; though a strong relation on empowerment. The study of Lakwo (2007) provided an inconsistent result compared to previous studies.

On the other hand, Asikhia (2009) who saw attitude towards micro-finance as entrepreneur's perception or knowledge, feeling or emotions, and will or behavior tendencies towards micro-finance institutions' services found a significant positive relationship between the small business owners' expectations of their micro-finance banks and present relationship, and a significant relationship between their expectations and future decisions. These significant relationships meant that most small business owners who are not enjoying expected service delivery presently with their banks are not enjoying good relationships and are likely to leave such micro-finance banks in the future (Asikhia, 2009).

In the same vein, Khandker (2001) found that micro-finance raised the income and consumption of the participants, mostly women, in Bangladesh thereby raising their wellbeing or standard of living. He added that though poverty still persisted but that should not be blamed on micro-finance, rather other poverty reduction strategies should be adopted by the government to reduce poverty in Bangladesh.

Again, Tata and Prasad (2008) also concluded that a strong positive relation exists between opportunity for collaborative exchange and women entrepreneurs' business performance, in USA for example. Antoncic (2006), in Slovenia for example, found a strong positive relation between opportunity for entrepreneurial activity and entrepreneurship performance. A strong positive relation was also found between micro-finance factors and entrepreneurs' performance in Ghana, Nicaragua and Kenya respectively (Cheston & Kuhn, 2002; Martin, 1999; Peter, 2001).

These studies revealed inconsistent results regarding women entrepreneurs' attitude towards micro-finance; and Baron and Kenny (1986) suggested that when there is a weak or inconsistent relation between predictor and criterion variables, then a moderator is necessary. Therefore, the use of attitude towards micro-finance as a moderator in this study is justified. Given the above trend in the literature, it is arguable that women entrepreneurs' ability to exploit entrepreneurial opportunities, provided by the environment and aided by micro-finance, to achieve business performance depends on their attitude towards micro-finance. That is, the ability of an entrepreneur to utilize the micro-finance factors to start or expand business in order to achieve business performance depends on her attitude towards micro-finance. Therefore, attitude towards

micro-finance could moderate the relationship between micro-finance factors, opportunity for entrepreneurial activity and women entrepreneurs' business performance.

3.8 Studies on Women Entrepreneurs' Business Performance

Generally, the new emphasis on micro-finance is on entrepreneurs' income, wellbeing or empowerment and enterprise performance or success (Kuzilwa, 2005; Lakwo, 2007). For example, entrepreneurship profit is a measure of performance and is very necessary because it is the reward for taking risk (Shane, 2003). This study focused on full time, self-employed women who were business owners and managers. This is because not all business owners are self-employed and not all of the self-employed are on full time business (Carter & Shaw, 2006). Entrepreneurs' performance could lead to poverty reduction, economic and social wellbeing of women entrepreneurs as well as boost their status in the family and community at large (Akanji, 2006; Brata, 2004). The study does not focus on home based businesses because some researchers have argued against the legitimacy of such businesses (Carter & Shaw, 2006).

From the discussions above, it is evident that previous studies have measured one or more of these micro-finance factors: credit, saving, training or social capital on enterprise performance and found positive results (e.g Kuzilwa, 2005; Ojo, 2009; Lawal et al., 2009; Peter, 2001). As such, these literatures have provided strong supports for the independent and dependent variables in this study. Therefore, this study measured credit, saving, training and social capital on women entrepreneurs' business performance;

mediated by opportunity for entrepreneurial activity and moderated by attitude towards micro-finance.

3.9 Previous Studies on Women Entrepreneurs in other Countries

Kuzilwa (2005) measured credit and training on enterprise success in Tanzania. A survey was conducted on 250 enterprises in Arusha, Morogoro and Dar-es-Salaam in Tanzania and an oral interview with three women entrepreneurs only in Morogoro from 1999 to 2000. Descriptive statistics and multiple regression analysis were used to analyze data. It was discovered that those entrepreneurs who had access to credit and training from the government's micro-finance institution (National Entrepreneurship Development Fund) had good business success than others as there was increase in their output. Those interviewed added that the increase in their output was not due to credit alone. However, the study was limited to the fact that a control group, that was initially intended, was neither included in the sample nor studied.

Mohamed, Mat and Hamed (1997) measured social capital on women entrepreneurs' business performance in Malaysia and found that women entrepreneurs had high network diversity as they included men in their networking activities. It was also found that women entrepreneurs actively participated in their networking activities, than men, to ensure business performance. For example, in a space of six months, women entrepreneurs averagely discussed their businesses with nine people while men discussed with five people. Again, there was no difference between men and women

regarding social ties or bonding. The study showed positive effect of social capital on women entrepreneurs' business performance.

Roslan and Mohd (2009) studied the determinants of micro-credit repayment in Malaysia and found that default in loan repayment was influenced by gender, with lower default rate among women than men. It was also influenced by type of business, amount of loan, repayment period and training. Those entrepreneurs who received training before business had higher repayment rates than others; as such training had positive impact on loan repayment. Also since Amanah Ikhtiar Malaysia (AIM) is a commercial bank, insurance cover was compulsory for borrowers.

Ruhaida (2006) investigated the outreach of micro-finance institutions to the poor in Malaysia with respect to credit. The study used secondary data from the annual reports of the micro-finance banks from 1995 to 2005. Using descriptive statistics, it was found that micro-finance factors could reduce poverty as evidence by Tabung Ekonomi Kunpulan Usaha Nianga (TEKUN); otherwise known as Economic Fund for Entrepreneurship Groups, that advanced loans to women entrepreneurs to the tune of RM488.3m in 2003. However, the study concentrated on the financial sustainability of the micro-finance institutions at the expense of women entrepreneurs since there was no attempt to interview any woman entrepreneur.

Grahame and Noor (2005) investigated the effectiveness of Credit Guarantee Scheme in Malaysia with respect to credit and outreach, and found that though the scheme has added value to the country but it has not achieved all the objectives for which it was

established. While Idris and Mahmood (2003) investigated the characteristics of successful entrepreneurs (male and female) as perceived by bank managers in Malaysia, and found that self-confidence, high level of energy, being ambitious and less emotional were the characteristics perceived by bank managers as vital. In addition to these, education, business experience and age were also considered crucial success characteristics of entrepreneurs (Antoncic, 2006; Carter & Shaw, 2006; Gatewood et al., 2004). This showed the characteristics of successful entrepreneurs are similar across different cultures; and these characteristics affect business performance.

Abdullah, Osman and Rahim (2009) investigated the key concept of academic technology entrepreneurship in current practice in Malaysia compared to USA and UK. Unstructured participant observation on current technology entrepreneurship development program, informal interview and literature review about current practice of academic technology entrepreneurship in Institutions of Higher Learning (IHL) was the methodology adopted in the study. It was discovered that most graduates of the National Unipreneur Development Program, and the Master of Science in Technology Entrepreneurship introduced by the Universiti Teknologi Malaysia (UTM) in 1999 and the Master of Science in Technopreneurship by the Universiti Utara Malaysia in 2003, were not able to translate their information technology skills into entrepreneurial opportunity because less emphasis was placed on the trainee characteristics, training environment and development process, implementation climate which influenced the trainee during the training process, and the University-Industrial linkages. The situation was better in the USA and UK. In USA, for example, technology entrepreneurship development program engaged in ideas and cross-culture learning experiences by

bringing together Students, Technology Entrepreneurs and the Universities. Also, in UK, students were better trained by exposing them to practical business and entrepreneurial skills through student-industrial internships. This study portrays the need to blend theoretical or classroom experience with practical or industrial experience for entrepreneurs in order to acquire better entrepreneurial skills. This is in line with the study of Stohmeyer (2007) and Ying (2008).

Gatewood, Brush, Carter, Greene and Hart (2004) discussed financial capital, human capital and social capital on women enterprise growth and survival in the United States of America. They concluded that prior managerial experience does not have any significant impact on enterprise survival; though it may contribute to it. However, entrepreneurial experience had positive impact on business growth. Also, there was no significant relationship between education and business growth of women entrepreneurs; though education could lead to business start-up. As such, they concluded that theoretical evidence on relationship between education and enterprise growth was mixed. However, they discovered that credit and type of industry had significant positive impact on profit performance. Profit performance was regarded as a measure or an indicator of survival.

Brana (2008) studied micro-credit and the role of gender with regards to self-employment in France. A sample size of 3,640 client portfolios of all micro-finance institutions (2,381 men and 1,259 women) were collected in Aquitaine region of France from 2000 to 2006. However, 90 clients with correct information were actually surveyed. Using multiple regression analysis, it was discovered that women had limited

physical capital (credit) and human capital (training) to start business. Lack of these resources led them to start under-funded enterprises which had negative impact on their performance in the long run. However, the study was limited to one region in France and small sample size.

Stohmeyer (2007) studied non-credit aspect of micro-finance factors (education and apprenticeship training) on gender self-employment in Germany. Respondents were selected from Microcensus Scientific Use Files of 2000, 2003 and 2004. 886 female graduates and 1,560 male graduates who founded enterprises, as well as 700 female and 1,224 male non-academics who founded enterprises were surveyed. Using hierarchical regression model, it was discovered that the field of study and apprenticeship training had positive impact on the type of employment. He also discovered that women were half the ratio of men in self-employment due to low level of education and skill training.

Mayer, Hackler and McFarland (2007) measured capital, skills (training) and networks on women entrepreneurs' perceptions in USA. A sample size of 50 women-owned firms in 50 most populous cities in USA, derived from the 2002 Economic Census Survey of Business Owners were studied in 2002. Correlation analysis was used to analyze data. The study found that women perceived capital, training and social networks as vital resources to enterprise development. They also discovered that managerial skills and access to finance support women's business ownership. Women-owned firms and women-employer firms benefit from a regional environment that provide women with the ability to network and gain social capital. However, women faced barriers which include inability to access finance, hindrance to career advancement and stereotypes.

Shane (2003) discussed credit and non-credit aspect (education) of micro-finance on entrepreneurial opportunity of male and female entrepreneurs in United States of America and concluded that prior business experience acquired through education leads to preparedness for entrepreneurial activity, and that acquisition of capital is also necessary for successful entrepreneurship start-up.

Hatcher, Terjesen and Planck (2007), in Thailand, studied micro-finance factors and women entrepreneurial activity across American and Asian cultures. The study, conducted in 2005, used data from empirical global studies and oral interviews of six Thai women entrepreneurs. 35 countries were studied including America, Australia, Belgium and Venezuela. Using descriptive statistics, it was discovered that low-income developing countries had significantly higher female entrepreneurial activity than high-income countries. For instance, in Asia, women had almost equal rates of entrepreneurial activity like men (32.5% v 33.5%). While in America, women had lower entrepreneurial activity than men (13% v 20%).

Eversole (2009) discussed micro-finance factors and micro-enterprise development in the informal sector of the Australian economy and concluded that micro-finance is a leading strategy for poverty reduction and grassroots development as it could lead to self-employment, social wellbeing of entrepreneurs and enable them participate in household and community decision-making. The emphasis of the study was on household empowerment of local women entrepreneurs. The conclusions from the study would have been far more persuasive if the study had also appraised any other welfare policy on women entrepreneurs.

Vonderlack & Schreiner (2001) discussed credit and savings on women entrepreneurs' wellbeing in Bangladesh, Indonesia, Ghana and Mexico, and concluded that credit and savings could improve the wellbeing of women entrepreneurs in developing countries.

Peter (2001) measured credit on the performance of female-run micro-enterprises in Kenya. A survey of 120 women entrepreneurs was conducted from 1996 to 1997. Descriptive statistics and regression techniques were used to analyze data. The study discovered that there were large increases in assets, sales and profit but small increase in employment. He also advocated for training to be tied to credit since some women did not received any training before loan.

Gine and Karlan (2009) measured social capital on micro-credit's group performance in Philippines for men and women entrepreneurs. The study made use of data from Green Bank of Caraga, a rural bank in Philippines. Emphasis was on repayment, savings, loan sizes, number of clients and client retention rates of those in groups and those not in groups. The first experiment took place in 2004 with a sample of 3,285 clients from 161 cash centers handled by 11 credit officers, while the second experiment took place from 2005 to 2007 using stratified random sampling on the credit officers from whom responses were collected about client's loan repayment. Ordinary least square (OLS) regression method was used. It was found that converting group lending to individual lending had no effect on repayment. That is, individual liability leads to less monitoring of each other's loan but does not lead to default. However, groups were still needed due to weekly group meetings and the fact that micro-finance institutions were unwilling to lend to individuals without group guarantors.

Kickul, Page, Gundry and Sampson (2007) measured social capital and training on women enterprise growth in USA. The study surveyed 421 women entrepreneurs in New Hampshire and Pennsylvania in 2002. It was found that physical capital, connection networks and training had positive effect on enterprise growth; as such are vital for success. Though the sample size was reasonable but the scope was limited.

Doocy, Norell, Teffera and Burnham (2005) studied micro-finance programs and improvement decision of male and female entrepreneurs in Ethiopia. Questionnaires were administered on 614 households (408 vs. 206) to compare those who received loans and those who did not, though they were clients of the micro-finance bank in 2003. Stratified random sampling, by survey site and client sex, and then systematic sampling was used to select the sample members. Using Regression analysis, it was discovered that evaluation of micro-finance services had positive impact on management's decisions. For example, the management of WISDOM Micro-finance Institution was able to improve its services by introducing increased savings to clients and use of female loan officers. The focus of their study was on decision-making of micro-finance institutions.

Cheston and Kuhn (2002) measured micro-finance's credit, training and health education on women empowerment in Ghana. The study was conducted in 2001 where questionnaires were administered on 1,200 women entrepreneurs and oral interview on 10 women entrepreneurs who were clients of Sinapi Aba Trust Bank. Using descriptive statistics, it was found that micro-finance led to greater independence of the women and contributed financially to their households and communities. It also led to women

empowerment through self-confidence, self-esteem and participation at household and community levels. Entrepreneurs had increases in income, output and employment. Training provided better customer relationship, and health education provided information that ensured good health for entrepreneur and her business activity. They advocated that health education, literacy or business training could be packaged with financial services to entrepreneurs. In a related study, Smith and Jain (1999) measured micro-finance's credit and health education on women micro-enterprise performance and micro-entrepreneur's empowerment in Ecuador and Honduras. It was found that incorporating healthcare and health education into micro-finance resulted in improved health for borrowers and their families and resulted in significant improvement in enterprise performance and entrepreneur's empowerment.

3.10 Previous Studies on Women Entrepreneurs in Nigeria

Okpukpara (2009) studied formal and informal micro-finance institutions in order to discover the determinants of micro-enterprises' loan acquisition for rural women entrepreneurs in Nigeria. The study surveyed a randomly selected 136 micro-enterprises, 20 informal and 14 formal micro-finance institutions in Abia and Anambra States of Nigeria. Using descriptive statistics, he found that 27 out of 34 enterprises that obtained loan did so from the informal micro-finance institutions since they do not require collaterals. He concluded that public micro-finance institutions have failed due to poor targeting and unorganized ways of loan administration. However, his conclusion might have been much more persuasive if the scope of the study was not limited to only two States in one region, out of the 36 States in Nigeria.

Iheduru (2002) discussed formal and informal sector micro-finance institutions with respect to financial sustainability, policy implications and community development on women's economic, social and political empowerment in Nigeria. She concluded that the public micro-finance institutions such as Family Economic Advancement Program (FEAP) and the Peoples Bank of Nigeria (PBN) failed due to lack of favorable policy framework regarding rural financial markets and grassroots approach to financial intermediation.

Ojo (2009) measured micro-finance factors on women entrepreneurial development in Nigeria. A survey method through purposive and then simple random sampling was used. From a sample of 60 enterprises in Lagos State of Nigeria, 48 completed questionnaires were used. Using descriptive statistics (ANOVA) and linear regression, the study found no significant effect between credit and entrepreneurial development but significant positive effect between the micro-finance factors (credit and savings) and entrepreneurship productivity. The emphasis of the study was on credit and savings, and entrepreneurship development in Nigeria. The findings might have been far more interesting if the scope of the study was not limited to only one State in one region of Nigeria which is not the only commercial city in the country. In a related study, May (2007) discussed micro-credit and entrepreneurship development in terms of asset acquisition and education. She concluded that inequality in education and acquisition of productive resources, such as credit, were the major obstacles to women's economic development in Nigeria. Adepelumi (2007) and Edozien (2008) respectively had discussion papers that focused on public micro-finance institutions and outreach of their services to women entrepreneurs.

Ibru (2009) discussed human capital (skill acquisition training) on women entrepreneurial activity in Nigeria. She concluded that many micro-finance institutions do not offer formal business training to their clients as they assume that all clients are already entrepreneurs in business. She, however, advocated for the inclusion of information and communication technology among the micro-finance services. For instance, Global Systems Mobile (GSM) service could be used for sending short messages which could enhance confidentiality. However, this current study does not consider it necessary to measure information and communication technology because it would not be realistic for micro-finance institutions to provide ICT to all their clients as this could increase their transaction cost. Increase in transaction cost reduces profit performance of the micro-finance institutions (Schreiner, 2001).

Mkpado and Arene (2007) measured social capital on sustainability of micro-credit groups (male and female) in Nigeria. A survey of 54 micro-credit groups and two micro-finance institutions, selected through purposive and then stratified random sampling, was conducted in Imo State of Nigeria in 2005. Using descriptive statistics and multiple regression analysis, the study found that strong social ties aid group's loan repayment and survival, and that savings mobilization and group's loan repayment depends on the frequency of meetings attendance. Though a large sample size was used, however the study also had a limited scope, that is, only one State out of 36 States in Nigeria was covered.

Akanji (2006) discussed credit and savings on women entrepreneurs' income and found that savings were needed as much as credit. It was also discovered that formal micro-

finance institutions were inefficient due to limited knowledge of the needs of the poor. She also advocated that training should be built into micro-finance programs which should include literacy, skill acquisition especially for those with primary education, and apprenticeship training for vocational jobs.

Olomola (2002) measured social capital on informal micro-finance groups in rural Western Nigeria. A survey was conducted in 1998 on 90 informal financial groups and their members totaling 879 in Oyo and Osun States of Nigeria using stratified random sampling to select 30 micro-finance institutions mobilized group, 30 autonomous groups and 30 “Esusu” groups. Group membership ranged between 5 and 10. Using regression analysis, the study found that social capital had significant positive effect on loan repayment performance and savings mobilization of women entrepreneurs but negative effect on regular meetings. It was also found that higher proportion of the micro-credit groups generated low savings, requested for small loans, while low proportion were defaulters. Other regions of the country were not included in the study which might have made the findings much more interesting.

Lawal et al. (2009) measured social capital on credit access in rural households in Nigeria. A survey, with structured questionnaire, was conducted on 150 proportionately sampled respondents in five villages in Osun State of Nigeria. Descriptive statistics and regression model were used to analyze data. The study found that social capital is positively related to credit access. That is, to secure credit from a micro-finance institution, an entrepreneur must be a member of local groups such as cooperative societies, social or community associations. It was also discovered that educational level

and years of entrepreneurial experience had positive relationship with credit access; and loan size much more influenced enterprise performance. Though a large sample size was used but it was tilted towards one State in Nigeria. As such, the study had a poor coverage or limited scope.

Tables 3.1 below show the literature matrix on women's entrepreneurship studies.

Table 3.1
Literature Matrix

Author	Independent Variables					Dependent Variables							
	Credit	Supervision	Savings	Insurance	Training	Education	Social networks	Enterprise development	Credit access	Employment	Household income	Entrepreneurial activity	Performance/success
Iheduru (2002)	x									x			
Okpukpara (2009)					x				x				
Ojo (2009)	x		x					x					
Ibru (2009)					x								x
Lawal et al. (2009)							x		x				
Iganiga (2008)	x							x					
Mkpado and Arene (2007)							x						x
Akanji (2006)	x	x	x										x
Olomola (2002)							x						x
Cheston and Kuhn (2002)	x				x	x							x
Lakwo (2007)	x									x			
Peter (2001)	x												x
Kuzilwa (2005)	x				x								x
Brata (2004)							x		x				
Gine and Karlan (2009)							x						x
Mohamed et al. (1997)							x						x

Table 3.1
Cont...

[illegible]

Source: Author's Literature Review (2009-2010)

Table 3.2 below was used to show the studies related to micro-finance factors in developing and developed countries, to further justify the need for these factors to be measured in a developing country like Nigeria.

Table 3.2
Studies related to micro-finance factors in developing versus developed countries

Variables	Developing Countries (Author)	Developed Countries (Author)
Credit	(Akanji, 2006; Cheston & Kuhn, 2002; Iheduru, 2002; Kuzilwa, 2005; Lakwo, 2007; Ojo, 2009; Okpukpara, 2009; Peter, 2001; Ruhaida, 2006)	(Brana, 2008; Eversole, 2009; Hatcher et al., 2007; Martin, 1999; Mayoux, 1999; Morduch, 1999; Otero, 1999; Shane, 2003; Smith & Jain, 1999; UNCDF/UNDP, 2003; Vonderlack & Schreiner, 2001)
Savings	(Akanji, 2006; Ojo, 2009)	(UNCDF/UNDP, 2003; Versluysen, 1999; Vonderlack & Schreiner, 2001)
Training	(Cheston & Kuhn, 2002; Ibru, 2009; Kuzilwa, 2005)	(Brana, 2008; Carter & Shaw, 2006; Kickul et al., 2007; Reavley & Lituchy, 2008; Shane, 2003; Smith & Jain, 1999; Stohmeyer, 2007)
Social Capital	(Brata, 2004; Gine & Karlan, 2009; Lawal et al., 2009; Mkpado & Arene, 2007; Olomola, 2002)	(Gatewood et al., 2004; Kickul et al., 2007; Reavley & Lituchy, 2008; Shane, 2003; Tata & Prasad, 2008)

Source: Author's Literature Review (2009-2010).

Table 3.3 below was used to show the studies related to micro-finance measures in specific countries, to further justify the need for these factors to be measured in Nigeria.

Table 3.3
Studies related to micro-finance measures in specific countries

Source	Independent Variables	Dependent Variables	Country of Study
Brana (2008)	Credit and training	Entrepreneurial activity	France
Stohmeyer (2007)	Training and education	Entrepreneurial activity	Germany
Shane (2003)	Credit, training and social capital	Entrepreneurial activity	USA
Brata (2004)	Social capital	Credit access	Indonesia
Lawal et al. (2009)	Social capital	Credit access	Nigeria
Tata and Prasad (2008)	Social capital	Entrepreneurs' performance	USA
Kuzilwa (2005)	Credit and training	Enterprise performance	Tanzania
Akanji (2009)	Credit and savings	Entrepreneurs' performance	Nigeria
Olomola (2002)	Social capital	Enterprise performance group	Nigeria
Mkpado and Arene (2007)	Social capital	Enterprise performance group	Nigeria
Ojo (2009)	Credit and savings	Enterprise productivity	Nigeria

Source: Author's Literature Review (2009-2010).

From the above trend in literature, it is evident that credit, savings, training and social capital have not been jointly measured by previous studies especially in developing countries. This study then focused on these micro-finance factors as well as on the mediating and moderating effects of opportunity for entrepreneurial activity and attitude towards micro-finance.

3.11 Related Researchers' Models (Specific Review)

Previous empirical studies, and their models, that were specifically related to this study were reviewed and summarized below.

Table 3.4
Related Researchers' Models (Specific Review)

Author	Independent Variables	Dependent Variables	Controlled Variables	Methodology	Results
Peter (2001)	Credit	Performance: sales, profit, asset, and employment.		The study adopted a survey to interview 120 women and their enterprises in Kenya from 1996 to 1997. Descriptive statistics and regression techniques were used to analyze data.	It was discovered that there were large increases in assets, sales and profit but small increase in employment created.
Brana (2008)	Credit access	Entrepreneurial activity.	Gender	Survey of 3,640 micro-credit client portfolios (male and female) of all microfinance institutions in Aquitaine region of France for the period of seven years from 2000 to 2006. Descriptive statistics and multiple regression techniques were used to analyze data.	Women had equal access to credit with men but men required larger loans, and the types of businesses differ. Women started less profitable ventures than men. Amount of credit increases with borrower's age, social network and likelihood to create new business.
Lakwo (2007)	Credit	Income and wellbeing (empowerment)		Quantitative and qualitative methods were adopted. Six women groups with a total of 180 members and one MFI in Nebbi district of Uganda in 2002 were interviewed. Also interviewed three focus groups, 30 husbands and children, and ten women community leaders. Multiple Regression technique was used to analyze 156 returned questionnaires.	Micro-finance aids acquisition of limited assets but facilitated women empowerment.

Table
3.4
Cont...

Martin (1999)	Credit	Asset acquisition, income and employment.		Qualitative and quantitative methods were employed. That is, a survey designed to interview 15 women and six men plus secondary data from 'Banco' bank in Managua, Nicaragua.	Micro-finance could generate income, employment, asset expansion and promote women's social development.
Ojo (2009)	Credit, savings	Productivity and development		The study adopted a quantitative method. Purposive sampling, and then simple random sampling, was used to select the small and medium scale enterprises. From a population of all SMEs in Nigeria, a sample of 60 enterprises were selected in Lagos State only; being a commercial center in Nigeria. 48 returned questionnaires were actually used. Descriptive statistics (ANOVA) and Linear Regression were used in data analysis.	It was found that micro-finance predicts entrepreneurial productivity, and that most entrepreneurs request for micro- finance services. Savings deposit was a condition for loan. However, there was insignificant impact on development.
Kuzilwa (2005)	Credit, training.	Business success: survival, new investment, new assets and employment.	Education, gender and motivation for success.	The study was to compare the situations of entrepreneurs who had access to Tanzanian Government's credit with those who could not. The study adopted both qualitative and quantitative methods. It combined case studies and survey to solicit responses from 250 firms. However, 216 returned	Those who had access to credit, education and training had good business success than others.

			questionnaires were used. The period covered was from 1999-2000. Descriptive statistics and regression analysis were used to analyze data.	
UNCDF /UNDP (2003)	Credit, savings, training	Income, asset acquisition, self-esteem and investment	The study adopted a qualitative approach based on case studies in Haiti, Kenya, Malawi and Nigeria.	There were positive impacts of credit and saving on income, asset acquisition and self-esteem of women entrepreneurs with varying percentages among the countries.
Cheston & Kuhn (2002)	Credit, training, health education	Income and wellbeing (empowerment)	The study was conducted in 2001 to assess the impact of credit, training and health education on women empowerment in rural Ghana. A case study of Sinapi Aba Trust Bank was adopted. Qualitative study (focus on loan officers and 10 women entrepreneurs) and quantitative study on 1,200 clients out of 22,765 clients was also adopted. Descriptive statistics was used to analyze data.	There were increases in women entrepreneurs' income, output and employment, better customer relationship and improved health of the women.
Lawal et al. (2009)	Social capital	Household credit access	The study was to discover the determinants of credit access, and the relationship between social capital and credit access in rural Nigeria. A survey, with structured questionnaire on a	Social capital positively affected credit access, as well as educational level and years of experience. In addition, loan size influences enterprise performance.

				sample of 150 households from five villages in six local government areas of Osun State in Nigeria, was used. Descriptive statistics and Regression model were used in data analysis.	
Brata (2004)	Social capital	Credit access		The study was to investigate the relationship between social capital and rural credits in Indonesia. A survey was conducted in 2004 in Dukuh-Senden village in Sleman, Yogyakarta, Indonesia. From a total of 189 heads of household, 70 heads of household were interviewed.	There was positive impact of social capital on informal credit and negative impact on formal credit. Meetings attendance facilitated credit information.
Mohamed et al. (1997)	Social capital	Performance		The study was to measure the effect of social capital (network diversity, size and bonding) on the business performance of women entrepreneurs in Malaysia. A survey of 134 respondents was carried out, and descriptive statistics was used to analyze data.	The study showed positive effect of network diversity, size and bonding on women entrepreneurs' business performance.
Allen (2000)	Social capital	Entrepreneurial activity	Gender, education and business experience.	The study used data set of random samples of male and female adults from the Wisconsin Entrepreneurial Climate Study of 1992 to 1993 in USA, to select 595 adults. Descriptive statistics	A person's decision to start business is influenced by the size and composition of the social network. Women had higher network diversity but lower network size than men.

			and regression analysis were used to analyze data.	They also had less social support for business than men.
Kickul et al. (2007)	Social capital, training.	Growth: (annual sales revenue, start-up funding and future funding over 5yrs)	The study was commissioned by a women's business centre and conducted by a University survey centre on 421 women entrepreneurs in New Hampshire and Pennsylvania, U.S.A in 2002, using their 2001 sales revenues. Quantitative method was adopted.	Physical capital, connection networks and training were necessary for success.
Reavley and Lituchy (2008)	Social capital, credit, training.	Success: (income, self-esteem and creativity)	The study was centered on analysis of self-reported determinants of success among female entrepreneurs in Canada, Northern Ireland, Republic of Ireland, Czech Republic, Poland and Japan. The method used was qualitative based on interviews of a total of 36 women entrepreneurs from the six countries.	Entrepreneurial skills, finance, social capital, information and strategic planning were necessary for success.

Source: Author's Literature Review (2009-2010).

From the table above, it is evident that credit; or a combination of two or more of the micro-finance factors have been measured on women entrepreneurs' business performance. But no study had empirically measured the relationship between credit, saving, training and social capital; and women entrepreneurs' business performance. Most importantly, the mediating and moderating effects of opportunity for

entrepreneurial activity and attitude towards micro-finance had received limited attention in the literature. This was the focus of this study.

3.12 The Research Gap

There were many studies on the relationship between one or a combination of credit, savings, training and social capital, and women entrepreneurs' business performance (e.g. Cheston & Kuhn, 2002; Kuzilwa, 2005; Olomola, 2002; Reavley & Lituchy, 2008; Wycklam & Wedley, 2003) but there was scarcity of research that empirically measured the joint effect of credit, savings, training and social capital on women entrepreneurs' business performance. This study provided such a research in order to bridge the gap. This is because women entrepreneurs especially in developing countries lack credit, savings, training and social capital for entrepreneurial activity and subsequent business performance (Akanji, 2006; Cheston & Kuhn, 2002; Ibru, 2009; Kuzilwa, 2005; Peter, 2001; Olomola, 2002). Entrepreneurship Theory (Shane, 2003) and other supporting theories confirmed that micro-finance factors could provide the needed resources for entrepreneurial activity which could lead to good business performance (Brana, 2008; Koontz & Weihrich, 2006; Salman, 2009; Shane, 2003).

Limited studies were available on opportunity for entrepreneurial activity mediating the relationship between micro-finance factors and women entrepreneurs' business performance (Shane, 2003; Tata & Prasad, 2008). Financial management studies and other supporting studies agree that funds could only be sourced to finance a particular project, business or contract. As such, micro-finance could only lead to business

performance when there is the tendency to engage in new business or business expansion (Antoncic, 2006; Shane, 2003; Van Horne, 1980).

Limited studies were also available on attitude towards micro-finance moderating the relationship between micro-finance factors and opportunity for entrepreneurial activity (e.g Shane 2003' work) and between micro-finance factors and women entrepreneurs' business performance (Vob & Muller, 2009). Whereas the Behavioral theorists had found that attitude and behavioral intention are positively related (Ajzen, 1991; Crisp & Turner, 2007).

Again, most of these previous studies on credit, savings, training or social capital had been carried out in developed countries such as France, U.K, Australia, U.S.A, Canada and Germany (e.g Brana, 2008; Carter & Shaw, 2006; Eversole, 2009; Kickul et al., 2007; Reavley & Lituchy, 2008; Stohmeyer, 2007). For example; Carter and Shaw (2006) discussed credit, training and social capital in UK while Gatewood et al. (2004) and Mayer et al. (2007) measured these factors in USA. However the relationship between credit, saving, training and social capital; and women entrepreneurs' business performance, especially in developing countries like Nigeria, did not received any empirical evidence in the literature; to the best of the Researcher's knowledge. Also, opportunity for entrepreneurial activity and attitude towards micro-finance as mediating and moderating variables had not yet been measured by previous studies. This means that a major gap existed in the literature which was to be covered by research. This study filled this gap by studying the situation in Nigeria.

3.13 Underpinning Theory

This research was underpinned on the Model of Entrepreneurial Process (Shane, 2003), supported by the Entrepreneurship Theory (Schumpeter, 1942) and Theory of Planned Behavior (Ajzen, 1991).

3.13.1 The Model of Entrepreneurial Process (Shane, 2003)

Entrepreneurship model or process developed by Shane (2003) consists of opportunity discovery, evaluation of the opportunity and the decision to exploit the opportunity. Other elements of the theory include self-employment, business operation and performance. The theory highlighted four operational measures of performance which are survival, growth, profitability/income, and experiencing initial public offering. Survival refers to continuation of entrepreneurial activity while growth refers to increase in the venture's sales and employment. Profitability refers to new surplus of revenue over cost while experiencing initial public offer refers to the sale of stock to the public (Shane, 2003).

Opportunities are created by the institutional or external environment for those entrepreneurs who could identify them to start or improve their businesses and subsequently, their welfare (North, 1990; Shane, 2003). Entrepreneurs' ability to identify and tap such entrepreneurial opportunities differs between entrepreneurs. It also depends on their ability to access information and willingness to engage in risky activity (Shane, 2003).

According to Shane (2003), individual attributes affect the discovery of entrepreneurial opportunity. It is made up of psychological and demographic factors such as motives, attitude towards micro-finance, education and training, career experience, age and social status. Changes in business environment such as economic, financial, political, legal, and socio-cultural factors also affect discovery of entrepreneurial opportunity. For example, income level of the entrepreneur, capital availability, political stability, laws concerning private enterprise and property rights, and desire for enhanced social status by the entrepreneur could affect discovery of entrepreneurial opportunity. Type of industry also affect opportunity discovery. Industrial sectors such as distribution, manufacturing, agriculture, catering, and business services are more attractive to entrepreneurs (Brana, 2008; Carter & Shaw, 2006; Gatewood et al., 2004; Riding, 2006; Shane, 2003; Stohmeyer, 2007). The concentration of industries in a particular location could also influence discovery of entrepreneurial opportunity by those in that location (Shane, 2003).

Evaluation of the identified entrepreneurial opportunity is another stage in the entrepreneurial process, and appropriate decision at this stage leads to the decision to exploit the opportunity (Shane, 2003).

The decision to exploit the entrepreneurial opportunity depends on the intention of the entrepreneur; and the appropriate measure of entrepreneurial decision-making is intention which leads to recognition of entrepreneurial opportunities (Shane, 2003). Exploitation of the opportunity depends on the entrepreneur's level of education, skills or knowledge acquired through work experience, social networks, credit, and cost-

benefit analysis of the business (Shane, 2003). The decision to exploit the opportunity leads to the quest for micro-finance factors; that is acquisition of resources. Acquisition of resources could also lead to opportunity for entrepreneurial activity; that is new business or business expansion. The appropriate use of the acquired resources in terms of business strategy and organizational design could lead to profit performance (Brana, 2008; Koontz & Weihrich, 2006; Salman, 2009; Shane, 2003).

The framework of Shane (2003) was shown in Figure 3.1 below.

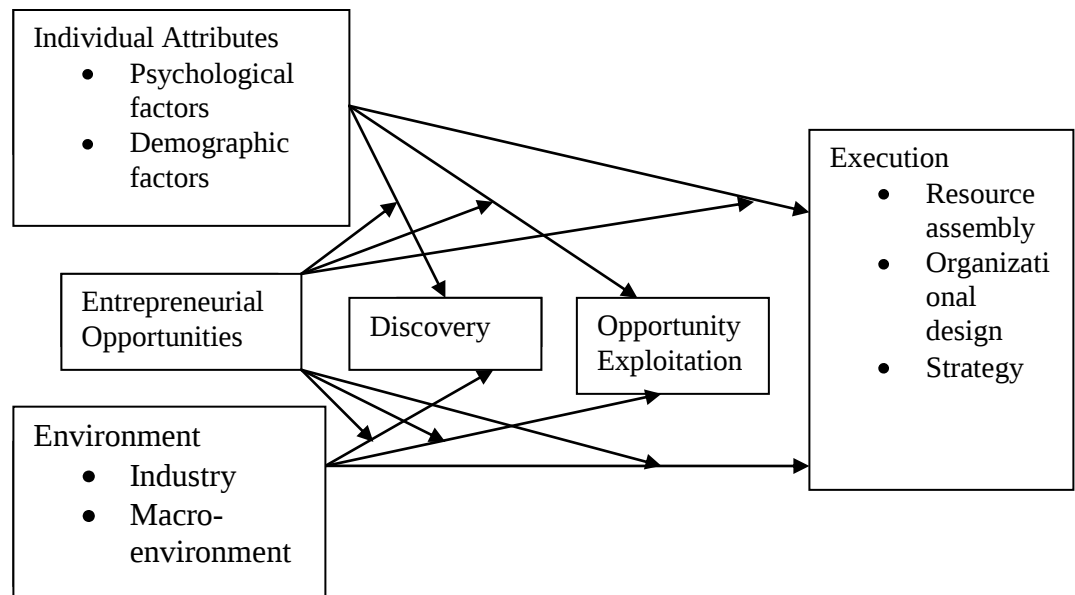


Figure 3.1
A Model of Entrepreneurial Process
 Source: Shane (2003)

Shane (2003)' model of entrepreneurial process (Figure 3.1 above) was simplified by him in the direction of the entrepreneurial process (Figure 3.2 below), based on the assumption that entrepreneurial activity is directional and ordered. To achieve business

performance, the resources acquired to exploit entrepreneurial opportunity must be organized into a new entity (Shane, 2003).

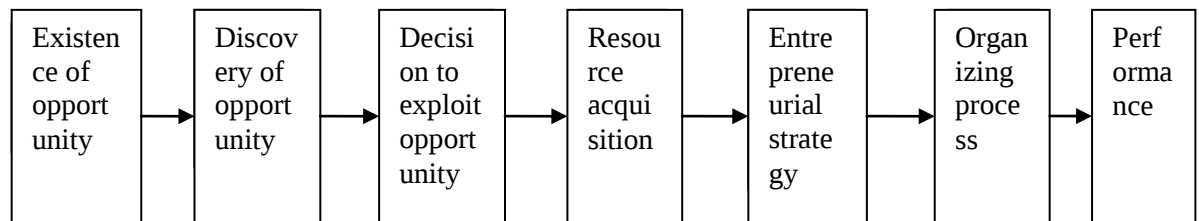


Figure 3.2
Direction of Entrepreneurial Process
Source: Shane (2003)

However, Shane (2003)' model placed much emphasis on formal education, and less emphasis on training, as a means of acquiring skill for entrepreneurial activity. Whereas training could aid the acquisition of entrepreneurial skills for women entrepreneurs with low educational levels especially in developing countries (Ibru, 2009). Again, though savings was discussed by the theory but much emphasis was placed on income as one of the factors that determine entrepreneur's decision to exploit entrepreneurial opportunity. That is, a person with low income is more likely to exploit entrepreneurial opportunity (Shane, 2003). However, income is not the same as savings because poor people could still save (Aportela, 1999). Saving, as used in this study, connotes a factor or service (access to a voluntary savings account) provided by micro-finance institutions to entrepreneurs. This, in concordance with the submissions of Aportela (1999) and Verhoef (2002), would enable women entrepreneurs raise capital, create new source of

income as well as handle business and personal exigencies so as to achieve better business performance.

3.13.2 The Entrepreneurship Theory (Schumpeter, 1942)

Earlier writers on entrepreneurship focused on entrepreneurial traits, personality traits and behavioral traits (e.g Drucker, 1964; McClelland, 1961). However, entrepreneurship literature in recent times has focused on entrepreneurial orientation with emphasis on entrepreneurial opportunity and the task of acquiring resources to pursue that opportunity. That is, the entrepreneur perceives profit opportunity in terms of unsatisfied needs of the society and then initiates actions to meet such needs (Kruger, 2004).

There are two phases of Schumpeter (1942)' Entrepreneurship Theory. In the first phase, the theory believed that entrepreneurs are inventors of innovation and technology, and therefore have owner-managed firms; buying and using the labor of other people to bring something new (capitalism) thereby leading to economic growth of a nation. In the second phase, Schumpeter believed that it is the large organizations that drive innovation and technology because they have enough resources to invest in Research and Development (R&D). These two sides of the theory have triggered a lot of debates in entrepreneurship literature. Therefore, there are both adherents and critics of Schumpeter (1942)' theory.

In support of Schumpeter (1942), Kruger (2004) posited that entrepreneurship starts with action, the creation of a new organization including the antecedents of its creation. That is, scanning the environment for entrepreneurial opportunity, the identification of

the opportunity and the evaluation of the opportunity or feasibility of the new venture. The next dimension of entrepreneurship is venture performance in terms of quantitative growth (turnover, profitability and shareholder's value) or qualitative growth (competitive position, product quality and consumer service) (Kruger, 2004).

In criticizing Schumpeter (1942), Marz (1991) and Swedberg (1991) argued that the theory could not deduce the activities of the innovating entrepreneur and how such activities could be improved upon; as well as the issue of inherited leadership or entrepreneurial qualities. They went on to condemn the action of an entrepreneur who buys or exploits the labor power from people who were static and could not take risk of developing something new because the entrepreneur must work with people.

These criticisms aside, the theory has been credited with its discussion that entrepreneurship enhances owner's profit made possible by innovation, and this leads to imitation that erodes the driven individual's (innovator) profits thereby calling for constant search for new products if the profits are to be maintained. Schumpeter's work dwelt on the effect of innovation on profit, effect innovation on activities of imitators, and effect of profit behavior on activities of innovating entrepreneur. This leads to economic growth (Jones & Wadhwani, 2006; Kruger, 2004).

Schumpeter (1942)' Entrepreneurship Theory is related to this study since it has to do with innovation and profits. This is because micro-finance factors could lead to entrepreneurial opportunity in terms of new business or business expansion which could in turn lead to profits (Allen et al., 2008; Brana, 2008; Salman, 2009).

3.13.3 The Theory of Planned Behavior (Ajzen, 1991)

The Theory of Planned Behavior lays much emphasis on individual's intention to perform a given behavior; which is an indication of how hard people are willing to try, and how much effort they are willing to exert in order to perform the behavior (Ajzen, 1991). The performance of a particular behavior also depends on other non-motivational factors such as availability of opportunities and resources like money, time skills and cooperation of other people. This represents actual control over the behavior. That is, the performance of behavior is a joint function of intention and perceived behavioral control (Ajzen, 1991).

The theory states that intentions are the best predictors of behavior; as such entrepreneurial intentions become the central point in understanding entrepreneurial process (Kruger, 2004). The theory of planned behavior generally deals with individual's attitude towards a behavior which could be positive or negative. The Theory of Planned Behavior (Ajzen, 1991) is related to this present study because women entrepreneurs' attitude (positive or negative) could affect their business performance. This depends on their evaluation of the ease or difficulty of accessing the micro-finance factors and the possible impact of such services on their business performance.

3.14 Research (Conceptual) Framework of the Study

The focus of this study was to examine the relationship between credit, saving, training and social capital; and women entrepreneurs' business performance. The mediating role of opportunity for entrepreneurial activity and the moderating role of attitude towards

micro-finance on the relationship between the micro-finance factors and women entrepreneurs' business performance were also examined. The conceptual framework for this study was shown in Figure 3.3 below.

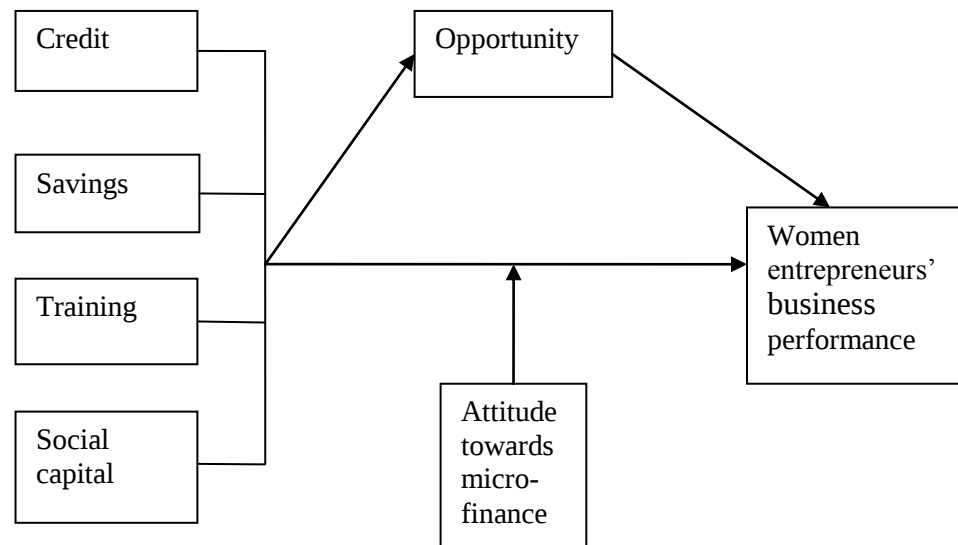


Figure 3.3
Research (Conceptual) Framework

3.15 Hypotheses Development

Despite the fact that critics, such as Karnani (2007), Fernando (2006) do not believe that credit could aid entrepreneurship performance and entrepreneur's welfare; evidences from the literature showed that adequate credit aids entrepreneurship performance (Kuzilwa, 2005; Lakwo, 2007; Martin, 1999; Ojo, 2009; Peter, 2001). The result of such credit assistance to entrepreneurs, especially women, is often seen in improved income,

output, investment, employment and welfare of the entrepreneurs (Kuzilwa, 2005; Lakwo, 2007; Martin, 1999; Peter, 2001). Credit had positive impact on business performance of women entrepreneurs in Kenya (Peter, 2001), Nigeria (Ojo, 2009) and Tanzania (Kuzilwa, 2005). Credit also had positive impact on income and wellbeing of women entrepreneurs in Uganda (Lakwo, 2007). We therefore hypothesized that:

H1: Credit is positively related to women entrepreneurs' business performance.

Savings acts as insurance for credit since women entrepreneurs lack physical collaterals (Akanji, 2006; Mkpado & Arene, 2007; Versluysen, 1999). Saving, and credit, has been found to have positive effect on enterprise productivity in Nigeria (Ojo, 2009). Saving, credit and training were found to have positive impact on women entrepreneurs' income and wellbeing in Haiti, Kenya, Malawi and Nigeria (UNCDF/UNDP, 2003). Saving and credit were also found to have positive effect on women entrepreneurs' wellbeing in Bangladesh, Indonesia, Ghana and Mexico (Vonderlack & Schreiner, 2001). We therefore hypothesized that:

H2: Saving is positively related to women entrepreneurs' business performance.

Suggested by literature is the fact that credit and training should go together, however little the training may be (Ibru, 2009; Kuzilwa, 2005). Skill training is necessary to provide the needed entrepreneurial skill for small business start-up while business or management training provides the needed managerial competence for routine and corporate decisions (Cunha, 2007; Kickul et al., 2007; Robinson & Malach, 2004; Ying,

2008). As such, training had positive impact on women entrepreneurship performance in Ghana, Nigeria, USA, Tanzania and Canada respectively (Cheston & Kuhn, 2002; Ibru, 2009; Kickul et al., 2007; Kuzilwa, 2005; Reavley & Lituchy, 2008). We therefore hypothesized that:

H3: Training is positively related to women entrepreneurs' business performance.

Women entrepreneurs, especially in developing countries, lacked social connections that are a source of credit and market information (Olomola, 2002), whereas social capital has been found to have positive impact on the performance of women entrepreneurs (Mkpado & Arene, 2007; Mohd et al., 1997; Olomola, 2002; Tata & Prasad, 2008). We therefore hypothesized that:

H4: Social capital is positively related to women entrepreneurs' business performance.

A relationship also exist between micro-finance factors and opportunity for entrepreneurial activities of women entrepreneurs. Micro-finance services provide the needed opportunity for entrepreneurs to start or improve business (Allen, 2000; Allen et al., 2008; Brana, 2008; Salman, 2009; Shane, 2003). Micro-finance factors create opportunity for entrepreneurial activity (Shane, 2003); as such there is a positive relationship between micro-finance factors and opportunity for entrepreneurial activity. For example, credit was found to have positive effect on opportunity for entrepreneurial activity of women in USA (Allen, 2000), in Nigeria (Akanji, 2006) and in France (Brana, 2008). We therefore hypothesized that:

H5: Credit is positively related to opportunity for entrepreneurial activity of women entrepreneurs.

Some amount of saving is mostly required before credit is granted to an entrepreneur. Again, voluntary savings could be ploughed back into a business or used to start a new one. As such, it is arguable that savings could lead to opportunity for entrepreneurial activity of women entrepreneurs. Saving and credit had positive impact on opportunity for entrepreneurial activity of women in Nigeria (Akanji, 2006). We therefore hypothesized that:

H6: Saving is positively related to opportunity for entrepreneurial activity of women entrepreneurs.

Training has become a vital micro-finance factor that is now tied to credit or other micro-finance factors such as saving and social capital. Training was found to have positive effect on entrepreneurial activity in Nigeria and Germany respectively (Ibru, 2009; Stohmeyer, 2007). Training and credit were found to have positive effect on entrepreneurial activity in France (Brana, 2008). Skill acquisition training had positive impact on entrepreneurial opportunity in Germany (Stohmeyer, 2007). We therefore hypothesized that:

H7: Training is positively related to opportunity for entrepreneurial activity of women entrepreneurs.

Ability to network so as to access information and resources for business is a necessary ingredient for entrepreneurial activity. This is made possible through group formation or membership and the features of such networks in terms of diversity, size and bonding. Carter and Shaw (2006), and Shane (2003) and Allen (2000) concluded that social capital had positive effect on entrepreneurial opportunity in UK and USA respectively. While Lawal et al. (2009) found that social capital had positive impact on enterprise activity in Nigeria. We therefore hypothesized that:

H8: Social capital is positively related to opportunity for entrepreneurial activity of women entrepreneurs.

Financial management studies agree that funds are always sourced to finance pre-determined projects (e.g VanHorne, 1980). While Antoncic (2006) supported other diversifications theories (e.g Pandya & Rao, 1998; Salavou, 2002) by stating that new product or service innovation mostly leads to business performance. However, his study had a contrary result as it was found that there was no association between related diversification and firm performance; only vertical diversification had positive relations with profitability. This was blame on the fact that western theory could not be neatly applied in the context of Slovenia's underdeveloped market forces and governance mechanism. Kuzilwa (2005) argued that the existence of opportunity is a critical factor for entrepreneurial activity since entrepreneurial activity could not occur in the absence of new product, new sources of supply or new technology. We therefore hypothesized that:

H9: Opportunity for entrepreneurial activity is positively related to women entrepreneurs' business performance.

Social capital (networks) creates opportunity for entrepreneurial activity which leads to performance (Allen et al., 2008). Yet still, opportunity in the market, identified through innovation, creates the need for micro-finance factors which in turn creates opportunity for entrepreneurial profits (Salman, 2009). Social capital provides opportunity for women entrepreneurs to network so as to access information and resources for business (Tata & Prasad, 2008). Opportunity for entrepreneurial activity, in terms of new business or business expansion, acts as a link between micro-finance factors and women entrepreneurs' business performance. It is reported that micro-finance factors create opportunity for entrepreneurs to generate income (Brana, 2008). The discovery of business opportunity and the decision to exploit the opportunity leads to a search for external funds, and the acquisition of such funds again creates opportunity for entrepreneurial income-generating activity (Shane, 2003). Proper application of the resources could lead to business performance (Koontz & Weihrich, 2006; Shane, 2003). We therefore hypothesized that:

H10: Opportunity for entrepreneurial activity mediates the relationship between credit, savings, training and social capital; and women entrepreneurs' business performance.

The ability of women entrepreneurs to exploit the opportunity provided by the environment and made possible by micro-finance factors to enhance business

performance depends on their attitude (Shane, 2003). Vob and Muller (2009) concluded that entrepreneur's behavior is influenced by a set of factors such as personality, resources and environment. An entrepreneur's attitude towards micro-finance bank's service delivery affects his/her actual access of such services (Asikhia, 2009). In the same line of reasoning, it could be argued that, if the women entrepreneurs' attitude towards micro-finance is positive, opportunity for entrepreneurial activity could lead to business performance. But if their attitude towards micro-finance is negative or low, opportunity for entrepreneurial activity may not lead to business performance.

Again studies have found that attitude and behavioral intention are positively related (Crisp & Turner, 2007) and that attitude towards behavior leads to intention which eventually leads to actual behavior (Ajzen, 1991). We therefore hypothesized that:

H11: Attitude towards micro-finance moderates the relationship between credit, saving, training, social capital and opportunity for entrepreneurial activity; and women entrepreneurs' business performance.

3.16 Chapter Summary

The chapter discussed the basic concepts concerning micro-finance factors and their relationship with women entrepreneurs' business performance. The review concluded that the characteristics of women entrepreneurs such as education, skills, age and business experience generally affect business performance. Again, the review discovered that divergent opinions exist on the relationship between micro-finance factors and

women entrepreneurs' business performance. While some studies (e.g Kuzilwa, 2005; Peter, 2001) agreed that micro-finance factors positively affect women entrepreneurship performance, other studies (e.g Karnani, 2007) do not. The next chapter of this work adopts a research methodology to test whether any relationship exists between micro-finance factors and women entrepreneurs' business performance, and what that relationship is. The mediating effect of opportunity for entrepreneurial activity, and the moderating effect of attitude towards micro-finance, would also be examined.

CHAPTER 4

METHODOLOGY

4.0 Overview of the Chapter

This chapter described the methods and techniques that were used in the research. It also discussed the research design that enabled proper and accurate data collection. Operational definitions of constructs or variables, measurement of variables and data collection procedures were discussed. The chapter ended with a discussion on the techniques of data analysis.

4.1 Research Design

A research design provides the basic direction for carrying out a study, and such a design should provide relevant information on the research question or hypothesis accurately and objectively (Hair, Money, Samouel, & Page, 2007). These authors also classified research design into three: exploratory, descriptive and causal.

This study fell under a basic, academic research which is of a general application. It was also an applied research because it identified a problem in an economic sector (women entrepreneurs) and applied an existing theory to solve the problem. It was a cross-sectional descriptive study. It was cross-sectional because sample respondents from women entrepreneurs were studied at a given point in time and the results analyzed

statistically. As such, sample surveys were adopted in an attempt to describe the population's characteristics as shown in the research questions, research objectives and hypotheses. Descriptive study is confirmatory; as such it could be used to test hypotheses (Gay & Diehl, 1996).

For this study, the independent variables were selected based on Shane (2003)' model of Entrepreneurship Process and these variables had been used by previous studies (e.g Mohamed et al., 1997; Mkpado & Arene, 2007; Tata & Prasad, 2008) according to their research objectives, while the dependent variable was selected in line with the model and previous studies (e.g Cheston & Kuhn, 2002; Kuzilwa, 2005; Lawal et al., 2009; Martin, 1999; Peter, 2001).

4.2 Operational Definitions of Constructs (Variables)

Constructs are abstract in nature and do not convey any meaning in the research until they are operationally defined (Cavana, Delahaye & Sekaran, 2001). In this study, the independent variables (micro-finance factors) were represented by credit, saving, training and social capital, while the dependent variable was represented by women entrepreneurs' business performance. The independent and dependent variables were mediated by opportunity for entrepreneurial activity and moderated by attitude towards micro-finance.

Credit was measured in terms of loan size and use of loan (Kuzilwa, 2005; Lakwo, 2007; Martin, 1999; Peter, 2001).

Savings was measured in terms of mandatory group savings and individual savings (Ojo, 2009; Versluysen, 1999; Vonderlack & Schreiner, 2001).

Training was measured in terms of skill acquisition and business or management training (Cheston & Kuhn, 2002; Kickul et al., 2007; Kuzilwa, 2005).

Previous studies measured social capital in terms of network diversity, network size and relationship strength or bonding (e.g Mohammed et al., 1997; Tata & Prasad, 2008). However, Allen (2000) and Olomola (2002) measured social capital as group membership or networking and bonding. This study measured social capital in line with Allen (2000) and Olomola (2002) as group membership and bonding.

Opportunity for entrepreneurial activity was measured in terms of the tendency to engage in new business, business expansion or self-employment (Shane, 2003). Shane (2003) stated that entrepreneurial opportunity is a difficult construct to measure but proxy measures such as the tendency to engage in new business formation, business expansion or self-employment could be adopted. Opportunity for entrepreneurial activity was also measured as the creation of new business or business diversification in terms of new products/services, technology, administrative techniques, strategies and competitive postures (Antoncic, 2006). Micro-finance factors create opportunity for entrepreneurs to generate income (Brana, 2008). Social capital creates opportunity for networking (Reavley & Lituchy, 2008). Again, social capital creates opportunity for women entrepreneurs to network in order to gain access to information and resources for business (Tata & Prasad, 2008). This study adopted the measurement of entrepreneurial

opportunity by Shane (2003) because it encompasses the micro-finance factors better than those of Brana (2008), Reavley and Lituchy (2008) and Tata and Prasad (2008) who measured entrepreneurial opportunity only in terms of income and networking.

Attitude towards micro-finance was measured, in line with Asikhia (2009), as perception or knowledge, feeling or emotions, and will or behavior tendencies of women entrepreneurs towards the micro-finance factors offered by the micro-finance institutions as a means of achieving their business performance. Asikhia (2009) found that, though most entrepreneurs agreed to have accessed loan from micro-finance institutions, their expectations were still much especially with regards to loan repayment and delivery of the right quantity of service at the right time.

Women entrepreneurs' business performance was measured in line with established literature. The classical economic measures of business performance are survival, profitability and growth (Kuzilwa, 2005; Shane, 2003; Tata & Prasad, 2008; Van Horne, 1980) while the classical economic measures of profitability are return on all asset, return on owner's equity, operating profit margin (per unit profit), and net profit (Van Horne, 1980). However, entrepreneurship profit performance was operationally defined as net profit; that is, sales less cost (Cheston & Kuhn, 2002; Shane, 2003). It was also operationally defined as net profit, change in output, change in investment, and change in employment (Kuzilwa, 2005; Peter, 2001). Due to inability of women entrepreneurs to keep accurate accounting records in developing countries, their profit performance is mostly inferred by a change in output, investment and employment (e.g Kuzilwa, 2005; Peter, 2001).

In this study, therefore, credit was measured in terms of loan size and use of loan. Savings was measured in terms of mandatory group savings and individual savings. Training was measured in terms of skill acquisition and business or management training. Social capital was measured in terms of group membership and bonding. Entrepreneurial opportunity was measured in terms of new business or business expansion. Attitude towards micro-finance was measured as entrepreneur's perception or knowledge, feeling or emotions, will or behavior tendencies towards micro-finance factors as a means of achieving business performance. Women entrepreneurs' business performance was measured in terms of net profit, change in output, change in investment and change in number of employees.

4.2.1 Procedure for Testing the Mediated and Moderated Variable

Regarding the procedure for testing a mediator effect, Baron and Kenny (1986), stated that three regression equations should be estimated. These include: regressing mediator on predictor variable, regressing criterion variable on predictor variable, and regressing criterion variable on both predictor variable and on the mediator. A variable functions as a mediator when it meets the following conditions: (a) variations in levels of the independent variable significantly account for variations in the presumed mediator, (b) variations in the mediator significantly account for variations in the dependent variable, and when the independent variables and the mediator are controlled, a previously significant relation between the independent and the dependent variables is no longer significant. To put it simply, the coefficient (beta) of the mediator must be significant while that of the predictors must not. The strongest mediation occurs when the last step

is zero, showing a single dominant mediator. However, from theoretical perspective, a significant reduction demonstrates that a given mediator is indeed potent; though not a necessary and sufficient condition. Again, mediator should correlate with predictor or criterion variable (Baron & Kenny, 1986).

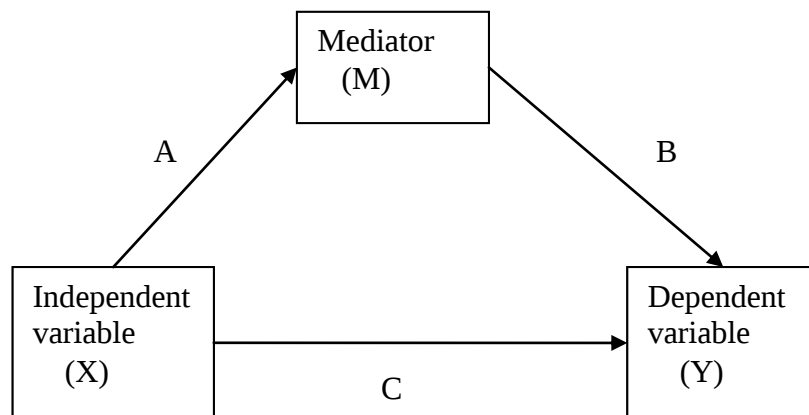


Figure 4.1
Mediation Model

Source: Baron and Kenny (1986)

Regarding the procedure for testing a moderator effect, Baron and Kenny (1986) also stated that a moderator-interaction effect would occur if a relation is substantially reduced instead of being reversed. That is, a moderator hypothesis is supported if the interaction or the product of a predictor variable and the moderator is significant when

the predictor and the moderator were being controlled (Baron & Kenny, 1986). There may also be significant main effects for the predictor and the moderator, but these are not directly relevant conceptually to testing the moderator hypothesis.

The predictor-moderator interaction procedure and the interpretation of the moderator regression analysis were described by Cohen and Cohen (1983). This involves multiplying each predictor variable by the moderator. In the regression; the criterion variable is first entered, next is controlled variable (if any), next is the predictor, next is the moderator, and finally the interaction between the predictor and the moderator is entered. If the value of the final stage or last model (interaction) is significant, then moderation has occurred. This procedure was also adopted by Baron and Kenny (1986). Bryman (1997) stated that if an independent variable interacts with each of the controlled variables and produces different result on the dependent variable, then interaction effect has occurred.

Sharma (2003) differentiated between pure and quasi moderator. By definition, a pure moderator variable is a variable that enters into interaction with an independent variable while having negligible correlations with the dependent variable. A quasi moderator variable not only interacts with the independent variable but also an independent itself.

The discussions above have shown that the variables in this study were selected based on the Entrepreneurship Model (Shane, 2003) and supported by previous studies.

4.3 Measurement of Variables (Instrumentation)

Before the actual survey, the questionnaires were pre-tested (with the two Supervisors and three other experts in the field) for content validity. A pilot survey of 40 women entrepreneurs was conducted to test the validity and reliability of the research instrument (questionnaire) in order to assess whether the questions accurately and consistently measured what they were supposed to measure. A pilot test helps to correct inadequacies in the questionnaire before the actual data collection (Sekaran, 2003).

The study adopted Likert's interval scale of measurement. A scale of measurement is "measurement instrument that are the collection of items combined into a composite score, and intended to reveal levels of theoretical variables not readily observable by direct means" (Hair et al., 2007). The Likert scale is a widely used response format to measure opinions, beliefs and attitudes, and it helps respondent to have wide range of choices as well as avoid misrepresentations (Hair et al., 2007). That is, the research instrument for data collection for this study was structured questionnaire.

Table 4.1 next page showed the measurement items adapted from various sources. The structured questionnaire made use of a 7-point Likert scale (approximated equal interval) made up of: strongly disagree, disagree somewhat, disagree slightly, undecided, agree slightly, agree somewhat, strongly agree. This is a type of coding and a scaling type of response format; and this 7-point Likert scale is better than 5-point scale because it provides better precision, enough choices, freedom of choices, avoid bias, and saves time (Hair et al., 2007, p. 229). Interval scales are continuous scales and are called

quantitative or metric scales. Its significance is that the differences between the scale points are considered to be equal. For instance, the difference between a rating of '3' and '4' is the same as the difference between a rating of '1' and '2'. With this, any mathematical procedure such as mean or standard deviation could be calculated. The questionnaire made use of standardized questions in a clear manner that was ideal for statistical analysis. The questions were framed in simple English language. Questions on income and demographic variables came last so as to solicit the needed responses from the respondents because those questions were personal issues (Hair et al., 2007).

Regarding items in the measurement, a minimum of three questions were asked on a construct because these were needed to achieve acceptable reliability in measuring a particular construct (Hair et al., 2007). However, alternative suggestion of five questions on a construct or variable was made by Hair et al. (2010). In their opinion, this would help to avoid boredom on respondents, help them to be consistent in their responses and also help the researcher during the data analysis deletion process. That is, if any deletion is made, then at least two items would be left. The measurement of variables was summarized on Table 4.1 next page.

Table 4.1

Measurement of Variables in Summary (Questionnaire)

Part	Section	Variable	Dimension	Source	Number of Items	Question Number	Total
1	1	IV: Credit	2 (loan size, use of loan)	(Kuzilwa, 2005; Lakwo, 2007; Peter, 2001)	LS: 8, UL: 4	Q1-Q8 Q9-Q12	12
		IV: Savings	1 (saving)	(Ojo, 2009; Vonderlack & Schreiner, 2001)	SV: 3	Q13-Q15	3
		IV: Training	2 (skill acquisition, general or business management)	(Kickul et al., 2007; Kuzilwa, 2005).	SA: 7, GM: 6	Q16-Q22 Q23-Q28	13
		IV: Social capital	2 (group membership/networking, bonding)	(Allen, 2000; Olomola, 2002)	NW: 4 BD: 3	Q29-Q32 Q33-Q35	7
	2	Med.V: Opportunity	1 (new business/expansion)	(Shane, 2003; Tata & Prasad, 2008)	OP: 6	Q36-Q41	6
		Mod.V: Attitude	1 (perception, knowledge, feeling, emotion, will, behavior)	(Asikhia, 2009; Ernis, 1992)	AT: 7	Q42-Q48	7
	3	DV: Women entrepreneurs business performance	4 (net profit, output, investment, employment)	(Kuzilwa, 2005; Peter, 2001)	NPF: 4 OTP: 3 INV: 3 EMP: 3	Q49-Q52 Q53-Q55 Q56-Q58 Q59-Q61	13
	4	Demography		(Idris Mahmood, 2003; Olomola, 2002; Peou, 2009)	& 17	QA-QQ	17
2		General Opinion			2		2

Source: Author's Literature Review, 2009-2010.

The unit of analysis in this study was women entrepreneurs. That is, the unit or level from which data were collected and to which the result of the study is to be applied. The study measured the performance of women entrepreneurs because, according to Economics, income level is an indicator of one's wellbeing (Lakwo, 2007) and entrepreneurship profit is the owner's profit (Hisrich et al., 2008). For reliability test, there are two types: internal consistency and stability test. Internal consistency is further made up of equivalent forms or methods and the split halves. For the split halves, all the data is entered into the database and then it is split into halves and tested one after the other and the result compared. For the equivalent method, another similar statistical method is used to test the data and the result compared. For the stability test, test and retest method is adopted where data are collected from the same respondents at different times on the same issue (Sekaran, 2003).

In this study, inter-item consistency reliability was calculated using SPSS to get Cronbach's coefficient alpha of 0.7 or more for internal consistency reliability.

Validity is the extent to which the instrument measures what it intended to measure and reliability is when a scale consistently measures a concept even when it is applied in a different setting (Cavana et al., 2001); hence, the reason for the adapted instrument or questionnaire for this study. There are three types of validity test: content or face validity, criterion validity and construct validity. Content validity is determined by the experts in the field as well as a result of literature review. It is compulsory that any instrument for a research be tested for content validity. Content validity ensures that questions in the questionnaires contain adequate contents or items that measure the

constructs in question. Construct validity is when an instrument is newly constructed and meant for future use. Criterion validity is made up of concurrent and predictive validity. Concurrent validity helps to assess whether a construct performs as expected compared to other variables that would have been used, and compared to the underpinning theory (Hair et al., 2007). For example, if data showed that access to credit, saving, training and social capital has increased women entrepreneurs' business performance; then concurrent validity is established. Predictive validity "assesses the ability of a construct measured at one point in time to predict another criterion at a future point in time" (Hair et al., 2007). Another way to measure validity is through the use of Exploratory Factor Analysis.

In this study, the questionnaires were pre-tested with the two Supervisors and three other experts in the field for content validity. A pilot test was also used to test the adequacy of the contents of the questionnaire. After the survey, Exploratory Factor Analysis was again used to measure the validity of the research instrument.

4.4 Data Collection

This is a means of sourcing data for a research that requires a considerable knowledge and skill. It is made up of secondary and primary sources. When the research objectives could not be achieved with secondary data, then primary data is needed. It could be qualitative or quantitative; both involve interviews, observations and/or questionnaires (Hair et al., 2007).

4.4.1 Sampling Method

The quantitative approach was based on a survey of women entrepreneurs who had received credit, saving, training and social capital from micro-finance institutions in their localities. The aim of the quantitative approach was to develop some descriptive statistics of vital measures for the purpose of generalization (Cavana et al., 2001). A sample size was chosen to allow for representativeness of the population; that is probability sampling. Probability sampling is appropriate for generalization, and is made up of simple random sampling and complex probability sampling (Cavana et al., 2001).

This study adopted a proportionate stratified random sampling method. This involved separating the population into sub-groups, and then randomly drawing a sample from each group (Gay & Diehl, 1996). Stratification is an efficient research sampling design because it ensures that the resulting sample is distributed in the same way as the population in terms of the stratifying criterion (Hair et al., 2007). Nigeria has three major regions: West, East and North; which is made up of six zones. Therefore the country was stratified into three regions for the study. A micro-finance institution was selected from each region to represent the whole country; giving a total of three micro-finance institutions. These institutions were selected because they are homogenous in terms of the products and services offered. Micro-finance institutions in Nigeria offer similar services as stipulated in the Microfinance Policy Framework for Nigeria (CBN, 2005). From the total population size of the clients of the three micro-finance institutions, a proportion was determined for each micro-finance institution (based on the total sample size) to determine the sample size for each micro-finance institution. Then, simple

random sampling was applied on each institution's sample members to select the sample elements (women entrepreneurs).

Population Size: It is difficult to assess the number of women entrepreneurs in developing countries due to lack of data-bank and non-registration of some women entrepreneurs (Kuzilwa, 2005; Lakwo, 2007; Sriprasert, 2007). In Nigeria, entrepreneurs are required by law (CAMA 1990, section 652: Registration of Business Names) to register either at the national level with the Corporate Affairs Commission or at the State level with the Ministry of Commerce or Ministry of Cooperatives. Women entrepreneurs, however, mostly register with the Ministry of Cooperatives at State levels; since they are required to form Cooperative Societies (groups) before they could access credit from micro-finance institutions. The registered name of such a Cooperative Society should reflect a particular trade, business or occupation and should have a minimum of 10 members and #50,000.00 start-up capital. Iganiga (2008, p.98) stated that micro-finance group members ranged between 5 and 60. However, not all women entrepreneurs registered with such authorities and not all those registered were clients of micro-finance institutions. Again, not all the registered women entrepreneurs were clients of the selected or sampled micro-finance institutions in this study.

The population size of the micro-finance institutions was made up of 793 micro-finance institutions in Nigeria, sourced from the Directory of Micro-finance Banks (CBN, 2009). The population size of women entrepreneurs constituted members of registered women groups in each of the three selected homogenous micro-finance institutions in the three regions of Nigeria. This method was also adopted by Gine & Karlan (2009),

Lawal et al. (2009), Mkpado & Arene (2007) and Olomola (2002). These micro-finance institutions were selected to allow for representativeness; covering the three regions of the country. They are Elim Micro-finance Bank Limited, Lagos (West region and South-West zone); Ekondo Microfinance Bank Limited, Calabar (East region and South-South zone) and DEC Microfinance Bank Limited, Bauchi (North region and North-East zone). These regions were also divided along the three major ethnic groups or tribes in Nigeria: the Yorubas in the West, the Igbos in the East and the Hausas in the North. The field work was conducted between August and October, 2010.

Elim Micro-finance Bank, Lagos had a total client size of 319 as at 2009 but six women groups made up of 53 members. The products and services of Elim MFB Ltd were classified as financial and non-financial. The financial services were deposits and loans/advances. Deposits included Savings account, Current account, Daily contribution, Children education, and Asset acquisition accounts. Loans included Credit solution, Elim Convenience, Elim Trading and Personal loan, Elim Assist, and Salary advance and overdrafts. The non-financial services were Graduate Apprenticeship/Empowerment Training Scheme, Cottage Industry Creation, and Confidence Building and Business Training (Annual Reports and Accounts, 2008).

Ekondo MFB Ltd, Calabar had a total client size of 21,537 as at 2009 but five women groups made up of 53 members. Its products and services were classified into credit and non-credit. The credit aspects were savings and loans/advances. Savings included Savings Plus, Investment Note, Share Acquisition Scheme, Asset Acquisition Program, Target Saving, and Rainbow Saving. Loans included long-term loans and overdrafts, and

short-term loans and overdrafts. The non-credit services included Business skills and management training (Annual Reports and Accounts, 2008).

DEC MFB Ltd, Bauchi had a total client size of 35,000 (all women) in 32 branches across nine States in the North region of Nigeria as at 2008. However, the study was limited to Bauchi branch with 16 women groups made up of 313 members. The products and services DEC MFB Ltd were categorized as financial and non-financial. The financial services were savings and loans/advances while the non-financial services were: Entrepreneurial Skill Acquisition; Adult Literacy; HIV/AIDS Awareness, Care and Support; Reproductive Health Education; Water; and Internet Café Services (DEC, 2008; Annual Reports and Accounts, 2008).

These three banks provided a sampling frame from which the sample size was selected.

Sample Size Determination: Entrepreneurs, generally, are relevant units of analysis that are difficult to sample (Davidsson & Wiklund, 2009). Hair et al. (2010) provided a rule of thumb for sample size determination such that, with Structural Equation Modeling (SEM) for example, 15 respondents for each item or variable to be estimated in the model are adequate to achieve normality. This is because larger samples of 1,000 observations or more make the statistical significance test sensitive (Hair et al., 2010). In multiple regression analysis, Hair et al. (2010) and Pallant (2007) suggested, as a general rule of thumb, a minimum ratio of 5:1. That is, five observations to be made for each independent variable in the model.

In multivariate analysis, the sample size should be 10 times as large as the number of variables or items in the study, and where samples are to be broken into sub-samples (categorical), for example male and female, a minimum sample size of 30 for each category is necessary (Cavana et al., 2001). Cavana et al. (2001) also provided a table for sample size determination based on Roscoe's (1975) rule of thumb method (see Table 4.2 of Appendix 2). For instance, for a population of 1,000,000; the sample size should be 384. While for a population of 420, the sample size should be 201.

Gay and Diehl (1996) stated that in descriptive research, a sample of 10% of the population is considered a bare minimum; and 20% could be used in situation of a small sample. Sekaran (2003) also stated that, as a rule of thumb, sample size between 30 and 50 could be effective depending on the type of sampling design used and the research questions being investigated.

Bartlett, Kotrlik, and Higgins (2001) provided a formula and a table for sample size determination based on Cochran's (1977) formula (see Table 4.3 of Appendix 3). For instance, for a population size of 10,000 and alpha level of 0.05; the sample size for a continuous data is 119. While for a population of 500, the sample size is 96. However, if multiple regression analysis is used, the sample size may be increased depending on the number of items in the measurement (Barlett et al., 2001).

In this study, a sample size determination by Israel (1992) based on Yamane's (1967) formula was adopted. The formula is as shown next page:

$$n = \frac{N}{1 + N(e)^2}$$

where, n = the required sample size, N = population size and 'e' is the error margin or alpha level. He also provided a table for sample size determination, given the above formula (see Table 4.4 of Appendix 4). For example, for a population size greater than 100,000 at 0.05 error margin; the sample size is 400. While for a population of 500, the sample size is 222.

With a total population of 419 women in 27 women groups of the three selected micro-finance institutions and the error margin of 0.05, the sample size was:

$$n = \frac{419}{1 + 419(0.05)^2}$$

$$n = \frac{419}{1 + 419(0.0025)}$$

$$n = \frac{419}{1 + 1.0475}$$

$$n = \frac{419}{2.0475}$$

$$n = 205.$$

Therefore, the sample size for this study was 205. This was considered appropriate because it met the minimum sample size requirement for a multivariate data analysis. More questionnaires were distributed so as to get at this sample size.

From this total sample size of 205, a proportion was determined for each micro-finance institution in each region. That is, the population in each micro-finance bank divided by the total population times the total sample size. The calculations were as follows:

$$\text{Elim MFB Ltd} = \frac{53 * 205}{419}$$

$$= 26$$

$$\text{Ekondo MFB Ltd} = \frac{53 * 205}{419}$$

$$= 26$$

$$\text{DEC MFB Ltd} = \frac{313 * 205}{419}$$

$$= 153$$

This was presented on Table 4.5 below.

Table 4.5
Determination of Sample Size in Summary

REGION	A	B	C	TOTAL
Population Size	53	53	313	419
Sample Size	26	26	153	205

However, only women entrepreneurs who had at least three years business experience and were still active in business actually constitute the sampling frame. Closed-ended questions were used, and a section for general opinion in the questionnaire was provided.

With respect to scope, the study did not emphasize the number of micro-finance institutions per se but to examine the effect of micro-finance factors offered by the micro-finance institutions on women entrepreneurs' business performance. As such a total of 3 micro-finance banks and 205 women entrepreneurs were studied.

4.4.2 Data Collection Procedures

Data could be collected from a number of ways and sources. The methods include interviews, questionnaires and observations. In this study, structured questionnaires were used. The questionnaires were mailed to the respondents. This is similar to that used by Ojo (2009).

The questionnaire or interview format centered on: the loan size, use of loans, loan repayment, frequency of loan, how the borrowers fared after the loan, savings, skill acquisition, general management, networking, opportunity, attitude, performance and entrepreneurs' demographics. Entrepreneurs' demographics came last because not everyone likes to disclose personal information at first sight. The questionnaire was framed in simple English language and was closed-ended, bordering on the research questions. These were sent to women entrepreneurs through their contacts in the list of women entrepreneurs provided by the micro-finance banks. This was to ensure that the proper unit of analysis filled the questionnaire. Reminders were sent to the respondents, who did not respond early, through telephone message. These efforts were to avoid non-response rate or bias.

The last section of the questionnaire solicited general opinions and suggestions from the respondents. The period for the data collection was three months (August to October, 2010). In other words, quantitative research method was adopted. This survey method and the hierarchical regression analysis method, in addition to expert judgment of content validity in pre-test, and transparency process in data collection and analysis indicated the rigorousness of the study. This is often referred to as epistemology of a study. The adapted measurement scales were, however, carefully checked and pre-tested to achieve content validity.

4.5 Techniques of Data Analysis

The data was processed using Statistical Packages for Social Sciences (SPSS) version 16 before the analysis. This is called data cleaning and transformation; that is editing for missing data, and identifying and eliminating any collected outlier. This is because, if missing data is substantial, it could mar the result of the analysis. Sometimes the respondent has to be revisited to provide the missing data; other times, all-available or complete-case approach could be used. The former computes missing data based on all available data for a given respondent, while the later computes missing data based on data from only complete cases. If the missing data is non-random, then modeling-based approaches such as maximum likelihood estimation and/or estimation are used. If the factor loading is 0.7 or more and missing data is below 10%, then the missing data could be ignored. If cases with no missing data are enough for the analysis, then the variables with the substantial missing data could be deleted (Hair et al., 2010).

Data analysis was done using multiple and hierarchical regression. Multiple regression analysis was used to test the direct relationships while hierarchical regression analysis was used to test the mediating and moderating relationships. Descriptive statistics such as frequency and relative frequency distributions, measures of central tendency and measures of dispersion were also employed. For instance, relative frequency was also used to analyze data on women entrepreneurs' demographic variables. Since the study used interval or ratio data, the mean and standard deviation were the most appropriate descriptive statistics to use (Hair et al., 2007).

The purpose of the descriptive statistics was to determine women entrepreneurs' perception about which of the micro-finance factors was critical to their business performance. Inferential and parametric statistics, hierarchical regression, was used to test the research hypotheses as well as draw inferences from sample to the population. Non-response rate from the returned questionnaires was determined through relative frequency (%). Non-response bias between the early and late respondents was determined through Levene's test for equality of variances and the t-test for equality of means.

Multivariate analysis is an appropriate method of data analysis in examining the simultaneous effects of three or more variables (Bryman & Cramer, 1997). Since the study sought to explain the dependent variable on the basis of four independent variables with mediating and moderating variables, therefore, a multivariate data analysis method was needed. The measurement levels of the predictor variables were approximately interval scale, and the measurement level of outcome variable was also approximately

interval scale. As such, analysis of dependence method was most appropriate for testing the research hypotheses in this study. This is because the conceptual model has four independent variables and one dependent variable, plus one mediating and one moderating variables. Independent controlled variables (age, education and business experience of the women entrepreneurs) were first tested by ANOVA to determine if there was any mean difference before their inclusion in the regression analysis. As such hierarchical regression analysis was the most appropriate method for testing the research hypotheses to determine the significant individual and composite influence of credit, saving, training and social capital on women entrepreneurs' business performance; as well as the mediating and the moderating effects of opportunity for entrepreneurial activity and attitude towards micro-finance. This is because hierarchical multiple regression technique normally considers one metric dependent and two or more metric, non metric independent variables.

The study tested the directional hypotheses earlier stated. The hypotheses earlier stated were re-stated to allow for subsequent testing for acceptance or otherwise as the case may be. A directional hypothesis has a direction, positive or negative, while a non-directional hypothesis only infers a relationship but does not indicate whether positive or negative. The re-stated hypotheses were done in accord with the results of the Exploratory Factor Analysis. The mediating and the moderating relationships were tested using hierarchical regression analysis following Baron and Kenny (1986).

4.5.1 Hierarchical Multiple Regression Analysis

Hierarchical multiple regression, which is also called a sequential regression, is a regression analysis in which variables are entered into the equation in the order specified by the researcher, based on theory. The variables or sets of variables are entered in steps or sequence, with each independent variable being assessed in terms of its contribution to the prediction of the dependent variable after the previous variables have been controlled. When all sets of variables are entered, then the overall model is assessed in terms of its ability to predict the dependent variable (Pallant, 2007).

In this study, the analysis was done through a close examination of the hierarchical regression coefficients. These coefficients described the relationship of the independent variables with the dependent variable. They also showed the average amount of change in the dependent variable due to a unit change in independent variables. The least square regression method was used to minimize the errors in predicting the dependent variable from the independent variables; while the F-test was used to compare the variance explained by the regression to the unexplained variance. The standardized regression coefficient (beta weight) was used to account for the different scales of measurement in the direct assessment of the independent variables and the dependent variable. The acceptable range for beta coefficient is from -1.00 to +1.00 (Hair et al., 2007). The higher the beta coefficient, the more relative importance it assumes in the prediction of the dependent variable. Hierarchical regression was also used to examine the effect of the mediating and moderating variables in the model.

The amount of variation in the dependent variable that is associated with the variation in the independent variable is often measured by the coefficient of determination (r^2); while the multiple coefficient of determination (R^2) is a measure of the proportion of the amount of variation in the dependent variable that can be explained by several independent variables in the model. In other words, it shows the strength of the overall relationship or the goodness of fit. The acceptable criterion for R^2 , by the rule of thumb, is from 0 to 1 (Hair et al., 2007; Hair et al., 2010). A large R^2 shows a good fit, association or stronger relationship and that the straight line works well. The F-statistics is mostly used to assess the statistical significance of the overall regression model to determine if a relationship exists at all. A significant F shows the presence of a relationship. R^2 is then assessed to measure the extent of the relationship. A larger F-statistics shows a stronger relationship. The coefficient of determination (r^2) of each independent variable and its t-statistics is examined to see which of them is statistically significant; that is, different from zero. This will assist in determining which of the independent variables has much influence on the dependent variable.

A general Summary of Findings in relation to the research questions and the hypotheses, and the factors in the conceptual model were discussed in a separate chapter.

CHAPTER 5

FINDINGS

5.0 Overview of the Chapter

This chapter presented and analysed the findings of the research. A detailed analysis of the field work, which included the pilot test and the main data collection, was given. Data cleaning method, which involved detecting and handling missing data, outliers and abnormal data, was also discussed. The chapter went on to discuss the results of the Exploratory Factor Analysis (EFA) and the Internal Consistency Reliability. The profile of the variables was given and the assumptions of Multiple Regression Analysis were discussed. The results of the the Pearson correlation analysis, multiple regression, linear regression and the hierarchical regression analyses were presented and discussed.

5.1 The Pilot Study

It was desirable to conduct a pilot test before the actual survey in order to identify and clarify inadequacies in the questionnaire before the actual data collection, as suggested by Hair et al. (2007). A pilot test was conducted on 40 women entrepreneurs in Bauchi State (North region) of Nigeria. It was also meant to test the research instruments. The researcher met face-to-face with each respondent and went through all questions. The respondents in this case were not the same respondents as those that participated in the main survey.

From the pilot test, the following inadequacies were observed and modifications made in the questionnaire prior to actual data collection. Most respondents did not answer Question 11 and Question 12. When asked further, they said that it was contrary to the micro-finance bank's policy as they were instructed during their pre-loan training not to use the loan for non-business activities. However, these questions were still retained because one company's policy may differ from another. Under demographic variables, Question 2 of Savings was modified to indicate 'savings per week' because most respondents said they made weekly savings and not monthly savings as earlier indicated. Still under demographic variables, Questions on Profit were modified to indicate 'weekly profit' before and after last loan, and not monthly profit. This is because most respondents said that they normally make weekly purchases and so they evaluate their weekly sales and make weekly loan repayment. After the improvement and modifications of the questionnaire based on the results of the pilot test, the questionnaire was finally administered.

5.2 Overview of the Data Collected

The questionnaires were mailed to the women entrepreneurs. The lists of women loan groups and their members were sourced from the documents received from the three micro-finance banks. From these lists, a total of 27 women groups with a total of 419 women constituted the study's population; out of which 205 women were sampled. In order to get the expected sample size, more questionnaires (280) were sent out. This is because Sekaran (2000) recommended that the questionnaires to be sent out should be two or three times larger than the sample size so as to get the expected sample size.

5.2.1 Response Rate

Out of the 280 questionnaires mailed out, 199 questionnaires were returned. Poorly completed questionnaires totalling 27 were discarded, leaving a total of 172 usable questionnaires. That is, from the first batch of the questionnaires returned, 79 were usable and from the second batch, 93 were usable. These 172 usable questionnaires gave a response rate of 61% as was shown on Table 5.1 below.

Table 5.1
Response rate on the research instrument (Questionnaire)

Micro-finance Bank Ltd	No. of Groups	Total No. of Women	Expected Sample Size	Quest. Sent out	Quest. Not Returned	Quest. Returned	Quest. Poorly Completed	Quest. Usable	Response Rate (%)
ELIM	6	53	26	40	3	37	6	31	78
EKON DO	5	53	26	40	5	35	2	33	83
DEC	16	313	153	200	73	127	19	108	54
TOTAL	27	419	205	280	81	199	27	172	61

$$\begin{aligned}
 \text{Response Rate} &= \frac{\text{Total Questionnaires Usable}}{\text{Total Questionnaires Administered}} \\
 &= \frac{172}{280} \\
 &= 61\%
 \end{aligned}$$

Comparing this 61% response rate with the acceptable response rate of 30% for mailed questionnaire as suggested by Sekaran (2000), it could be concluded that the response rate was good since it was above the acceptable response rate. It also compared

favorably with previous studies that used mailed questionnaires. For instance, Hedges et al. (2007, p. 4) mailed out 10,000 questionnaires and used 2,116 (21.16% response rate). Antoncic (2006, p. 54) mailed out 2,086 questionnaires and got back 502 (24.1% response rate). Ojo (2009, p. 541) sent out 60 questionnaires and used 48 (80% response rate).

5.2.2 Non-Response Bias

An independent-sample t-test (Levene's test) was conducted to compare the scores or responses of the early and late respondents. The purpose was to show that those who did not respond did not make any difference (Armstrong, 1977). The sig. (2-tailed) t-value for equality of means showed that there was no significant difference between the early and late respondents, except for opportunity. Therefore, the study concluded that there was no bias response between the early and the late respondents. In other words, the respondents represented an unbiased sample. The results were shown on Table 5.2 next page.

Table 5.2
Differences in Major Variables by Early and Late Responses (N=172)

Variable	Early N=79 M (SD)	Late N=93 M (SD)	t-value	Sig. (2 tailed)
Credit	5.814 (0.741)	5.606 (0.757)	1.819	0.071
Saving	6.784 (0.813)	6.598 (0.685)	1.630	0.105
Training	5.786 (0.383)	5.755 (0.887)	0.294	0.769
Social capital	5.946 (0.380)	5.982 (0.383)	-0.607	0.544
Opportunity	6.862 (0.245)	6.647 (0.521)	3.376	0.001
Attitude	6.801 (0.269)	6.689 (0.501)	1.862	0.065
Performance	4.559 (0.644)	4.360 (0.690)	1.937	0.054

5.3 Examination of the Data

Prior to performing the regression analyses, the data were examined to determine whether or not they met the requirements and assumptions of the regression technique.

5.3.1 Data Screening

The data from the field were screened and 27 questionnaires that were poorly completed, out of the 199 returned questionnaires, were rejected. This left a total of 172 usable questionnaires for consideration. These 172 questionnaires were then subjected to further check for missing data. The table below shows the extent of the missing data.

Table 5.3
Extent of Missing Data

Items	Cases with missing data	Total cases	%	Variables with missing data	Total variables (demography inclusive)	%
Demography (marital status)	1		0.58	1		1.18
Demography (savings2)	1		0.58	1		1.18
Q46 (attitude)	1		0.58	1		1.18
Total		172			85 =(61+24)	3.54

Missing data for the above items were treated and transformed statistically through mean substitution (series mean) as suggested by Hair et al., 2007, p. 306).

5.3.2 Detecting and Handling Outliers

Outliers could be identified by comparing the Mahalanobis distance (D^2) or chi-square value of each respondent with the critical or table chi-square value, using the number of predictor variables as the degrees of freedom (Pallant, 2007, p. 157). Outliers could also be detected through a multivariate, bivariate and univariate analysis of Mahalanobis distances (Hair et al., 2010). It is recommended that researchers utilize as many of these three methods as possible; looking for consistent pattern (Hair et al. 2010, p. 66). Only those observations that are extreme on a sufficient number of variables should be deleted (Hair et al. 2010, p. 70). In this study, a multivariate detection of outliers was employed on all the items of the variables simultaneously and a univariate detection on the items of each variable (Hair et al., 2010). In each case, extraordinary observations were detected.

A multivariate detection of outliers was first performed and those observations with D^2 higher than the table chi-square value of 77.42 ($p < 0.001$), 43 predictors were deleted. The result was shown on Table 5.4 below.

Table 5.4
Multivariate Detection of Outliers

Respondent ID	Extreme Items	Chi-square value (D^2)
6	Q3-Q9, Q33-Q61 (7)	91.36097
36	Q3-Q8, Q37-Q49 (7)	103.13050
39	Q3-Q9, Q13-Q20, Q24-Q57 (7)	94.20601
76	Q16-Q20, Q27-Q31 (7), Q42-Q46 (6)	96.67883
77	Q37-Q56 (7)	100.37825
79	Q24-Q28 (5), Q29-Q33, Q43-Q47 (7), Q52-Q56 (5)	90.50973
97	Q28-Q43, Q34-Q39 (7)	109.95365
115	Q41-Q46 (5), Q59-Q63 (1)	95.64987
116	Q15-Q20, Q49-Q51 (7)	96.16240
143	Q16-Q28 (1), Q29-Q34 (7), Q38-Q50 (5), Q51-Q63 (3)	101.20556
146	Q3-Q8, Q32-Q37 (7), Q40-Q58 (5), Q59-Q63 (1)	91.90804
148	Q16-Q23 (1), Q34-Q50 (6), Q59-Q63 (1)	98.54022
149	Q16-Q28 (1), Q29-Q33 (7)	112.90337

A univariate detection of outliers was also performed, and the result was shown on Table 5.5 next page.

Table 5.5
Univariate Detection of Outliers

Respondent ID	Variable name	Chi-square value (D²)
6	Training	87.96061
36	Social capital	107.89791
76	-	-
77	-	-
79	-	-
* 97	Opportunity, Attitude	90.58178, 114.26386.
115	-	-
116	-	-
143	-	-
146	-	-
148	Training	98.00882
* 149	Credit, Social capital, Attitude	92.54997, 127.42427, 100.01924

According to Hair et al. (2010, p. 70), no observation should be eliminated except they are extreme on a sufficient number of variables to be considered unrepresentative of the entire population. Pallant (2007) also suggested that if a few number of outliers are still discovered during the regression analysis, they may be ignored since it is common to find many outlying residuals with large samples. A close examination of these extreme cases revealed that respondents ID 97 and 149 had outliers in a number of variables both in multivariate and univariate detection tests as shown on Table 5.5 above. As such, respondent ID 97 and 149 were deleted. Their chi-square values were higher than the chi-square critical value of 77.42 at a significance level or error margin of 0.001 corresponding to 43 items (number of predictors; excluding categorical data) or degree of freedom. Hair et al. (2010, p. 66) and Pallant (2007, p. 157) recommended a significance level of 0.001 to be used as a benchmark value for designation as an outlier.

As a rule of thumb, a case is labeled outlier if its Mahalanobis distance $>$ Chi-square critical value (Pallant, 2007). This showed that all outliers were deleted from the data set.

5.3.3 Handling Non-normal Data (Normality)

Normality could be assessed through normal probability plots as well as through statistical test. Lewis-Beck (1993) suggested that the normality assumption could be ignored if the sample size is large enough, for then the central-limit theorem could be invoked. The theorem states that the distribution of a sum of independent variables, which we can conceive of the error term as representing, approaches normality as sample size increases, irrespective of the nature of the distribution in the population.

However, in this study, though the sample size was large enough, a statistical test (skewness and kurtosis) was used to assess the normality of the data distribution. According to Hair et al. (2010, p. 73), the most commonly used critical values are ± 2.58 which correspond to an error margin of 0.01, and ± 1.96 which correspond to an error margin of 0.05. If the calculated z-score is $>$ or $<$ the specified critical value, the distribution is non-normal; as such the respondents with such abnormal z-scores should be deleted. In this study, the calculated z-score was compared with the critical z-score of ± 1.96 at 0.05 error level to assess the degree to which the skewness and peakedness of the distribution vary from the normal distribution. Normality was then assessed by determining the z-score of each respondent and comparing it with the z-score critical

value of ± 1.96 . Cases with z-score above or below ± 1.96 were shown in Table 5.6 below.

Table 5.6
Cases with non-normal data

Respondent ID	Number of items with z-score > or < ± 1.96	Total number of measured items	%
76	11	56	19.64
79	12	56	21.43
114	11	56	19.64
115	8	56	14.29
142	33	56	58.93
145	18	56	32.14
147	17	56	30.36
155	8	56	14.29
158	10	56	17.86

The respondents above with ID 76, 79, 114, 115, 142, 145, 147, 155 and 158 who had non-normal data were again deleted; leaving a total of 161 respondents. The statistical test for normality (the z-score) was also supported with histogram and normal Q-Q plots. Refer to Appendix 5-10.

5.4 Descriptive Statistics

This section presented the profiles, and the descriptive analysis, of the respondents. Descriptive statistics were used to observe the data responses from the respondents in order to discover the factors that influence women entrepreneurs' business performance especially in Nigeria. Descriptive analyses were also used to present and analyze the nominal data that were not subjected to regression analysis: amount of loan spent on stock (Q9), amount of loan spent on other business issues (Q10), amount of loan spent

on family issues (Q11), amount of loan spent on charity (Q12) and belonging to more than one loan group (Q30). The results of the descriptive analysis of the respondents were presented on Table 5.7a, 5.7b and 5.7c below. The results of the descriptive analysis of the categorical data were presented on Table 5.8 below.

5.4.1 Profiles of the Respondents

Education: Table 5.7a below indicated that 54% of the sampled women entrepreneurs had secondary education while 28% had tertiary education, and 18% had primary education. The study revealed that the majority of women entrepreneurs in Nigeria had low educational attainment. The result was also in line with Ibru (2009) who found that women entrepreneurs in Nigeria, and in most developing countries, had low educational levels than their counterparts in developed countries. It also supported Carter and Shaw (2006) who found that most women entrepreneurs in France had high school education. However, the study contradicted Gatewood et al. (2004) and Salman (2009) who found that most women entrepreneurs in USA and Pakistan respectively had tertiary education, followed by high school education. It also contradicted Kuzilwa (2005) where most women entrepreneurs had primary education, followed by those with secondary education; while only few graduates were engaged in entrepreneurship and they did that only on part-time. Yet, ability to exploit entrepreneurial opportunity depends on the entrepreneur's level of education, skills acquired through work experience, social networks, credit and cost-benefit analysis of the business (Shane, 2003). Gatewood et al. (2004) also, in USA for example, concluded that education had positive impact on entrepreneurial performance.

Age: Table 5.7a indicated that 56.5% of the sampled women entrepreneurs were in the age bracket of 30-39 years while 30.4% were in the age bracket of 40-49 years. 9.3% were in the age bracket of 20-29 years, and 3.7% were in the age bracket of 50 years and above. The study revealed that most of the women entrepreneurs in Nigeria were above 30 years of age. This was in line with Carter and Shaw (2006) and Roomi and Parrot (2008) who found that women entrepreneurs in France and Pakistan respectively were above 30 years of age. Allen (2000), in USA, found a mean age of entrepreneurs as 36. While Allen et al. (2008) discovered that most women aged 25-34 years were found in the early-stage entrepreneurship. Shane (2003) concluded that age, education, experience and social networks had positive influence on entrepreneur's business performance.

Marital status: Table 5.7a indicated that 72% of the women entrepreneurs were married while 16.1% were single. 9.3% were widowed and 1.9% were divorced. One respondent, accounting for 0.6%, had missing data. The study revealed that most of women entrepreneurs in Nigeria were married. The finding was in agreement with Roomi and Parrot (2008) who found that most women entrepreneurs in Pakistan were married.

Number of children: Table 5.7a indicated that 33.5% of the women entrepreneurs had 3-5 children while 24.8% had 1-2 children. 24.2% had 6 children and above, and 17.4% did not have any child. The study revealed that most women entrepreneurs in Nigeria had three and five children. This was in agreement with the work of Roomi and Parrot (2008) which had the mean number of children as 3. Allen et al. (2008) and Lawal et al. (2009) found that women with family size of five and above were likely to become

entrepreneurs. However, the result contradicted with Salman (2009), in Pakistan, who found that women with one or two children were likely to participate in entrepreneurial activity in order to generate income to support their families.

Experience in business: Table 5.7a indicated that 40.4% of the sampled women entrepreneurs had 3-5 years experience in business generally while 38.5% of the women had 6-10 years business experience. 19.3% of the women had 11 years experience and above, and 1.9% had less than 3 years business experience. The study revealed that most women entrepreneurs in Nigeria had 3-5 years experience in business generally. This was in support of previous studies which suggested that a minimum of three years business experience is sufficient to assess an entrepreneur (Antoncic, 2006; Carter & Shaw, 2006; Harrison & Mason, 2007; Kuzilwa, 2005; Salman, 2009). It also supported Porter and Nagarajan (2005), in India for example, who opined that five years business experience is sufficient to assess an entrepreneur. Experience had positive influence on entrepreneur's business performance (Shane, 2003).

Experience on paid job before business: Table 5.7a indicated that 72% of the sampled women entrepreneurs were not on paid jobs before starting their businesses while 28% were on paid jobs before starting their businesses. The study revealed that most women entrepreneurs in Nigeria were not on paid jobs before starting their businesses. The study supported previous studies which found that most women entrepreneurs in developing countries lack managerial experience due to lack of former paid employment which made pre-loan training very essential to them (Akanji, 2006; Brana, 2008; Cheston & Kuhn, 2002; Kuzilwa, 2005). Previous studies suggested that managerial

experience had positive influence on entrepreneurial performance (Brana, 2008; Gatewood et al., 2004). This is not the case in Nigeria because lack of former paid employment indicated lack of managerial experience. This could be due to high incidence of unemployment in Nigeria, especially among the youths and women.

Experience on other enterprises before current business: Table 5.7a indicated that 95.7% of the sampled women entrepreneurs have not run other enterprises before the current business while 4.3% had experience in other enterprises before their current businesses. The study revealed that most women entrepreneurs in Nigeria had not run other enterprises before their current enterprises. Therefore, they were nascent entrepreneurs who require assistance from the micro-finance institutions to succeed. The study supported previous studies which found that most women, especially in developing countries, lack entrepreneurial experience and therefore they were found in nascent or early-stage entrepreneurship (Allen et al., 2008; Shane, 2003). However, the result contradicted the work of Roomi and Parrot (2008) whose finding suggested that women entrepreneurs had previous entrepreneurial exposure before their current businesses. These personal characteristics of the women entrepreneurs which could influence business performance were presented on Table 5.7a next page.

Table 5.7a
Profile of Respondents (Personal) (N = 161)

Profile	Description	Frequency	Percentage (%)
Education	Primary	29	18.0
	Secondary	87	54.0
	Tertiary	45	28.0
Age	20-29 years	15	9.3
	30-39 years	91	56.5
	40-49 years	49	30.4
	50 years and above	6	3.7
Marital status	Married	116	72.0
	Single	26	16.1
	Widowed	15	9.3
	Divorced	3	1.9
	Missing system (replaced)	1	0.6
Number of children	None	28	17.4
	1-2	40	24.8
	3-5	54	33.5
	6 and above	39	24.2
Experience 1 (in business generally)	Less than 3 years	3	1.9
	3-5 years	65	40.4
	6-10 years	62	38.5
	11 years and above	31	19.3
Experience 2 (on paid job before business)	Yes	45	28.0
	No	116	72.0
Experience 3 (on other enterprises before current one)	Yes	7	4.3
	No	154	95.7

Other characteristics of the women entrepreneurs related specifically to their firms that could also influence business performance were also discussed as follows:

Type of industry: Table 5.7b indicated that 49.1% of the sampled women entrepreneurs were engaged in wholesaling and retailing while 19.9% were engaged in service. 11.2% were engaged in agriculture, 10.6% were in manufacturing industry, 5.6% were in knowledge-based industry, 3.1% were engaged in professional services, and 0.6 were in extractive industry. The study revealed that most women entrepreneurs in Nigeria were engaged in wholesaling and retailing businesses. The result supported previous studies which found that industrial sectors such as distribution, manufacturing, agriculture, catering and business services were more attractive to women entrepreneurs (Brana, 2008; Carter & Shaw, 2006; Gatewood et al., 2004; Mohamed et al., 1997; Riding, 2006; Shane, 2003; Stohmeyer, 2007).

Firm age: Table 5.7b indicated that 80.7% of the sampled women entrepreneurs businesses were established from 2001-2008 while 19.3% of the women entrepreneurs businesses were established from 1991-2000. The study revealed that most of the women entrepreneurs businesses in Nigeria were established between 2001 and 2008. This suggested that most of the enterprises were less than 10 years old. The results supported Kuzilwa (2005) who found the mean age of the firm as 4 years. Previous studies suggested that the age of the firm, the size of the firm and type of industry in which a firm belongs affect the profit performance of the firm (Antonicic, 2008), and the credit terms or access of the firm (Hedges et al., 2007).

Firm size: Table 5.7b indicated that 81.4% of the sampled women entrepreneurs had businesses worth #40,000 and above while 16.1% of the women had businesses worth #20,000-39,000, and 2.5% of the women had businesses worth #5,000-19,000. The

study revealed that most of women entrepreneurs businesses in Nigeria were worth #40,000 and above. This average is better than that of Lakwo (2007) which had a minimum firm size worth UDS 250,000 in Uganda which, in Nigerian currency, is about #16,000. Previous studies suggested that the age of the firm, the size of the firm and type of industry in which the firm belongs affect the profit performance of the firm (Antoncic, 2008), and the credit terms or access of the firm (Hedges et al., 2007).

Capital before last loan: Table 5.7b indicated that 37.9% of the sampled women entrepreneurs had business capital of #20,000 and above before their last loan while 36% of the women had capital of #10,000-19,000 and 26.1% had capital of #5,000-9,000. The study revealed that most women entrepreneurs in Nigeria had business capital from #20,000 and above. This was in line with the small nature of their businesses which is mostly wholesaling and retailing.

Capital after last loan: Table 5.7b indicated that 96.3% of the sampled women entrepreneurs had business capital after their last loan of #20,000 and above while 3.7% had business capital after last loan of #10,000-19,000. The effect of the loan could be noticed by the increase in the capital of the women as no one had capital less than #10,000 after last loan.

Development stage: Table 5.7b indicated that 62.1% of the sampled women entrepreneurs' businesses were at the growth stage, while 26.1% of the women' businesses were at start-up stage. 11.8% of the women' businesses were at maturity

stage. This concluded that most of the businesses of women entrepreneurs in Nigeria were at the growth stage.

Registration: Table 5.7b indicated that 64.6% of the sampled women entrepreneurs did not register their businesses with any government agencies, while 35.4% of the women entrepreneurs registered their businesses with the government. The study revealed that most of the women entrepreneurs in Nigeria did not register their businesses with the government. Lakwo (2007) had similar discovery that most women entrepreneurs in Uganda did not register with government agency due to the small nature of the businesses; mostly retail.

Ownership: Table 5.7b indicated that 88.2% of the women entrepreneurs acquired their businesses through start-up while 11.8% of the women acquired their current businesses through succession. The study revealed that most women entrepreneurs in Nigeria started their own businesses themselves. The results supported Kuzilwa (2005) who found that most of the businesses (87%) were sole proprietors who acquired their businesses through start-up which were funded from own sources, and then acquired credit for business expansion. These firm-specific characteristics were presented on Table 5.7b next page.

Table 5.7b
Profile of Respondents (Firm-specific) (N = 161)

Profile	Description	Frequency	Percentage (%)
Type of Industry	Agriculture	18	11.2
	Knowledge-based	9	5.6
	Manufacturing	17	10.6
	Extractive	1	0.6
	Wholesaling/Retail.	79	49.1
	Professional	5	3.1
	Service	32	19.9
	Others	-	-
Firm age	Before 1980	-	-
	1981-1990	-	-
	1991-2000	31	19.3
	2001-2008	130	80.7
Firm size	Less than #5,000	-	-
	#5,000-19,000	4	2.5
	#20,000-39,000	26	16.1
	#40,000 and above	131	81.4
Capital 1 (before last loan)	Less than #5,000	-	-
	#5,000-9,000	42	26.1
	#10,000-19,000	58	36.0
	#20,000 and above	61	37.9
Capital 2 (after last loan)	Less than #5,000	-	-
	#5,000-9,000	-	-
	#10,000-19,000	6	3.7
	#20,000 and above	155	96.3
Development stage	Start-up	42	26.1
	Growth	100	62.1
	Maturity	19	11.8
	Decline	-	-
Registration	Yes	57	35.4
	No	104	64.6
Ownership	Start-up	142	88.2
	Succession	19	11.8
	Joined as partner	-	-
	Take-over	-	-
	Others	-	-

The characteristics related to business performance of the women entrepreneurs were again discussed. These characteristics could not be left out because they are vital, not only to the business of the women, but also to their subsequent welfare. These were discussed as follows:

Saving (part of income): Table 5.7c indicated that 99.4% of the women entrepreneurs saved part of their incomes, while 0.6% of the women did not save part of their income. This concluded that most women entrepreneurs in Nigeria saved part of their income; possibly to be used to guarantee new loan or solve some business or family exigencies (Akanji, 2006; Mkpado & Arene, 2007).

Saving (amount saved per week): Table 5.7c indicated that 51.6% of the sampled women entrepreneurs saved #5,000-9,000 per week while 37.3% of the women entrepreneurs saved less than #5,000 per week. 10.6% of the women saved #10,000-19,000 and 0.6% was a missing value. None of the women could save up to #20,000 and above. The study revealed that most women entrepreneurs in Nigeria saved between #5,000 and #9,000 per week. This was, possibly, due to the small nature of their businesses or that some of their income may have been used to settle family expenses.

Saving (recorded in savings card weekly): Table 5.7c indicated that 100% of the sampled women entrepreneurs in Nigeria had their savings recorded in savings card of members by the credit officers. This is part of the measures adopted by the banks to ensure proper accountability and loan repayment.

Saving (recorded in group record card): Table 5.7c indicated that 100% of the sampled women entrepreneurs in Nigeria had their savings recorded in group record card of members by the credit officers. This is part of the measures adopted by the banks to ensure proper accountability and loan repayment. This result was also in line with the micro-credit model of the Grameen Bank of Bangladesh (Versluisen, 1999).

Profit (per week before last loan): Table 5.7c indicated that 52.2% of the women entrepreneurs earned #5,000-9,000 per week while 24.8% of the women earned less than #5,000 per week. 21.7% of the women earned #10,000-19,000 and 1.2% of the women earned #20,000 and above. The study revealed that most of the women entrepreneurs in Nigeria earned profit between #5,000 and #9,000 per week before their last loan.

Profit (per week after last loan): Table 5.7c indicated that 64% of the sampled women entrepreneurs earned #10,000-19,000 profit after their last loan while 27.3% of the women earned #5,000-9,000. 7.5% of them earned #20,000 and above whereas 1.2% of them earned less than #5,000. The study revealed that most of the women entrepreneurs in Nigeria earned between #10,000 and #19,000 profit after their last loan. This was a proof of the positive effect of the loan on women entrepreneurs' business performance. These performance-specific characteristics were presented on Table 5.7c next page.

Table 5.7c
Profile of Respondents (Performance-specific) (N = 161)

Profile	Description	Frequency	Percentage (%)
Saving 1 (part of income)	Yes	160	99.4
	No	1	0.6
Saving 2 (amount per week)	Less than #5,000	60	37.3
	#5,000-9,000	83	51.6
	#10,000-19,000	17	10.6
	#20,000 and above	-	-
	Missing system	1	0.6
Saving 3 (recorded in personal saving card weekly)	Yes	161	100
	No	-	-
Saving 4 (recorded in group record card weekly)	Yes	161	100
	No	-	-
Profit 1 (weekly profit before last loan)	Less than #5,000	40	24.8
	#5,000-9,000	84	52.2
	#10,000-19,000	35	21.7
	#20,000 and above	2	1.2
Profit 2 (weekly profit after last loan)	Less than #5,000	2	1.2
	#5,000-9,000	44	27.3
	#10,000-19,000	103	64.0
	#20,000 and above	12	7.5

Note: # is the symbol of Nigeria's currency (Naira)

5.4.2 The Nominal/Ordinal Data

Question 9 (loan amount spent on stock): Table 5.8 indicated that 65.8% of the sampled women entrepreneurs spent above #30,000 on stock while 31.7% of the women spent #25,001-30,000 on stock. 1.9% of them spent #20,001-25,000 on stock and 0.6% spent #15,001-20,000 on stock. The study revealed that most women entrepreneurs in Nigeria spent above #30,000 on stock. This was in line with the nature of their businesses such

as retailing and restaurant services which required the purchase of much stock. It was also an indication of their proper use of the loans. This result was in line with Kuzilwa (2005) who found that most of the sampled entrepreneurs used a major part of the loan for new business, while some investments were undertaken by existing firms.

Question 10 (loan amount spent on other business issues): Table 5.8 indicated that 99.4% of the sampled women entrepreneurs spent #1,000-5,000 of their loan on other business issues while 0.6% of them spent #5,001-10,000 of their loan on other business issues like electricity and water. The study revealed that most women entrepreneurs spent less of their loan on other business issues in order to minimize cost and increase profit. This was also an indication of their proper use of the loans.

Question 11 (loan amount spent on family issues): Table 5.8 indicated that 6.8% of the sampled women entrepreneurs spent #1,000-5,000 of their loan on family issues. The result showed that most of the women entrepreneurs spent much of their loan on business issues, not family issues.

Question 12 (loan amount spent on charity): Table 5.8 indicated that 4.3% of the sampled women entrepreneurs spent #1,000-5,000 of their loan on charity. The result showed that most of the women entrepreneurs spent much of their loan on business issues, not charity.

Question 30 (belong to more than one group): Table 5.8 indicated that 70.2% of the sampled women entrepreneurs belonged to more than one loan groups while 29.8% of

them belonged to one loan group only. The study revealed that most women entrepreneurs in Nigeria belonged to more than one loan groups. This was in with literature that more social networks lead to access to information and resources for business (e.g Mohamed et al., 1997; Tata & Prasad, 2008). These were presented on Table 5.8 below.

Table 5.8
Descriptive Statistics of the nominal/ordinal data

Variable	Description	Frequency	Percentage (%)
Q9 (loan amount spent on stock)	#1,000-5,000	-	-
	#5,001-10,000	-	-
	#10,001-15,000	-	-
	#15,001-20,000	1	0.6
	#20,001-25,000	3	1.9
	#25,001-30,000	51	31.7
	Above #30,000	106	65.8
Q10 (loan amount spent on other business issues)	#1,000-5,000	160	99.4
	#5,001-10,000	1	0.6
	#10,001-15,000	-	-
	#15,001-20,000	-	-
	#20,001-25,000	-	-
	#25,001-30,000	-	-
	Above #30,000	-	-
Q11 (loan amount spent on family issues)	#1,000-5,000	11	6.8
	#5,001-10,000	-	-
	#10,001-15,000	-	-
	#15,001-20,000	-	-
	#20,001-25,000	-	-
	#25,001-30,000	-	-
	Above #30,000	-	-
Q12 (loan amount spent on charity)	#1,000-5,000	7	4.3
	#5,001-10,000	-	-
	#10,001-15,000	-	-
	#15,001-20,000	-	-
	#20,001-25,000	-	-
	#25,001-30,000	-	-
	Above #30,000	-	-
Q30 (belong to more than one group)	1 = Yes	113	70.2
	2 = No	48	29.8

5.5 Goodness of Measures

This is an attempt to ensure the measurement model is valid. To achieve such validity, an acceptable level of goodness of measures for the model needs to be established. Finding a specific evidence of construct validity is also necessary (Hair et al., 2010).

5.5.1 Construct Validity

A construct is when several statements or questions are used in combination to represent a concept or characteristic, while construct validity assesses what the construct or scale is really measuring (Hair et al., 2007). It is the extent to which the measured variables actually represent the theoretical latent construct they are designed to measure (Hair et al., 2010). Construct validity is usually based on theoretical basis underlying the measurement, upon which the results would be interpreted. Convergent and discriminant validity are available to determine construct validity. In this study, convergent validity was used to assess the extent to which the construct was positively correlated with other measures of the same construct. This was achieved with the use of Exploratory Factor Analysis.

The measurement instrument was majorly adapted from Kuzilwa (2005). It covered credit, training and performance; while social capital items were adapted from Allen (2000) and Olomola (2002). However, there was the need for the Exploratory Factor Analysis (EFA) because the instrument was used in different cultural environments. Exploratory factor analysis (principal component analysis) was performed on the variables to determine their components so that they could be converged accordingly

before the analysis. The EFA was tested on each factor of the model: independent variables, mediating variable, moderating variable and the dependent variable.

Prior to the Exploratory Factor Analysis, effort was made to ensure that the requirements for the use of EFA were met. These basic requirements are: ensuring a large sample size (though literature do not agree on how large the sample size should be), having at least three items to measure a construct, and a preliminary test with evidence of coefficients > 0.3 to show strong intercorrelations among the items (Pallant, 2007).

A total of 56 items of the questionnaire were subjected to principal component analysis, using SPSS version 16. This was made up of 30 items for the independent variables which were factor analyzed separately, 6 items for the mediating variable, 7 items for the moderating variable, and 13 items for the dependent variable. The preliminary analysis was performed to assess the suitability of the data for the factor analysis. The correlation matrix revealed the presence of many coefficients of value 0.3 and above which indicated that the factor analysis could proceed.

Table 5.9 below showed the principal component analysis for the independent variables. The analysis revealed the presence of three components with eigenvalues > 1 , using Varimax with Kaiser's normalization rotation method. The rotation converged in five iterations. These three components factors were renamed skill acquisition, loan access, and bonding. The naming was done according to the items with the highest factor loadings on each component. The three components explained a total variance of 70.1% which was above the recommended minimum value of 0.60. Factor communalities for

most variables were above the minimum acceptable value of 0.60 (Hair et al., 2010, p. 108). An examination of the screeplot showed a clear break after the third component. Eight items loaded on the first component, three items on the second component, and three items loaded on the third component. The anti-image, which examined the mean sampling adequacy (MSA) and measured the degree of intercorrelations among the variables, ranged from 0.594 to 0.935 which was above the minimum recommended value of 0.50. Barlett' test of sphericity (approx. chi-square) was 1392.415, degree of freedom = 91.000 and a significant p value of 0.000 which was above the acceptable minimum value of significant $p \leq 0.05$. Also, the Kaiser-Meyer-Olkin' measure of sampling adequacy was 0.843, which was above the minimum recommended value of 0.60. Factor loadings ranged from 0.733 to 0.852 in the first component, 0.761 to 0.918 in the second component, and 0.782 to 0.867 in the third component. This was above the minimum acceptable value of 0.50 (Hair et al., 2010), and there was no case of cross loadings. Refer to Appendix **11**.

Table 5.9
EFA for the independent variables (rotated component matrix)

Items	Factor	Component 1	Component 2	Component 3
SA gave required competence (Q18)	Training	0.852		
SA gave assurance for success (Q19)		0.836		
Received training before loan (Q16)		0.816		
It gave knowledge to manage loan(Q26)		0.813		
It provided general awareness (Q22)		0.786		
Training was effective (Q20)		0.773		
It gave required skill for business (Q17)		0.766		
It help relate well with customers (Q28)		0.733		
It was difficult to access loan (Q3)	Credit		0.918	
It took long process to get loan (Q4)			0.909	
Maturity period was alright (Q6)			0.761	
Close friendship in group (Q33)	Soc. Cap.			0.867
Communicate frequently (Q34)				0.861
Mandatory savings as loansecurity(Q15)				0.782

Variance explained = 70.102%
KMO = 0.843
Barlett' test of sphericity = 1392.415
Df. = 91.000
Sig. = 0.000
Note: SA means skill acquisition

Table 5.10 below showed the principal component analysis for the mediating variable. The analysis revealed the presence of only one component with eigenvalues > 1. As such, the factors could not be rotated. The component was named opportunity to improve business. The naming was done according to the items with the highest factor loadings on that component. The component explained a total variance of 64.6% which was above the recommended minimum value of 0.60. Factor communalities for most variables were above the minimum acceptable value of 0.60. An examination of the screeplot showed a clear break after the first component. Five items loaded on the component. The anti-image ranged from 0.791 to 0.834 which was above the minimum recommended value of 0.50. Barlett' test of sphericity was 368.919, degree of freedom =

10.000 and a significant p value of 0.000 which was above the acceptable minimum value of significant $p \leq 0.05$. Also, the Kaiser-Meyer-Olkin' measure of sampling adequacy was 0.809, which was also above the minimum recommended value of 0.60. Factor loadings ranged from 0.763 to 0.857 which was above the minimum acceptable value of 0.50 (Hair et al., 2010). Refer to Appendix 12.

Table 5.10
EFA for the mediating variable (component matrix)

Items	Factor	Component 1
MF gave opportunity to improve business (Q37)	Opportunity	0.857
Group provide business information (Q40)		0.843
MF provides motivation or desire for success (Q39)		0.777
Business does well due to MF (Q41)		0.776
MF provides resources to improve business (Q36)		0.763

Variance explained = 64.669%
KMO = 0.809
Barlett' test of sphericity = 368.919
Df. = 10.000
Sig. = 0.000
Note: MF means micro-finance factors

Table 5.11 below showed the principal component analysis for the moderating variable. The analysis revealed the presence of two components with eigenvalues > 1 , using Varimax with Kaiser's normalization rotation method. The rotation converged in three iterations. These two components factors were named ability to expand business, and self-confidence in doing business. The naming was done according to the items with the highest factor loadings on each component. The two components explained a total variance of 74.4% which was above the recommended minimum value of 0.60. Factor communalities for most variables were above the minimum acceptable value of 0.60 (Hair et al., 2010, p. 108). An examination of the screeplot showed a clear break after

the second component. Four items loaded on the first component, and three items loaded on the second component. The cross loading of 0.306 was noticed but was not considered because it was less than the recommended value of 0.50. Therefore the factor was considered on component one because it loaded more than twice on component one than component two. The anti-image ranged from 0.687 to 0.889 which was above the minimum recommended value of 0.50. Barlett' test of sphericity was 625.733, degree of freedom = 21.000 and a significant p value of 0.000 which was above the acceptable minimum value of significant $p \leq 0.05$. Also, the Kaiser-Meyer-Olkin' measure of sampling adequacy was 0.809, which was also above the minimum recommended value of 0.60. Factor loadings ranged from 0.755 to 0.911 on the first component and 0.717 to 0.899 in the second component. This was above the minimum acceptable value of 0.50 (Hair et al., 2010). Refer to Appendix 13.

Table 5.11
EFA for the moderating variable (rotated component matrix)

Items	Factor	Component 1	Component 2
MF gave ability to improve business (Q43)	Attitude	0.911	
MF gave willingness to improve business (Q44)		0.876	
MF made me work harder (Q45)		0.869	
Received MF, I was encouraged (Q42)		<u>0.755</u>	0.306
MF gave me confidence in doing business (Q47)			0.899
MF gave assurance for success (Q48)			0.826
MF helped in business planning (Q46)			0.717

Variance explained = 74.402%

KMO = 0.809

Barlett' test of sphericity = 625.733

Df. = 21.000

Sig. = 0.000

Note: MF means micro-finance factors

Table 5.12 below showed the principal component analysis for the dependent variable. The analysis revealed the presence of four components with eigenvalues > 1 , using Varimax with Kaiser's normalization rotation method. The rotation converged in four iterations. However, only the first component was used because the other three components loaded only with two items each (Q60, Q57; Q52, Q55; and Q61, Q58). According to Pallant (2007, p. 192), a minimum of three items should load on a component for it to be retained and to get an acceptable reliability. As such, the other components were not used for further analysis. The accepted component was named sales. The naming was done according to the items with the highest factor loadings on that component. The four components explained a total variance of 71.2% which was above the recommended minimum value of 0.60. Factor communalities for most variables were above the minimum acceptable value of 0.60 (Hair et al., 2010, p. 108). An examination of the screeplot showed a clear break after the first component. Six items loaded on the first component. The anti-image ranged from 0.778 to 0.895 on the first component. Anti-image for the rest three components were below 0.50, except for component three; still proving their inability to be retained. Barlett's test of sphericity was 806.653, degree of freedom = 66.000 and a significant p value of 0.000 which was above the acceptable minimum value of significant $p \leq 0.05$. Also, the Kaiser-Meyer-Olkin's measure of sampling adequacy was 0.730, which was also above the minimum recommended value of 0.60. Factor loadings ranged from 0.693 to 0.815 on component one. This was above the minimum acceptable value of 0.50 (Hair et al., 2010). The cross loading of 0.314 was noticed but was not considered because it was less than the recommended value of 0.50. Therefore the factor was considered on component one

because it loaded more than twice on component one than component three. Refer to Appendix 14.

Some items were deleted by the Exploratory Factor Analysis (EFA). For example, Q1, Q2, Q5, Q7 and Q8 were deleted from credit; all items were deleted from savings, while Q21, Q23, Q24, Q25 and Q27 were deleted from training; and Q29, Q31, Q32 and Q35 were deleted from social capital. Q38 was deleted from the mediating variable. However, no question item was deleted from the moderating variable. Q59 was deleted from the dependent variable. Their deletion was because they did not meet the requirements of the Exploratory Factor Analysis (for example, the minimum factor loadings of 0.50).

Table 5.12
EFA for the dependent variable (rotated component matrix)

Items	Factor	Component 1	Component 2	Component 3	Component 4
Sales increased (Q50)	Performance	0.815			
Net profit increase (Q49)		0.793			
Bought more stock (Q54)		0.775			
Savingsaccountimprove (Q51)		<u>0.761</u>		0.314	
Output increased (Q53)		0.728			
Investment increased (Q56)		0.693			
Have new parttime staff (Q60)			0.938		
Opened new branch (Q57)			0.907		
Expenses easily settled (Q52)				0.812	
Customer demand met (Q55)				0.767	
Have new apprentice (Q61)					0.875
Bought new machine (Q58)					0.869

Variance explained = 71.269%
KMO = 0.730
Barlett' test of sphericity = 806.653
Df. = 66.000
Sig. = 0.000

Table 5.13 below showed the comparison between the variables and their dimensions before and after the Exploratory Factor Analysis.

Table 5.13
Variables and dimensions before and after EFA

Before EFA	After EFA
Credit • loan size • use of loan	Credit • loan access
Savings	-
Training • skill acquisition • general management	Training • skill acquisition
Social capital • group membership • bonding	Social capital • bonding
Opportunity	Opportunity to improve business
Attitude towards micro-finance	Attitude towards micro-finance • ability to expand business • self-confidence in business

5.5.2 Reliability and Descriptive Tests

Reliability, which is made up of stability and internal consistency, is the degree to which measures are free from error and therefore yield consistent results. Stability is the ability of the measures to produce consistent results over time while internal consistency is concerned with the homogeneity of the measures that tap the constructs (Cavana et al., 2001). This is made up of inter-item consistency reliability and the split-half test (Cavana et al., 2001).

However, this study used the Cronbach's alpha to get the inter-item consistency reliability. The acceptable value for reliability, with Likert scale items < 10 , is Cronbach's alpha ≥ 0.7 , though Cronbach's alpha values of 0.60 to 0.70 are deemed the lower limit of acceptability (Hair, Anderson, Tatham & Black, 1998, p. 88). Cronbach's alpha values lower than 0.7 may also be acceptable depending on the research objectives (Hair et al., 2007, p. 244). The minimum acceptable Cronbach's alpha is 0.60 (Sekaran, 2000, p. 312). Again, some researchers suggest alpha of 0.6 in a research with a large sample size (Briggs & Cheek, 1986; Cavana et al., 2001) and in a social science research (Nunnally & Bernstein, 1994).

The factors derived from the exploratory factor analysis were then subjected to reliability test. Savings was no longer considered in subsequent analyses. Their means and standard deviations were also determined. Table 5.14 below showed the Cronbach's alpha values for the factors and their dimensions. The alpha values for the factors ranged from 0.705 to 0.920, exceeding the minimum alpha of 0.6 (Hair et al., 1998; Sekaran, 2000). Hence, all the measures for the factors were highly reliable. Using the mean and standard deviation, it was also revealed that of the six variables, ability to expand business as a new dimension of attitude ($M = 6.825$, $SD = 0.379$), opportunity to improve business ($M = 6.814$, $SD = 0.345$) and self-confidence in doing business ($M = 6.733$, $SD = 0.487$) respectively were perceived highly by the respondents. Of the micro-finance factors, the respondents perceived bonding ($M = 6.653$, $SD = 0.659$) and skill acquisition ($M = 6.570$, $SD = 0.672$) as very critical to their business performance. Refer to Appendix 15-21. The results were presented on Table 5.14 below.

Table 5.14

Construct' Mean, Standard Deviation and Internal Consistency Reliability

S/N	Construct	Mean	SD	Number of items	Reliability
1	Credit: Loan access	5.816	1.528	3	0.840
2	Training: Skill acquisition	6.570	0.672	8	0.920
3	Social capital: Bonding	6.653	0.659	3	0.826
4	Opportunity: Opportunity to improve business	6.814	0.345	5	0.860
5	Attitude				
	• Ability to expand business	6.825	0.379	4	0.898
	• Self-confidence in doing business	6.733	0.487	3	0.705
6	Performance: Sales	6.721	0.478	6	0.863

The descriptive analyses of the items of the factors and their dimensions were also determined. These were shown on Table 5.15 next page.

Table 5.15

Constructs Dimensions' Mean, Standard Deviation and Internal Consistency Reliability

S/N	Construct (Items)	Mean	SD	Number of items	Reliability
1	Credit: Loan access			3	0.840
	It was difficult to access loan (Q3)	5.82	1.827		
	It took long process to get loan (Q4)	5.78	1.803		
	Maturity period was alright (Q6)	5.81	1.631		
2	Training: Skill acquisition			8	0.920
	SA gave required competence (Q18)	6.55	0.844		
	SA gave assurance for success (Q19)	6.52	0.837		
	Received training before loan (Q16)	6.81	0.760		
	Gave knowledge manage loan (Q26)	6.60	0.744		
	It provided general awareness (Q22)	6.40	0.931		
	Training was effective (Q20)	6.39	0.962		
	Gave require skill for business (Q17)	6.57	0.941		
	Help relate well with customer (Q28)	6.73	0.642		
3	Social capital: Bonding			3	0.826
	Close friendship in group (Q33)	6.59	0.810		
	Communicate frequently (Q34)	6.59	0.825		
	Mand. savings as loan security(Q15)	6.78	0.649		
4	Opportunity: Opportunity to improve business			5	0.860
	MF gave opportunity to improve business (Q37)	6.83	0.407		
	Group provide business information (Q40)	6.76	0.454		
	MF provides motivation or desire for success (Q39)	6.76	0.481		
	Business does well due to MF (Q41)	6.83	0.436		
	MF provdes resources to improve business (Q36)	6.88	0.367		
5	Attitude:			4	0.898
	• Ability to expand business				
	MF gave ability to improve business (Q43)	6.81	0.440		
	MF gave willingness to improve business (Q44)	6.83	0.441		
	MF made me work harder (Q45)	6.86	0.395		
	Received MF, I was encouraged (Q42)	6.81	0.454		

Table 5.15 Cont...

6	• Self-confidence			3	0.705
	MF gave me confidence in doing business (Q47)	6.783	0.483		
	MF gave assurance for success (Q48)	6.833	0.422		
	MF helped in business planning (Q46)	6.584	0.848		
7	Performance: Sales			6	0.863
	Sales increased (Q50)	6.75	0.570		
	Net profit increase (Q49)	6.73	0.622		
	Bought more stock (Q54)	6.78	0.533		
	Savingsaccountimprove (Q51)	6.58	0.730		
	Output increased (Q53)	6.80	0.489		
	Investment increased (Q56)	6.70	0.742		

5.5.3 ANOVA (Post Hoc) Test on Controlled Variables

Post Hoc (ANOVA) test was conducted on education, age and experience in order to determine their qualification as controlled variables. The results showed that there was no mean difference within and between groups regarding education and experience. Refer to Appendix 22 and Appendix 24. As such, education and experience were no longer used as controlled variables in subsequent analyses. However, the Post Hoc test for age showed that there was mean difference within and between groups. Refer to Appendix 23. Therefore, age was still retained as a controlled (dummy) variable in the subsequent analysis.

5.5.4 Correlation Analysis

Pearson correlation analysis is one of the methods used to detect linear relationships and multicollinearity among variables. In this study, Pearson Correlation analysis, as a

predictive analysis, was performed to indicate the relationship between the variables and to determine if there was any multicollinearity among the variables. Pearson Correlation coefficient is best used for interval scaled and ratio scaled variables (Sekaran, 2000) as they establish relationships among the variables. However, correlation above 0.90 normally indicates multicollinearity (Hair et al., 2010). The result also proved that a relationship exist between the micro-finance related factors and women entrepreneurs' business performance.

As suggested by Cohen (1988), $r = 0.10$ to 0.29 indicate small relationship; $r = 0.30$ to 0.49 indicate medium relationship, and $r = 0.50$ to 1.0 indicate large relationship. Therefore, the results of the correlation analysis in this study were reported in line with the set criteria from Cohen (1988), and were presented on Table 5.16 below.

The values of the correlation coefficient (r) indicated the strength of the relationship. Most of the correlations among the predictor and the criterion variables on Table 5.16 below were statistically significant, ranging from $r = 0.250$ ($p < 0.01$) to $r = 0.685$ ($p < 0.01$). For example, skill acquisition $r = 0.685$ ($p < 0.01$) significantly correlated with sales performance. Bonding $r = 0.250$ ($p < 0.01$) also significantly correlated with sales performance. However, the correlation between loan access $r = 0.085$ and sales performance was insignificant. Opportunity $r = 0.631$ ($p < 0.01$) also significantly correlated with sales performance.

The correlation between the controlled variable (age) $r = 0.006$ and sales performance on Table 5.16 next page was insignificant. This is in line with literature. For example,

Stohmeyer (2007) stated that age has a curvilinear relationship with the probability of being self-employed. On one hand, old people have enough information, resources and skills for self-employment or entrepreneurial opportunity. On the other hand, as people become older, the effect of age on their willingness to become self-employed reduces. As such, age may affect entrepreneurial opportunity but not performance. Therefore, age was no longer used as a controlled variable in subsequent analyses in this study.

The Pearson Correlation matrix also revealed that there was no incidence of multicollinearity because none of the variables, especially the independent variables, had correlation coefficient up to 0.90 as suggested by Hair et al. (2010) and Pallant (2007). Therefore, all the variables were retained for further analysis, except age.

In summary, the correlation matrix showed strong positive relationships between skill acquisition and sales performance, bonding and sales performance, and opportunity and sales performance of women entrepreneurs. The analysis indicated that skill acquisition, bonding and opportunity to improve business are the critical factors that influence business performance of women entrepreneurs in Nigeria.

Table 5.16
Pearson correlation analysis

	Factor Correlation							
	Age	LA	SA	BD	OP	Abexp	Sconf	PerSales
Age	1.000							
LA	-.043	1.000						
SA	-.056	.076	1.000					
BD	-.063	.171*	.357**	1.000				
OP	-.021	.183*	.503**	.211**	1.000			
Abexp	-.056	-.043	.457**	.145	.582**	1.000		
Sconf	-.057	-.024	.352**	.141	.260**	.427**	1.000	
PerSales	.006	.085	.685**	.250**	.631**	.544**	.321**	1.000

*Correlation is significant at the 0.05 level (2-tailed).

**Correlation is significant at the 0.01 level (2-tailed).

Dependent Variable: Sales performance (PerSales)

Note: LA=Loan access, SA=Skill acquisition, BD=Bonding, OP=Opportunity, Abexp=Ability to expand business, Sconf=Self-confidence in business, PerSales=Sales Performance

5.6 Assumptions of Multiple/ Hierarchical Regression Analysis

It was necessary to test the assumptions of the hierarchical regression analysis before the analyses were performed. In addition to normality, the four other assumptions of hierarchical multiple regression analysis (multicollinearity, linearity, homoscedasticity and independence of error terms) were assessed.

5.6.1 Multicollinearity

Collinearity is a situation where two variables are perfectly correlated while multicollinearity refers to the collinear relationship among more than two independent variables. Multicollinearity occurs if any single independent variable is highly correlated

with a set of other independent variables. It is the degree to which each independent variable is explained by the set of other independent variables (Hair et al., 2010).

One of the methods of testing multicollinearity is the variance inflationary factor (VIF). When the results of VIF in each explanatory variable = 1, the variables are uncorrelated. When the results of VIF are > 10 , there is too much correlation among the explanatory variables. According to Pallant (2007), Tolerance should be > 0.10 . If Tolerance < 0.10 , it indicates that the correlation with other variables is high which suggests the possibility of multicollinearity. Also, VIF should be < 10 . If VIF > 10 , it indicates multicollinearity. Condition index should be < 30 .

In this study, multicollinearity was first assessed through an examination of the relationship among the variables in the Pearson Correlation analysis matrix as was shown on Table 5.16 above. There was no incidence of multicollinearity because none of the variables had correlation coefficient (r) up to 0.90 as suggested by Hair et al. (2010) and Pallant (2007).

Multicollinearity was again assessed through an examination of the collinearity statistics (Tolerance and VIF) of the regression analysis of the relationship between all the predictors and the criterion variable. The results from the test showed that the maximum VIF was 1.824 as was shown on Table 5.17 below. This suggested that the variables were not highly correlated with each other. Refer to Appendix 31. Again, from the regression analyses, the results showed that Tolerance was > 0.10 , and VIF was < 10 . Condition index for detecting multicollinearity was < 30 in most cases. Therefore, the

requirement for employing the regression technique was fulfilled. That is, the assumption of multicollinearity was not violated. As such, the variables were sufficiently inter-correlated to produce representative factors.

Table 5.17
Test of multicollinearity

Variables	Collinearity Statistics	
	Tolerance	VIF
(Constant)	-	-
Loan access (LA)	0.912	1.096
Skill acquisition (SA)	0.621	1.610
Bonding (BD)	0.851	1.176
Opportuntiy	0.556	1.799
Abexp.	0.548	1.824
Sconf.	0.784	1.276

Dependent Variable: Sales performance (PerSales)

Note: Tolerance should be > 0.10.

VIF should be < 10

5.6.2 Linearity

Regression analysis in itself is a linear procedure. Should there be any non-linear relationship in the model, it will be shown in the R square for the overall model and in the beta for each variable. This is because the R square and the betas will underestimate the overall variance explained and the importance of each variable in the model respectively (Pallant, 2007). Linearity of a model as a whole could be assessed by an examination of the scatter-plot of the regression standardized residual and the regression

predicted value; being one of the outputs of the regression analysis. On the other hand, the relationship of each independent variable to the dependent variable could be assessed through partial regression plots. According to Pallant (2007), the residuals will be roughly rectangularly distributed, with most of the scores concentrated in the centre along the zero point. Also, according to Coakes and Steed (2003), if there is no clear relationship between the residuals and the predicted values (from the residual statistics), the assumptions of linearity and homoscedasticity are met.

An examination of scatter-plot in this study revealed a linear relationship between the independent variables and the dependent variable since the residuals looked roughly rectangular and most of the scores on the graph concentrated in the centre along the zero point. Refer to Appendix 25. Also, an examination of the residuals statistics table of the output of the regression analysis did not reveal any nonlinear pattern among the variables in the model. Again, the results of the Pearson correlation analysis shown on Table 5.16 above indicated a linear relationship among the variables. Therefore, linearity assumption was not violated.

5.6.3 Homoscedasticity

Levene test is normally used to determine the equality of variance whenever group differences are examined. For example sex (male and female) or response rate (early response rate and late response rate). However, homoscedasticity could also be determined from the residual statistics of the regression analysis. Heteroscedasticity are mostly examined using non-metric variables as independent variables and metric

variables as dependent variables while homoscedasticity are examined using two metric variables, for example, in multiple regression analysis where the residuals are analyzed (Hair et al., 2010, p. 82). The analysis of the residuals mostly is to ensure that the residuals are dispersed randomly throughout the range of the estimated dependent variable since the variance of the error term or residual error should be constant for all the independent variables (Pallant, 2007). Also, according to Coakes and Steed (2003), if there is no clear relationship between the residuals and the predicted values, the assumptions of linearity and homoscedasticity are met. Again, in the suggestion of Lewis-Beck (1993, p. 22), homoscedasticity assumption is not violated if residual variance (from residual versus predicted value plot) is around zero.

In this study, an independent-sample t-test (Levene's test) was conducted to compare the scores or responses of the early and late respondents. Refer to Table 5.2 at the early part of this chapter. The sig. (2-tailed) t-value for equality of means showed that there was no significant difference between the early and late respondents, except for opportunity. Again, equality of variance was determined through an examination of the residuals of the regression analysis. Since there was no clear relationship between the residuals and the predicted values (Coakes & Steed, 2003), and the residual variance from the residual versus the predicted plot was around zero point (Lewis-Beck, 1993); then the assumption of homoscedasticity was not violated. Refer to Appendix 25.

5.6.4 Independence of Error Term

Durbin Watson statistics is the most popular statistical method of assessing independence of error term (Hair et al., 2010). The benchmark for acceptance ranges from 1.50 to 2.50. In this study, independence of error term was assessed through an examination of Durbin Watson statistics in the regression analyses. In all the regression outputs, the Durbin Watson statistics were in the recommended range of 1.50-2.50. As such, the assumption of independence of error term was not violated. Refer to Appendix 25-30.

5.7 Hypotheses Testing

This section tested the hypotheses for the quantitative part of the study; having met the normality and other assumptions or requirements of the parametric technique used. Multiple, linear and Hierarchical regression techniques were used to test the hypotheses. These were performed to test the individual and aggregate influence of micro-finance factors on women entrepreneurs' business performance, with mediating and moderating variables. The regression analyses were performed in line with the restated hypotheses. Preliminary analyses were conducted, as explained earlier, to ensure that there was no violation of the assumptions of normality, linearity, multicollinearity, homoscedasticity and independence of error terms.

5.7.1 Re-Statement of Hypotheses

The hypotheses earlier stated were restated to reflect the component factors that resulted from the exploratory factor analysis (EFA). These were stated as follows:

- H1: Loan access is positively related to women entrepreneurs' sales performance.
- H2: Skill acquisition is positively related to women entrepreneurs' sales performance.
- H3: Bonding is positively related to women entrepreneurs' sales performance.
- H4: Loan access is positively related to opportunity for business improvement of women entrepreneurs.
- H5: Skill acquisition is positively related to opportunity for business improvement of women entrepreneurs.
- H6: Bonding is positively related to opportunity for business improvement of women entrepreneurs.
- H7: Opportunity for business improvement is positively related to women entrepreneurs' sales performance.
- H8: Opportunity for business improvement mediates the relationship between loan access, skill acquisition and bonding; and women entrepreneurs' sales performance.
- H9: Ability to expand business moderates the relationship between loan access, skill acquisition, bonding and opportunity; and women entrepreneurs' sales performance.
- H10: Self-confidence in doing business moderates the relationship between loan access, skill acquisition, bonding and opportunity; and women entrepreneurs' sales performance.

5.7.2 Test of Hypotheses 1, 2 and 3:

Multiple regression analysis on the relationship between loan access, skill acquisition and bonding; and women entrepreneurs' sales performance

The regression analysis of this stage (Table 5.18 below) was used to test hypotheses one to hypotheses three (H1 to H3).

H1: Loan access is positively related to women entrepreneurs' sales performance.

H2: Skill acquisition is positively related to women entrepreneurs' sales performance.

H3: Bonding is positively related to women entrepreneurs' sales performance.

When loan access, skill acquisition and bonding were entered; the total variance explained by the model as a whole was 0.471. In other words, the regression model fits the data adequately and significantly explained 47.1% of the variation in the outcome variable, sales performance (R square 0.471, F change = 46.544, $p < 0.001$). The three independent variables explained 47% of the variance in sales performance (R square change = 0.471, $p < 0.001$). The overall regression model was significant (Sig. F change = 0.000, R square = 0.471, F change = 46.544, $p < 0.001$). The results were shown on Table 5.18 below.

Table 5.18

Multiple regression: loan access, skill acquisition and bonding; and women entrepreneurs' sales performance

Variables	(IV-DV) Beta	Hypothesis
Loan Access (LA)	0.034	H1
Skill Acquisition (SA)	0.683***	H2
Bonding (BD)	0.000	H3
R square	0.471***	
Adjusted R square	0.461	
R square Change	0.471	
F Value	46.544	
Sig. F. Change	0.000***	

Note: *p < 0. 05; **p < 0.01; ***p < 0.001
Dependent variable: Sales performance (PSales).

From the individual coefficients, only skill acquisition of the independent variables was statistically significant (beta = 0.683, p < 0.001) in the prediction of the direct relationship between loan access, skill acquisition and bonding; and sales performance. Refer to Appendix 25.

In summary, though the overall model was significant, the results of the multiple regression analysis showed that skill acquisition influenced women entrepreneurs' sales performance in Nigeria. This indicated that skill acquisition was a critical factor to women entrepreneurs' sales performance.

Hypothesis 1 predicted a positive relationship between loan access and women entrepreneurs' sales performance. The regression results on Table 5.18 above revealed that loan access individually (beta = 0.030) had no significant relationship with women entrepreneurs' sales performance in Nigeria. Hence, the results did not support the

alternative hypothesis that loan access is positively related to women entrepreneurs' sales performance. Thus, hypothesis 1 was not supported.

Hypothesis 2 predicted a positive relationship between skill acquisition and women entrepreneurs' sales performance. The regression results on Table 5.18 above revealed that skill acquisition individually ($\beta = 0.683$, $p < 0.001$) had a significant relationship with women entrepreneurs' sales performance. Hence, the results supported the alternative hypothesis that skill acquisition is positively related to women entrepreneurs' sales performance. Thus, hypothesis 2 was supported.

Hypothesis 3 predicted a positive relationship between bonding and women entrepreneurs' sales performance. The regression results on Table 5.18 above revealed that bonding individually ($\beta = 0.000$) had no significant relationship with women entrepreneurs' sales performance in Nigeria. Hence, the results did not support the alternative hypothesis that bonding is positively related to women entrepreneurs' sales performance. Thus, hypothesis 3 was not supported.

5.7.3 Test of Hypothesis 4, 5 and 6:

Multiple regression analysis on the relationship between loan access, skill acquisition and bonding; and opportunity for business improvement of women entrepreneurs

The regression analysis of this stage (Table 5.19 below) was used to test hypotheses four to hypotheses six (H4 to H6).

- H4: Loan access is positively related to opportunity for business improvement of women entrepreneurs.
- H5: Skill acquisition is positively related to opportunity for business improvement of women entrepreneurs.
- H6: Bonding is positively related to opportunity for business improvement of women entrepreneurs.

When loan access, skill acquisition and bonding were entered; the total variance explained by the model as a whole was 0.274. In other words, the regression model fits the data adequately and significantly explained 27.4% of the variation in the outcome variable, opportunity for business improvement (R square 0.274, F change = 19.796, $p < 0.001$). The three independent variables explained 27.4% of the variance in opportunity for business improvement (R square change = 0.274, $p < 0.001$). The overall regression model was significant (Sig. F change = 0.000, R square = 0.274, F change = 19.796, $p < 0.001$). The results were shown on Table 5.19 below.

Table 5.19

Multiple regression: loan access, skill acquisition and bonding; and opportunity for business improvement of women entrepreneurs

Variable	(IV-Med.) Beta	Hypothesis
Loan Access (LA)	0.144*	H4
Skill Acquisition (SA)	0.488***	H5
Bonding (BD)	0.013	H6
R square	0.274***	
Adjusted R square	0.261	
R square Change	0.274	
F Value	19.796	
Sig. F. Change	0.000***	

Note: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$
Dependent variable: Opportunity

From the individual coefficients, loan access ($\beta = 0.144$, $p < 0.05$) and skill acquisition ($\beta = 0.488$, $p < 0.001$) of the independent variables were statistically significant in the prediction of the direct relationship between loan access, skill acquisition and bonding; and opportunity for business improvement of women entrepreneurs. Refer to Appendix 26.

In summary, though the overall model was significant, the results of the multiple regression analysis showed that loan access and skill acquisition influenced opportunity for business improvement of women entrepreneurs.

Hypothesis 4 predicted a positive relationship between loan access and opportunity for business improvement of women entrepreneurs. The regression results on Table 5.19 above revealed that loan access individually ($\beta = 0.144$, $p < 0.05$) had a significant relationship with opportunity for business improvement of women entrepreneurs. Hence, the results supported the alternative hypothesis that loan access is positively related to opportunity for business improvement of women entrepreneurs. Thus, hypothesis 4 was supported.

Hypothesis 5 predicted a positive relationship between skill acquisition and opportunity for business improvement of women entrepreneurs. The regression results on Table 5.19 above revealed that skill acquisition individually ($\beta = 0.488$, $p < 0.001$) had a significant relationship with opportunity for business improvement of women entrepreneurs. Hence, the results supported the alternative hypothesis that skill

acquisition is positively related to opportunity for business improvement of women entrepreneurs. Thus, hypothesis 5 was supported.

Hypothesis 6 predicted a positive relationship between bonding and opportunity for business improvement of women entrepreneurs. The regression results on Table 5.19 above revealed that bonding individually ($\beta = 0.013$) had no significant relationship with opportunity for business improvement of women entrepreneurs. Hence, the results did not support the alternative hypothesis that bonding is positively related to opportunity for business improvement of women entrepreneurs. Thus, hypothesis 6 was not supported.

5.7.4 Test of Hypothesis 7:

Linear Regression analysis on the relationship between opportunity for business improvement and women entrepreneurs' sales performance

The regression analysis of this stage (Table 5.20 below) was used to test hypotheses seven (H7).

H7: Opportunity for business improvement is positively related to women entrepreneurs' sales performance.

When opportunity was entered; the total variance explained by the model as a whole was 0.398. In other words, the regression model fits the data adequately and significantly explained 39.8% of the variation in the outcome variable, sales performance (R square 0.398, F change = 105.303, $p < 0.001$). The overall regression model was significant

(Sig. F change = 0.000, R square = 0.398, F change = 105.303, $p < 0.001$). The results were shown on Table 5.20 below.

Table 5.20

Linear regression: Opportunity for business improvement and women entrepreneurs' sales performance

Variable	(Med-DV) Beta	Hypothesis
Opportunity (Op)	0.631***	H7
R square	0.398***	
Adjusted R square	0.395	
R square Change	0.398	
F Value	105.303	
Sig. F. Change	0.000***	

Note: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Dependent variable: Sales Performance (PSales)

From the individual coefficients, opportunity (beta = 0.631, $p < 0.001$) was statistically significant in the direct prediction of sales performance. Refer to Appendix 27.

In summary, the overall model was significant as the results of the linear regression analysis showed that opportunity for business improvement directly predicted women entrepreneurs' sales performance.

Hypothesis 7 predicted a positive relationship between opportunity for business improvement and women entrepreneurs' sales performance.

The results of the regression analysis (Table 5.20) above revealed that opportunity (beta = 0.631, $p < 0.001$) had significant influence on sales performance. Therefore, opportunity for business improvement was positively related to women entrepreneurs'

sales performance because both the overall model and the individual coefficient of opportunity were statistically significant. Hence, the results supported the alternative hypothesis that opportunity for business improvement is positively related to women entrepreneurs' sales performance. Thus, hypothesis 7 was supported.

5.7.5 Test of Hypothesis 8:

Hierarchical regression analysis of the mediating influence of opportunity on the relationship between loan access, skill acquisition and bonding; and women entrepreneurs' sales performance

The regression analysis of this stage (Table 5.21 below) was used to test hypothesis eight (H8).

H8: Opportunity for business improvement mediates the relationship between loan access, skill acquisition and bonding; and women entrepreneurs' sales performance.

The mediation criteria, as suggested by Baron and Kenny (1986), and used by Bielen and Demoulin (2007) and Yean (2010) is that; for mediation to occur, the regression from the dependent variable to the independent variable must be significant and the regression from the dependent variable to the mediator, when the independent variable is controlled, must also be significant. For full mediation to occur, the beta of the mediator must be significant while the beta of the independent variable must not be significant. The strongest mediation occurs when the significant beta of the mediator is zero, showing a single dominant mediator. However, from theoretical perspective, a

significant reduction demonstrates that a given mediator is indeed potent; though not a necessary and sufficient condition. Again, mediator should correlate with predictor or criterion variable (Baron & Kenny, 1986).

Condition 1 (Step 1) had already been discussed on Table 5.19 (H4, H5 and H6) for direct relationship between loan access, skill acquisition and bonding; and opportunity for business improvement of women entrepreneurs. The R square was 0.274. From the individual coefficients, loan access ($\beta = 0.144$, $p < 0.05$) and skill acquisition ($\beta = 0.488$, $p < 0.001$) of the independent variables were statistically significant.

Condition 2 (Step 2) had also been discussed on Table 5.18 (H1, H2 and H3) for direct influence of loan access, skill acquisition and bonding on women entrepreneurs' sales performance. The R square was 0.471. From the individual coefficients, only skill acquisition ($\beta = 0.683$, $p < 0.001$) was significant.

In Condition 3 (Step 3): opportunity (mediator) was entered and the R square became 0.580. This showed that the total variance explained by the model as a whole was 58% (R square 0.580, F change = 40.577, $p < 0.001$). This was left with 42% residual variability. The additional variable, opportunity, explained an additional 10.9% of the variation in sales performance after controlling loan access, skill acquisition and bonding (R square change = 0.109, F change = 40.577, $p < 0.001$). The results were shown on Table 5.21 below.

Table 5.21

Hierarchical regression: mediating influence of opportunity on loan access, skill acquisition, bonding; and women entrepreneurs' sales performance

Variable	Condition 1 (IV-Med) Beta 1 (Step 1)	Condition 2 (IV- DV) Beta 2 (Step 2)	Condition 3 (IV-Med-DV) Beta 3 (Step 3)	Hypothesis
Loan Access (LA)	0.144*	0.034	-0.022	
Skill Acquisition (SA)	0.488***	0.683***	0.493***	
Bonding (BD)	0.013	0.000	-0.005	
Opportunity (OP)			0.388***	H8
R square	0.274***	0.471***	0.580***	
Adjusted R square	0.261	0.461	0.569	
R square Change	0.274	0.471	0.109	
F Value	19.796	46.544	40.577	
Sig. F. Change	0.000***	0.000***	0.000***	

Note: *p < 0. 05; **p < 0.01; ***p < 0.001

Dependent variable: Sales performance

In summary; loan access, skill acquisition and bonding collectively as a construct directly and significantly predict sales performance with 58% variance explained (R square = 0.580, $p < 0.001$). Opportunity also predicted sales performance with additional 10.9% variance explained (R square change = 0.109, $p < 0.001$). Again, the overall regression model was significant (Sig. F change = 0.000, R square = 0.580, F change = 40.577, $p < 0.001$).

From the individual coefficients, loan access (beta = -0.022) and bonding (beta = -0.005) were not significant. Most important is the fact that they were not also significant in Condition 2, Step 2. That is, they would have been fully mediated if they were significant in Condition 1 and Condition 2 (Baron & Kenny, 1986). Opportunity as the mediator was significant (beta = 0.388, $p < 0.001$) and it satisfied the condition for mediation (Baron & Kenny, 1986). However, skill acquisition had a reduction in its beta

value from 0.683, $p < 0.001$ in Condition 2, Step 2 to 0.493, $p < 0.001$ in Condition 3, Step 3. This explained partial mediation (Baron & Kenny, 1986; Yean, 2010).

In line with the mediation criteria of Baron and Kenny (1986), opportunity for business improvement partially mediated between skill acquisition (but not loan access and bonding); and women entrepreneurs' sales performance. Refer to Appendix 28.

Hypothesis 8 predicted a mediating influence of opportunity for business improvement on the relationship between loan access, skill acquisition, bonding; and women entrepreneurs' sales performance.

Following the mediation criteria (Baron & Kenny, 1986; Bielen & Demoulin, 2007), the regression results on Table 5.21 revealed that opportunity for business improvement partially mediated between skill acquisition and women entrepreneurs' sales performance, but not loan access and bonding though the overall model was significant. Hence, the results partially supported the alternative hypothesis that opportunity for business improvement mediates the relationship between loan access, skill acquisition and bonding; and women entrepreneurs' sales performance. Thus, hypothesis 8 was partially supported.

5.7.6 Test of Hypothesis 9:

Hierarchical regression analysis on the moderating influence of ability to expand business on the relationship between loan access, skill acquisition, bonding and opportunity; and women entrepreneurs' sales performance

The regression analysis of this stage (Table 5.22 below) was used to test hypotheses nine (H9).

H9: Ability to expand business moderates the relationship between loan access, skill acquisition, bonding and opportunity; and women entrepreneurs' sales performance.

The results were shown on Table 5.22 below.

Table 5.22

Hierarchical regression: moderating influence of ability to expand business on loan access, skill acquisition, bonding, opportunity and women entrepreneurs' sales performance

Variable	Condition 1 (IV-DV) Beta 1 (Step 1)	Condition 2 (IV-Med-DV) Beta 2 (Step 2)	Condition 3 (IV-Med- Mod-DV) Beta 3 (Step 3)	Condition 4 (Interaction effect) Beta 4 (Step 4)	Hypothesis
Loan Access (LA)	0.034	-0.022	0.001	0.022	
Skill Acquisition (SA)	0.683****	0.493****	0.460****	0.287**	
Bonding (BD)	0.000	-0.005	-0.002	0.018	
Opportunity (OP)		0.388****	0.312****	0.188**	
Abexp. LA*Abexp			0.153**	-1.512* -0.096*	H9
SA*Abexp				0.521**	
BD*Abexp				1.425*	
OP*Abexp				-0.174	
R square	0.471****	0.580****	0.594**	0.646***	
Adjusted R square	0.461	0.569	0.581	0.625	
R square Change	0.471	0.109	0.014	0.052	
F Value	46.544	40.577	5.359	5.563	
Sig. F. Change	0.000****	0.000****	0.022**	0.000****	

Note: *p < 0. 10; **p < 0.05; ***p < 0.01; ****p < 0.001

Dependent variable: Sales performance (PSales)

The procedure for testing moderation-interaction effect (Baron & Kenny, 1986; Bryman & Cramer, 1997; Cohen & Cohen, 1983; Sharma, 2003) was adopted in testing Hypothesis 9 and 10.

Conditions 1 (Step 1) and Condition 2 (Step 2) had already been discussed on Table 5.21 (H8). For example, Condition 1 (Step 1) showed the direct influence of loan access, skill acquisition and bonding on women entrepreneurs' sales performance. The R square was 0.471. From the individual coefficients, only skill acquisition ($\beta = 0.683$, $p < 0.001$) was significant. Condition 2 (Step 2) showed the mediating influence of opportunity on loan access, skill acquisition and bonding; and women entrepreneurs' sales performance. The R square was 0.580. From the individual coefficients, loan access ($\beta = -0.022$) and bonding ($\beta = -0.005$) were not statistically significant. They were not also significant in previous Condition. However, skill acquisition had a reduction in its β ; as such it indicated a partial mediation (Baron & Kenny, 1986). Opportunity as the mediator ($\beta = 0.388$, $p < 0.001$) was significant (Baron & Kenny, 1986).

In Condition 3 (Step 3): ability to expand business (the first dimension of attitude towards micro-finance) was entered; and the R square became 0.594. This showed that the total variance explained by the model as a whole was 59.4% (R square 0.594, F change = 5.359, $p < 0.05$). The additional variable, ability to expand, explained an additional 1.4% of the variance in sales performance after controlling for loan access, skill acquisition, bonding, and opportunity (R square change = 0.014, F change = 5.359, $p < 0.05$). Again, the overall regression model was significant (Sig. F change = 0.022, R square = 0.594, F change = 5.359, $p < 0.05$).

In the final Condition 4 (Step 4): the interaction of the moderator with the independent variables plus the mediator was made. The same procedure was adopted by Bielen and Demoulin (2007). That is, the interaction of ability to expand with loan access, skill acquisition, bonding and opportunity. It is suggested that the main effect of the moderator and the independent variable must be determined as well as the interaction effect between the two. If there is any mediator before the moderator, the moderator-interaction would include the independent variable and the mediator (Bielen & Demoulin (2007). Therefore, when the interaction was performed, then the R square became 0.646. This showed that the total variance explained by the model as a whole was 64.6%. The interaction effect was noticed by the increase in R square value by 5.2%. That is, the interaction explained an additional 5.2% of the variance in sales performance after controlling for loan access, skill acquisition, bonding, and opportunity (R square change = 0.052, F change = 5.563, $p < 0.001$). The overall regression model was significant (Sig. F change = 0.000, R square = 0.646, F change = 5.563, $p < 0.001$).

In the prediction of the moderator effect of ability to expand business, skill acquisition was significant (beta = 0.460, $p < 0.001$). Opportunity for business improvement was also statistically significant (beta = 0.312, $p < 0.001$). Ability to expand was also significant (beta = 0.153, $p < 0.05$).

In the prediction of the moderator-interaction effect, ability to expand business interacted with loan access (beta = -0.096, $p < 0.10$), skill acquisition (beta = 0.521, $p < 0.05$), bonding (beta = 1.425, $p < 0.10$). Ability to expand business was also statistically

significant ($\beta = -1.512$, $p < 0.10$). According to Sharma (2003), this indicated a quasi moderator. Refer to Appendix 29.

In summary, though the overall model was significant in all cases, the results indicated that ability to expand business interacted with loan access, skill acquisition and bonding (but not opportunity) to predict women entrepreneurs' sales performance.

Hypothesis 9 predicted a moderating influence of ability to expand business on the relationship between loan access, skill acquisition, bonding and opportunity; and women entrepreneurs' sales performance.

Following the moderation criteria (Baron & Kenny, 1986; Bielen & Demoulin, 2007; Sharma, 2003), the regression results on Table 5.22 revealed that ability to expand business fully moderated between loan access ($\beta = -0.096$, $p < 0.10$), skill acquisition ($\beta = 0.521$, $p < 0.05$) and bonding ($\beta = 1.425$, $p < 0.10$); and women entrepreneurs' sales performance, but not opportunity though the overall model was significant.

The significant beta coefficient of the interaction terms indicated that the impact of loan access, skill acquisition and bonding on sales performance differ by the degree of emphasis on the ability to expand business on the part of the women entrepreneurs. Hence, the results partially supported the alternative hypothesis that ability to expand business moderates the relationship between loan access, skill acquisition, bonding and opportunity; and women entrepreneurs' sales performance. Thus, hypothesis 9 was partially supported.

5.7.7 Test of Hypothesis 10:

Hierarchical regression analysis on the moderating influence of self-confidence in business on the relationship between loan access, skill acquisition, bonding and opportunity; and women entrepreneurs' sales performance

The regression analysis of this stage (Table 5.23 below) was used to test hypotheses ten (H10).

H10: Self-confidence in doing business moderates the relationship between loan access, skill acquisition, bonding and opportunity; and women entrepreneurs' sales performance.

The results of the Hierarchical regression analysis on the moderating influence of self-confidence in business on the relationship between loan access, skill acquisition, bonding and opportunity; and women entrepreneurs' sales performance were shown on Table 5.23 below.

Table 5.23

Hierarchical regression: moderating influence of self-confidence in business on loan access, skill acquisition, bonding, opportunity and women entrepreneurs' sales performance

Variable	Condition 1 (IV-DV) Beta 1 (Step 1)	Condition 2 (IV-Med-DV) Beta 2 (Step 2)	Condition 3 (IV-Med- Mod-DV) Beta 3 (Step 3)	Condition 4 (Interaction effect) Beta 4 (Step 4)	Hypothesis
Loan Access (LA)	0.034	-0.022	-0.018	-0.013	
Skill Acquisition (SA)	0.683****	0.493****	0.478****	0.243**	
Bonding (BD)	0.000	-0.005	-0.006	-0.010	
Opportunity (OP)		0.388****	0.381****	0.242**	
Sconf. LA*Sconf.			0.054	-0.270 0.124*	H10
SA* Sconf.				-0.253	
BD* Sconf.				0.208	
OP* Sconf.				-0.300**	
R square	0.471****	0.580****	0.582	0.634***	
Adjusted R square	0.461	0.569	0.569	0.612	
R square Change	0.471	0.109	0.002	0.052	
F Value	46.544	40.577	0.925	5.326	
Sig. F Change	0.000****	0.000****	0.338	0.000****	

Note: *p < 0.10; **p < 0.05; ***p < 0.01; ****p < 0.001

Dependent variable: Sales performance (PSales)

Conditions 1 (Step 1) and Condition 2 (Step 2) had already been discussed on Table 5.21 (H8). For example, Condition 1 (Step 1) showed the direct influence of loan access, skill acquisition and bonding on women entrepreneurs' sales performance. The R square was 0.471. From the individual coefficients, only skill acquisition (beta = 0.683, p < 0.001) was significant. Condition 2 (Step 2) showed the mediating influence of opportunity on

loan access, skill acquisition and bonding; and women entrepreneurs' sales performance. The R square was 0.580. From the individual coefficients, loan access ($\beta = -0.022$) and bonding ($\beta = -0.005$) were not statistically significant. They were not also significant in previous Condition. However, skill acquisition had a reduction in its β ; as such it indicated a partial mediation (Baron & Kenny, 1986). Opportunity as the mediator ($\beta = 0.388$, $p < 0.001$) was significant (Baron & Kenny, 1986).

In Condition 3 (Step 3): self-confidence in business (the second dimension of attitude towards micro-finance) was entered; and the R square became 0.582. This showed that the total variance explained by the model as a whole was 58.2% (R square 0.582, F change = 0.925). The additional variable, self-confidence in business, explained an additional 0.2% of the variance in sales performance after controlling for loan access, skill acquisition, bonding, and opportunity (R square change = 0.002, F change = 0.925). The overall regression model was insignificant (Sig. F change = 0.338, R square = 0.582, F change = 0.925).

In the final Condition 4 (Step 4): the interaction of the moderator with the independent variables plus the mediator was made. The same procedure was adopted by Bielen and Demoulin (2007). That is, the interaction of self-confidence with loan access, skill acquisition, bonding and opportunity. Therefore, when the interaction was performed, then the R square became 0.634. This showed that the total variance explained by the model as a whole was 63.4%. The interaction effect was noticed by the increase in R square value by 0.052. That is, the interaction explained an additional 5.2% of the variance in sales performance after controlling for loan access, skill acquisition,

bonding, and opportunity (R square change = 0.052, F change = 5.326, $p < 0.001$). The overall regression model was significant (Sig. F change = 0.000, R square = 0.634, F change = 5.326, $p < 0.001$).

In the prediction of the moderator effect of self-confidence in business, skill acquisition was significant (beta = 0.478, $p < 0.001$). Opportunity for business improvement was also statistically significant (beta = 0.381, $p < 0.001$). Self-confidence was insignificant (beta = 0.054).

In the prediction of the moderator-interaction effect, self-confidence in business interacted with loan access (beta = 0.124, $p < 0.10$) and opportunity (beta = -0.300, $p < 0.05$). The regression coefficient for self-confidence was not significant. According to Sharma (2003), this indicated the existence of pure moderator. Refer to Appendix 30.

In summary, the results indicated that self-confidence in business interacted with loan access and opportunity (but not skill acquisition and bonding) to predict women entrepreneurs' sales performance.

Hypothesis 10 predicted a moderating influence of self-confidence in business on the relationship between loan access, skill acquisition, bonding and opportunity; and women entrepreneurs' sales performance.

Following the moderation criteria (Baron & Kenny, 1986; Bielen & Demoulin, 2007; Sharma, 2003), the regression results on Table 5.23 revealed that self-confidence in

business moderated between loan access ($\beta = 0.124, p < 0.10$) and opportunity ($\beta = -0.300, p < 0.05$) and women entrepreneurs' sales performance, but not skill acquisition and bonding.

The significant beta coefficient of the interaction terms indicated that the impact of loan access and opportunity on sales performance differ by the degree of emphasis on self-confidence in business on the part of the women entrepreneurs. Hence, the results partially supported the alternative hypothesis that self-confidence in business moderates the relationship between loan access, skill acquisition, bonding and opportunity; and women entrepreneurs' sales performance. Thus, hypothesis 10 was partially supported.

The regression results for the test of hypotheses were summarized on Table 5.24 next page.

Table 5.24
Summary Table of Hypotheses

	Hypothesis	Result
H1	Loan access is positively related to women entrepreneurs' sales performance	Not supported
H2	Skill acquisition is positively related to women entrepreneurs' sales performance	Supported
H3	Bonding is positively related to women entrepreneurs' sales performance	Not supported
H4	Loan access is positively related to opportunity for business improvement of women entrepreneurs	Supported
H5	Skill acquisition is positively related to opportunity for business improvement of women entrepreneurs	Supported
H6	Bonding is positively related to opportunity for business improvement of women entrepreneurs	Not supported
H7	Opportunity for business improvement is positively related to women entrepreneurs' sales performance	Supported
H8	Opportunity for business improvement mediates the relationship between loan access, skill acquisition and bonding; and women entrepreneurs' sales performance	Partially supported
H9	Ability to expand business moderates the relationship between loan access, skill acquisition, bonding and opportunity; and women entrepreneurs' sales performance	Partially supported
H10	Self-confidence in business moderates the relationship between loan access, skill acquisition, bonding and opportunity; and women entrepreneurs' sales performance	Partially supported

Note: LA=Loan access, SA=Skill acquisition, BD=Bonding, OP=Opportunity, Abexp=Ability to expand business, Sconf=Self-confidence in business, PerSales=Sales Performance

5.8 Answering Research Questions

Research Question 1:

Correlation analysis on the relationship between micro-finance factors and women entrepreneurs' business performance

The Pearson correlation analysis (on Table 5.16) was used to test whether any relationship exists at all between micro-finance factors and women entrepreneurs' business performance (Research Question 1).

However, the new variables resulted from the Exploratory Factor Analysis were used to represent the old variables. For example, loan access represented credit, skill acquisition represented training, bonding represented social capital, opportunity for business improvement represented opportunity for entrepreneurial activity, ability to expand business and self-confidence in doing business represented attitude towards micro-finance, and women entrepreneurs' sales performance represented women entrepreneurs' business performance.

The results of the correlation analysis indicated that a relationship exists between micro-finance factors (loan access, skill acquisition and bonding) and women entrepreneurs' business (sales) performance; though loan access showed a weak relationship. Opportunity for entrepreneurial activity (opportunity for business improvement), and attitude towards micro-finance (ability to expand business and self-confidence in doing business) were also related to women entrepreneurs' business (sales) performance. These relationships were positive. The results indicated that these micro-finance factors

were critical to women entrepreneurs' business performance in Nigeria. Hence, the results answered Research Question 1 in the affirmative that a relationship exists between micro-finance factors and women entrepreneurs' business performance.

Research Question 2:

Multiple regression analysis on the relationship between micro-finance related factors and women entrepreneurs' business performance

Multiple regression analysis (on Table 5.18) was used to verify the nature of the relationship between micro-finance related factors and women entrepreneurs' business performance (Research Question 2).

The results of the multiple regression analysis indicated that a positive relationship exists between micro-finance factors (loan access, skill acquisition and bonding) and women entrepreneurs' business (sales) performance as the overall model was significant. However, training (skill acquisition) proved to be a critical factor to women entrepreneurs' business performance in Nigeria. Hence, the results answered Research Question 2 that a positive relationship exists between micro-finance factors and women entrepreneurs' business performance.

Research Question 3:

Multiple regression analysis on the relationship between micro-finance related factors and opportunity for entrepreneurial activity of women entrepreneurs

Multiple regression analysis (on Table 5.19) was used to verify the nature of the relationship between micro-finance related factors and opportunity for entrepreneurial activity of women entrepreneurs (Research Question 3).

The results of the multiple regression analysis indicated that a positive relationship exists between micro-finance factors (loan access, skill acquisition and bonding) and opportunity for entrepreneurial activity (opportunity for business improvement) of women entrepreneurs as the overall model was significant, though social capital (bonding) showed a weak relationship. Hence, the results answered Research Question 3 that a positive relationship exists between micro-finance factors and opportunity for entrepreneurial activity of women entrepreneurs.

Research Question 4:

Linear regression analysis on the relationship between opportunity for entrepreneurial activity of women entrepreneurs and women entrepreneurs' business performance

Linear regression analysis (on Table 5.20) was used to verify the nature of the relationship between opportunity for entrepreneurial activity (opportunity for business improvement) of women entrepreneurs and women entrepreneurs' business performance (Research Question 4).

The results of the linear regression analysis indicated that a positive relationship exists between opportunity for entrepreneurial activity (opportunity for business improvement) of women entrepreneurs and women entrepreneurs' business (sales) performance as the

overall model was significant. The individual coefficient of opportunity also showed a high significant value. Hence, the results answered Research Question 4 that a positive relationship exists between opportunity for entrepreneurial activity and women entrepreneurs' business performance.

Research Question 5:

Hierarchical regression analysis on the mediating influence of opportunity for entrepreneurial activity on the relationship between micro-finance related factors and women entrepreneurs' business performance

Hierarchical regression analysis (on Table 5.21) was used to verify whether opportunity for entrepreneurial activity mediates the relationship between micro-finance related factors and women entrepreneurs' business performance (Research Question 5).

The results of the hierarchical regression analysis indicated that opportunity for entrepreneurial activity (opportunity for business improvement) partially mediated the relationship between micro-finance factors (loan access, skill acquisition, bonding) and women entrepreneurs' business (sales) performance as the overall model was significant, though training (skill acquisition) appeared to be a critical factor in the mediated relationship. Hence, the results answered Research Question 5 that opportunity for entrepreneurial activity mediates the relationship between micro-finance related factors and women entrepreneurs' business performance.

Research Question 6:

Hierarchical regression analysis on the moderating influence of attitude towards micro-finance on the relationship between micro-finance related factors, opportunity for entrepreneurial activity and women entrepreneurs' business performance

Hierarchical regression analyses (on Table 5.22 and Table 5.23) were used to verify whether attitude towards micro-finance moderates the relationship between micro-finance related factors, opportunity for entrepreneurial activity and women entrepreneurs' business performance (Research Question 6).

The results of the hierarchical regression analyses indicated that attitude towards micro-finance (ability to expand business and self-confidence in business) partially moderated the relationship between micro-finance factors (loan access, skill acquisition and bonding), opportunity for entrepreneurial activity (opportunity for business improvement) and women entrepreneurs' business (sales) performance. This is because the overall models were significant. The individual coefficients of the interaction terms were also significant. Hence, the results answered Research Question 6 that attitude towards micro-finance moderates the relationship between micro-finance related factors and women entrepreneurs' business performance.

CHAPTER SIX

DISCUSSION, CONCLUSION AND RECOMMENDATION

6.0 Overview of the Chapter

The main purpose of this study was to examine whether a relationship exist at all between micro-finance factors offered by micro-finance institutions and women entrepreneurs' business performance. It was also to examine the relationship between micro-finance factors and women entrepreneurs' business performance in Nigeria. Again, the study was meant to test the mediating effect of opportunity for entrepreneurial activity and the moderating effect of attitude towards micro-finance on the relationship between micro-finance factors and women entrepreneurs' business performance. This chapter was used to present the discussions of the findings related to these relationships. Therefore, a recapitulation of the study's objectives was given in this chapter, followed by the research questions. Recapitulation of the study's findings was given and discussion of the findings in relation to the problem statement was given within the Nigerian context. The contributions of the study in terms of the theoretical, practical and policy implications were highlighted in detail. Finally, the general conclusion, the limitations of the study and the suggestions for future research were discussed.

6.1 Summary of Findings and Contributions of the Study

The study focused on the following questions: (i) Is there a relationship between micro-finance related factors (credit, savings, training and social capital) provided by micro-finance institutions; and women entrepreneurs' business performance? (ii) What relationship exists between micro-finance related factors (credit, savings, training and social capital) offered by micro-finance institutions; and women entrepreneurs' business performance? (iii) What relationship exists between credit, savings, training and social capital offered by micro-finance institutions; and opportunity for entrepreneurial activity of women entrepreneurs? (iv) What relationship exists between opportunity for entrepreneurial activity and women entrepreneurs' business performance? (v) Does opportunity for entrepreneurial activity mediate the relationship between credit, savings, training and social capital offered by micro-finance institutions; and women entrepreneurs' business performance? (vi) Does attitude towards micro-finance moderate the relationship between credit, savings, training, social capital and opportunity; and women entrepreneurs' business performance? Each of these issues are discussed in detail in subsequent sections with respect to the existing knowledge and the contributions of the findings in enhancing further understanding in the research area.

However, the new variables resulted from the Exploratory Factor Analysis were used to represent the old variables. For example, loan access represented credit, skill acquisition represented training, bonding represented social capital, opportunity for business improvement represented opportunity for entrepreneurial activity, ability to expand business and self-confidence in doing business represented attitude towards micro-

finance, and women entrepreneurs' sales performance represented women entrepreneurs' business performance.

The study concluded that credit (loan access), training (skill acquisition) and social capital (bonding) offered by micro-finance institutions positively influenced women entrepreneurs' business (sales) performance in Nigeria. This is because the correlation matrix indicated that a relationship exists between micro-finance related factors offered by micro-finance institutions and women entrepreneurs' business performance. This showed that these factors are very important in aiding the women to achieve business performance. Therefore, Research Objective 1 was met.

Credit (loan access) is positively related to women entrepreneurs' business (sales) performance (H1)

Credit is a crucial micro-finance factor for business opportunity and performance, yet previous studies agreed that women entrepreneurs, especially in developing countries, lack access to credit provided by micro-finance institutions due to gender discriminations (May, 2007; Roomi & Parrot, 2008; Otero 1999), long processing period for loan (Ojo, 2009; Olomola, 2002) and compulsory group savings (Versluysen, 1999). This situation resulted to their low business performance compared to their male counterparts (Harrison & Mason, 2007). The measures for credit, training and performance were majorly adapted from Kuzilwa (2005) to determine the relationship between credit, training, and social capital; and women entrepreneurs' business performance. The result generally showed that women entrepreneurs in Nigeria had a

good perception of credit (loan access) as vital to their business success as indicated by the descriptive statistics ($M = 5.816$, $SD = 1.528$).

In examining the hypothesis related to the relationship between credit (loan access) and women entrepreneurs' business (sales) performance, it was found that there is no significant relationship between credit (loan access) and women entrepreneurs' business (sales) performance in Nigeria. The result implied that credit alone could not lead to business performance of the women entrepreneurs without other micro-finance factors. Therefore, this study recommended a tie-in of credit with training and social capital to women entrepreneurs in Nigeria since the overall model was significant.

Previous studies found that credit positively predicted women entrepreneurs' business performance (IFAD, 2006; Kuzilwa, 2005; Lakwo, 2007; Martin, 1999; Peter, 2001; UNCDF/UNDP, 2003). This study contradicted previous studies since it failed to support the relationship between loan accessed from micro-finance institutions and women entrepreneurs' business performance. This could possibly be because credit in itself, without training and social capital, could not lead to women entrepreneurs' business performance in Nigeria due to the women's low educational levels. This also supported the argument of Karnani (2007) that loan extension to women entrepreneurs could not lead to their welfare improvement because of their low educational levels which was a barrier to their proper use of the loans. It also supported the argument of Kuzilwa (2005), in Tanzania for example, that it is very difficult to assess the effect of one micro-finance factor in isolation in contributing to the success of entrepreneurial activities. He went on to recommend that credit and training should be jointly provided

to women entrepreneurs in developing countries. Also, from his oral interview, the women entrepreneurs complained that the loan size they received was too small for business. He also reported that 25% of the entrepreneurs complained that the loan they received was too low for business expansion or investment but only sufficient as working capital, and that the increase in their income was not due to credit only.

Training (skill acquisition) is positively related to women entrepreneurs' business (sales) performance (H3)

Previous studies had reported that women entrepreneurs, especially in developing countries have low educational levels (Akanji, 2006; Harrison & Mason, 2007; Tazul, 2007) and they lack training (Brana, 2008; Cheston & Kuhn, 2002; Ibru, 2009; IFC, 2007; Karnani, 2007) whereas training enhances business opportunity and performance (Kuzilwa, 2005). Again, the exploitation of entrepreneurial opportunity depends on the entrepreneur's level of education, skills or knowledge acquired through work experience, social networks or credit (Shane, 2003). The result generally showed that women entrepreneurs in Nigeria perceived training (skill acquisition) as very critical to their business performance ($M = 6.570$, $SD = 0.672$).

In examining the hypothesis related to the relationship between training (skill acquisition) received from micro-finance institutions and women entrepreneurs' business (sales) performance, it was found that there is a significant positive relationship between skill acquisition training and women entrepreneurs' business performance in Nigeria. The result implied that skill acquisition training could lead to business performance of the women entrepreneurs. Therefore, more emphasis should be placed

on skill acquisition training, by the government of Nigeria and the micro-finance institutions, for women entrepreneurs due to their low levels of education.

Previous studies found that skill acquisition training directly predicted women entrepreneurs' business performance (Cheston & Kuhn, 2002; Ibru, 2009; Kickul et al., 2007; Kuzilwa, 2005; Reavley & Lituchy, 2008). The result of this study was consistent with the findings of previous studies. For instance, Kuzilwa (2005) found that those entrepreneurs who had access to credit, education and skill training had good business success than others. The result of this study indicated the crucial role that skill acquisition training plays in women entrepreneurs' business performance, mostly in developing countries due to their low levels of education and lack of managerial and entrepreneurial experience. Therefore, Research Objective 2 was met.

Social capital (bonding) is positively related to women entrepreneurs' business (sales) performance (H4)

Many studies supported the fact the social capital is crucial in accessing information and resources for business start-ups or for growing firms (Brata, 2004; Lawal et al., 2009; Shane, 2003). Of vital use of the social capital to aid women entrepreneurial opportunity and performance is the group cohesiveness known as relationship strength or bonding (Allen, 2000; Mohamed et al., 1997; Olomola, 2002; Tata & Prasad, 2008), yet women entrepreneurs especially in developing countries lack social connections that are a source of information for access to micro-finance factors (Olomola, 2002). The measures for social capital were majorly adapted from Allen (2000) and Olomola (2002). The result generally showed that social capital (bonding), as a micro-finance factor, was perceived

very highly by women entrepreneurs in Nigeria as being critical to their business performance ($M = 6.653$, $SD = 0.659$).

In examining the hypothesis related to the relationship between social capital (bonding) and women entrepreneurs' business (sales) performance, it was found that there is no significant relationship between social capital and women entrepreneurs' business performance in Nigeria. The result implied that social capital alone could not lead to business performance of the women entrepreneurs without other micro-finance factors. Therefore, this study recommended a tie-in of social capital with credit and skill acquisition training to women entrepreneurs in Nigeria since the overall model was significant.

Previous studies found that social capital directly predicted women entrepreneurs' business performance (Mohamed et al., 1997; Olomola, 2002). This study contradicted previous studies since it failed to support the relationship between social capital and women entrepreneurs' business performance. This could possibly be because social capital in itself, without credit and skill acquisition training, could not lead to women entrepreneurs' business performance in Nigeria due to the women's low levels of education and income.

Credit (loan access) is positively related to opportunity for entrepreneurial activity (opportunity for business improvement) of women entrepreneurs (H5)

There are literature supports of the fact that credit leads to opportunity for entrepreneurial activity of entrepreneurs. While Kuzilwa (2005) argued that the

existence of opportunity is a critical factor for entrepreneurial activity to occur since entrepreneurial activity could not occur in the absence of new product, new sources of supply or new technology; VanHorne (1980) concurred with other Financial Theorists that funds are usually sourced to finance predetermined projects or contracts. In the same vein, Brana (2008) in France, for example, reported that credit access created opportunity for entrepreneurs to generate income while Shane (2003) in USA, for example, stated that acquisition of external funds created opportunity for entrepreneurial income-generating activity. The result of the descriptive statistics generally showed that opportunity for entrepreneurial activity (opportunity for business improvement) was perceived very highly by women entrepreneurs in Nigeria as being critical to their business (sales) performance ($M = 6.814$, $SD = 0.345$).

In examining the hypothesis related to the relationship between credit (loan access) from micro-finance institutions and opportunity for entrepreneurial activity (opportunity for business improvement) of women entrepreneurs, it was found that there is a significant positive relationship between credit (loan access) and opportunity for entrepreneurial activity (opportunity for business improvement) of women entrepreneurs in Nigeria. The result implied that credit could lead to opportunity for entrepreneurial activity of women entrepreneurs in Nigeria. Therefore, the study recommended that concerted effort should be made by the government of Nigeria and the micro-finance institutions to make it easy for women entrepreneurs to access loan for business start-ups or improvement so as to reduce women unemployment. This is because most women entrepreneurs surveyed indicated that it was difficult for them to access loan due to the long process involved,

and that the loan received was not enough for their business as it was short of the amount applied for.

Previous studies found that credit positively predicted opportunity for entrepreneurial activity of women entrepreneurs (Brana, 2008; Shane, 2003). The results indicated the crucial role that credit plays in opportunity for new business or business improvement of women entrepreneurs, mostly in developing countries, due to their low savings, low household and business income. The result of this study supported previous studies that credit is positively related to opportunity for entrepreneurial activity of women entrepreneurs. Therefore, Research Objective 3 was met.

Training (skill acquisition) is positively related to opportunity for entrepreneurial activity (opportunity for business improvement) of women entrepreneurs (H7)

It has been reported in the literature that an entrepreneur's level of education and skills or knowledge acquired through work experience leads to the identification and/or exploitation of entrepreneurial opportunity (Shane, 2003). Stohmeyer (2007) in Germany, for example, also discovered that the type of education and training received led to the type of entrepreneurial activity engaged in.

In examining the hypothesis related to the relationship between training (skill acquisition) received from micro-finance institutions and opportunity for entrepreneurial activity (opportunity for business improvement) of women entrepreneurs, it was found that there is a significant positive relationship between skill acquisition training and opportunity for entrepreneurial activity of women entrepreneurs in Nigeria. The result

implied that skill acquisition training could lead to opportunity for entrepreneurial activity of women entrepreneurs in Nigeria. Therefore, the study recommended that more emphasis should be placed on skill acquisition training for the women entrepreneurs by the government of Nigeria and the micro-finance institutions.

Previous studies found that education and training positively predicted opportunity for entrepreneurial activity of women entrepreneurs (Shane, 2003; Stohmeyer, 2007). The result of this study indicated that skill acquisition training played a crucial role in opportunity for new business or business improvement of women entrepreneurs in Nigeria, due to their low educational levels. Therefore, the result of this study supported previous studies that skill acquisition training is positively related to opportunity for entrepreneurial activity of women entrepreneurs. Therefore, Research Objective 3 was further met.

Social capital (bonding) is positively related to opportunity for entrepreneurial activity (opportunity for business improvement) of women entrepreneurs (H8)

Social capital creates opportunity for entrepreneurial activity (Allen, 2000) which leads to business performance (Allen et al., 2008; Salman, 2009) and social capital provides opportunity for women entrepreneurs to network in order to gain access to information and other resources for business (Tata & Prasad, 2008). Social capital is necessary for start-ups or growing firms (Lawal et al., 2009).

In examining the hypothesis related to the relationship between social capital (bonding) and opportunity for entrepreneurial activity (opportunity for business improvement) of

women entrepreneurs, it was found that there is no significant relationship between social capital (bonding) and opportunity for entrepreneurial activity (opportunity for business improvement) of women entrepreneurs in Nigeria. The result implied that social capital alone could not lead to opportunity for entrepreneurial activity of women entrepreneurs in Nigeria. Therefore, the study recommended that social capital offered by micro-finance institutions should be tied with skill acquisition training and credit for women entrepreneurs in Nigeria since the overall model was significant.

Previous studies found that social capital directly predicted opportunity for entrepreneurial activity of women entrepreneurs (Allen, 2000; Shane, 2003; Tata & Prasad, 2008). However, the results of this study contradicted the above previous studies because it fails to support the direct relationship between social capital and opportunity for entrepreneurial activity of the women entrepreneurs in Nigeria. The probable reason for this could be their low educational levels and cultural barriers or factors that restrict women's social affiliations. For example, most married women remain indoors or must get approval from their husbands before getting access to any loan and how to use such acquired resources and information.

Opportunity for entrepreneurial activity (opportunity for business improvement) is positively related to women entrepreneurs' business (sales) performance (H9)

Evidences abound in the literature that entrepreneurial activity such as business diversification in terms of new product or service innovation, in most cases, leads to business performance (Antoncic, 2006; Pandya & Roa, 1998; Salavou, 2002). Proper use of the acquired funds in an entrepreneurial activity could lead to business performance

(Koontz & Weihrich, 2006; Shane, 2003). Social capital creates opportunity for entrepreneurial activity (Allen, 2000) which leads to profit (Allen et al., 2008; Salman, 2009), and social capital provides opportunity for women entrepreneurs to network in order to gain access to information and other resources for business (Tata & Prasad, 2008). The above studies indicated that opportunity for entrepreneurial activity (opportunity for business improvement) could lead to women entrepreneurs' business (sales) performance.

In examining the hypothesis related to the relationship between opportunity for entrepreneurial activity (opportunity for business improvement) and women entrepreneurs' business (sales) performance, it was found that there is a significant positive relationship between opportunity for entrepreneurial activity and women entrepreneurs' business performance in Nigeria. Therefore, the study recommended that women entrepreneurs in Nigeria should have specific business projects or improvement programs to execute before seeking for micro-financial assistance and the loan, for example, should be used for the intended business as this will lead to their subsequent business performance.

Previous studies found that opportunity for entrepreneurial activity is positively related to women entrepreneurs' business performance (Brana, 2008; Shane, 2003; Tata & Prasad, 2008). Antoncic (2006) argued that business diversification in terms of new product or service innovation, in most cases, leads to business performance. Allen et al. (2008) and Salman (2009) stated that social capital creates opportunity for entrepreneurial activity which leads to profits. The results of this study supported

previous studies (Brana, 2008; Shane, 2003; Tata & Prasad, 2008) that opportunity for entrepreneurial activity is positively related to women entrepreneurs' business performance. Therefore, Research Objective 4 was met.

Opportunity for entrepreneurial activity (opportunity for business improvement) mediates the relationship between credit (loan access), training (skill acquisition), social capital (bonding); and women entrepreneurs' business (sales) performance (H10)

It is reported that micro-finance services create opportunity for entrepreneurs to generate income (Brana, 2008). The discovery of such opportunity and the decision to exploit it leads to a search for external funds, the acquisition of which again creates opportunity for entrepreneurial activity (Shane, 2003). Proper use of the acquired funds could lead to business performance (Koontz & Weihrich, 2006; Shane, 2003). Social capital creates opportunity for entrepreneurial activity (Allen, 2000) which leads to profit (Allen et al., 2008; Salman, 2009), and social capital provides opportunity for women entrepreneurs to network in order to gain access to information and other resources for business (Tata & Prasad, 2008). The above studies indicated that opportunity for entrepreneurial activity could mediate between credit, training and social capital; and women entrepreneurs' business performance.

In examining the hypothesis related to the mediating influence of opportunity for entrepreneurial activity (opportunity for business improvement) on the relationship between credit (loan access), training (skill acquisition) and social capital (bonding); and women entrepreneurs' business (sales) performance, it was found that opportunity for business improvement partially mediated the relationship between loan access, skill

acquisition and bonding; and women entrepreneurs' sales performance in Nigeria. The result implied that credit, training and social capital indirectly predicted women entrepreneurs' business performance in Nigeria through opportunity for entrepreneurial activity. Skill acquisition training was significant but not credit and social capital. Therefore, the study recommended that micro-finance institutions should ensure that the women entrepreneurs, seeking for micro-financial assistance, already have specific business projects or improvement programs to execute that will lead to their subsequent business performance.

Previous studies found that opportunity for entrepreneurial activity mediated the relationship between credit, training or social capital; and women entrepreneurs' business performance (Shane, 2003; Tata & Prasad, 2008). The results of this study supported the above previous studies because opportunity for entrepreneurial activity partially mediated between the micro-finance factors and women entrepreneurs' business performance as the overall model was significant. Therefore, Research Objective 5 was met. However, the mediator had no significant influence on the relationship between credit, social capital, and business performance. This suggested that skill acquisition training was a critical factor to women entrepreneurs' business performance in Nigeria, directly and indirectly through opportunity for entrepreneurial activity.

Attitude towards micro-finance moderates the relationship between credit, training, social capital and opportunity; and women entrepreneurs' business performance (H11)

Behavioral scientists such as Crisp and Turner (2007) and Ajzen (1991) studied the relationship between attitude and behavior and concluded that attitude and behavioral intentions are positively related. That is, attitude towards behavior leads to intention which eventually leads to actual behavior. Asikhia (2009) investigated attitudinal response to micro-finance banks' services by entrepreneurs in Nigeria and found that, though most entrepreneurs agreed to have accessed loan from micro-finance institutions, their expectations were still much especially with regards to loan repayment and delivery of the right quantity of service at the right time. This implies that an entrepreneur's type of attitude towards micro-finance (favorable or unfavorable) determines his/her level of business performance. Therefore, attitude towards micro-finance could moderate the relationship between micro-finance factors and women entrepreneurs' business performance.

In examining the hypothesis related to the moderating influence of attitude towards micro-finance on the relationship between credit, training, social capital, opportunity and women entrepreneurs' business performance; it was found that attitude towards micro-finance partially moderated the relationship between micro-finance factors, opportunity for entrepreneurial activity and women entrepreneurs' business performance in Nigeria. Therefore, the study recommended that women entrepreneurs in Nigeria should have positive attitude towards micro-finance in terms of their ability to expand business and self-confidence in business without which micro-financial aid could not lead to business performance.

Previous studies measured the relationship between attitude, behavioral intention and actual behavior; in this case entrepreneurial opportunity and performance (Ajzen, 1991; Crisp & Turner, 2007; Shane, 2003; Vob & Muller, 2009). No study had measured the moderating influence of attitude (ability to expand business and self-confidence in business) on the relationship between credit (loan access), training (skill acquisition), social capital (bonding), and opportunity for entrepreneurial activity (opportunity for business improvement); and women entrepreneurs' business (sales) performance. Therefore, this study has made a novel discovery that attitude towards micro-finance partially moderates the relationship between credit, training, social capital, and opportunity for entrepreneurial activity; and women entrepreneurs' business performance. Therefore, Research Objective 6 was met.

6.2 Implications of the Study for Research

The contributions, implications or conclusions of the study were discussed under the methodological issues and the theoretical issues. Methodological issues were concerned with the implications of the research design for future empirical research, while the theoretical issues were concerned with the specific implications of the study's findings for existing theory related to micro-finance and/or entrepreneurship.

6.2.1 Methodological Contribution

This study made a methodological contribution by adopting quantitative research approach, especially the hierarchical regression analysis.

6.2.2 Theoretical Contribution

Entrepreneurship Model (Shane, 2003): Shane's model of entrepreneurial process, in summary, postulated that opportunity discovery leads to the quest for micro-finance services; the acquisition of micro-finance could also lead to opportunity discovery and/or exploitation (Shane, 2003). Schumpeter (1942) postulated that opportunity identification and exploitation leads to innovation and technology which leads to profit. The sustenance of such profit by maintaining a competitive edge over imitators leads to economic growth. Ajzen (1991) concluded that intention is the key predictor of behavior and this depends on the person's attitude or an evaluation of the outcome of the behavior. The extensive literature reviewed by this study has contributed in enhancing increased understanding of the major works done in the area of micro-finance and entrepreneurship. However, the major theoretical contributions of this study are discussed below.

Many studies have examined the influence of micro-finance factors on women entrepreneurs' business performance (e.g Kuzilwa, 2005; Mohamed et al., 1997; Tata & Prasad, 2008). However, very little was known about the relationship between credit, savings, training and social capital offered by micro-finance institutions; and women entrepreneurs' business performance. This study filled this gap by investigating the composite and individual influence of credit, training and social capital offered by micro-finance institutions; and women entrepreneurs' business performance. The result indicated that the micro-finance factors jointly and positively influenced women entrepreneurs' business performance as the overall model was significant. However,

skill acquisition training appeared to be the most important factor because from the individual coefficients, only skill acquisition training was significant.

Few studies also examined the influence of micro-finance factors on opportunity for entrepreneurial activity of women entrepreneurs (Brana, 2008; Shane, 2003). This study filled this gap by examining the influence of micro-finance factors on opportunity for entrepreneurial activity of women entrepreneurs. The result indicated that the micro-finance factors jointly and positively predicted opportunity for entrepreneurial activity of women entrepreneurs in Nigeria as the overall model was significant. Specifically, the result revealed that there is a significant positive relationship between credit (loan access) and training (skill acquisition); and opportunity for entrepreneurial activity (opportunity for business improvement) of women entrepreneurs in Nigeria.

Previous studies have examined the influence of opportunity for entrepreneurial activity on enterprise performance generally (Antoncic, 2006; Koontz & Weihrich, 2006; Shane, 2003). For example, social capital creates opportunity for entrepreneurial activity which leads to profit (Allen et al., 2008; Salman, 2009). This study specifically and empirically measured the influence of opportunity for entrepreneurial activity (opportunity for business improvement) on women entrepreneurs' business (sales) performance. The result indicated a significant positive relationship between opportunity for entrepreneurial activity and women entrepreneurs' business performance in Nigeria.

Very few known studies have empirically measured the mediating effect of opportunity for entrepreneurial activity on women entrepreneurs' business performance. For

example, Tata and Prasad (2008) measured the effect of social capital on women entrepreneurs' business performance in USA. However, very little was known about the mediating influence of opportunity for entrepreneurial activity on the joint relationship between credit, skill acquisition training and social capital; and women entrepreneurs' business performance. This study filled this gap by investigating the mediating influence of opportunity for entrepreneurial activity on the joint relationship between credit, training and social capital; and women entrepreneurs' business performance. The result showed that opportunity for entrepreneurial activity (opportunity for business improvement) partially mediated the relationship between credit (loan access), training (skill acquisition) and social capital (bonding); and women entrepreneurs' business (sales) performance as the overall model was significant. Opportunity for entrepreneurial activity partially mediated between skill acquisition training (not credit and social capital) and women entrepreneurs' business performance.

There was no known study that examined the moderating influence of attitude towards micro-finance on the relationship between credit, training, social capital and opportunity; and women entrepreneurs' business performance. However, very few Behavioral theorists have measured the moderating influence of attitude on behavioral intentions and actual behavior (Ajzen, 1991, Crisp & Turner, 2007). Therefore, this study filled the gap by examining the moderating influence of attitude towards micro-finance on the relationship between credit, training, social capital and opportunity; and women entrepreneurs' business performance. The result indicated that attitude towards micro-finance (ability to expand business and self-confidence in business) partially moderated the relationship between credit (loan access), training (skill acquisition),

social capital (bonding) and opportunity for entrepreneurial activity (opportunity for business improvement); and women entrepreneurs' business (sales) performance in Nigeria as the overall model was significant.

6.3 Implications and Recommendations of the Study for Practice/Policy

This section discussed the practical and policy or managerial implications of the study. This would help the government of Nigeria, and the micro-finance institutions, to take appropriate decision and policy action to create an enabling environment and financial supports for women entrepreneurs.

The correlation matrix indicated that a relationship exists between micro-finance related factors (credit, savings, training and social capital) offered by micro-finance institutions and women entrepreneurs' business performance. This showed that these services offered by the micro-finance institutions in Nigeria play a crucial role in women entrepreneurs' business performance and their subsequent wellbeing. Therefore, Research Objective 1 is satisfied.

The results of the regression analysis indicated that all the micro-finance factors influenced women entrepreneurs' business performance as the overall model was significant. However, skill acquisition training appeared to be the most important factor. With reference to the objectives of the study stated in chapter 1, this study concluded that credit, savings, training and social capital offered by micro-finance institutions positively influenced women entrepreneurs' business performance in Nigeria. Therefore,

the micro-finance institutions in Nigeria need to give a package of credit, training and social capital to women entrepreneurs; with special attention to skill acquisition training as it influenced women entrepreneurs' business performance most. The government of Nigeria needs to play an encouraging and persuasive role to the micro-finance institutions in this regard. Therefore, Research Objective 2 is satisfied.

The result also indicated also that there is a significant positive relationship between credit (loan access) and training (skill acquisition); and opportunity for entrepreneurial activity (opportunity for business improvement) of women entrepreneurs in Nigeria. Simply put, the acquisition of micro-finance factors especially credit and training could lead to opportunity for new business or improving an existing business. Considering the fact that youth and women unemployment is a concern to the Nigerian government, giving priority to credit extension and skill training to women entrepreneurs by the micro-finance banks would immensely assist the government in corbing the menace of unemployment, especially women unemployment. This is because the women would use such micro-financial assistance to start new business or improve an existing one. Therefore, Research Objective 3 is satisfied.

The result again indicated a significant positive relationship between opportunity for entrepreneurial activity (opportunity for business improvement) and women entrepreneurs' business (sales) performance in Nigeria. This showed that business start-up or business improvement, if properly managed, could lead to women entrepreneurs' business performance. The implication of this result is that women entrepreneurs should ensure that the micro-financial assistance received is meant for the intended business

improvement or start-up, and they should work hard to achieve high performance in order to repay the loan, for example. Therefore, Research Objective 4 is satisfied.

The result yet showed that opportunity for entrepreneurial activity (opportunity for business improvement) mediated the relationship between credit (loan access), training (skill acquisition), and social capital (bonding); and women entrepreneurs' business (sales) performance as the overall model was significant. However, skill acquisition training appeared to be most important factor regarding indirect influence. Therefore, women entrepreneurs should ensure that there exist an opportunity for new business or business improvement before seeking micro-financial aid; without which business performance would be a mirage as such funds could be diverted to other uses. Therefore, Research Objective 5 is satisfied.

Another positive result of the study was that attitude towards micro-finance (ability to expand business and self-confidence in business) moderated the relationship between credit (loan access), training (skill acquisition), social capital (bonding) and opportunity for entrepreneurial activity (opportunity for business improvement); and women entrepreneurs' business (sales) performance in Nigeria as the overall model was significant. Therefore, Research Objective 6 is satisfied.

6.4 Limitations of the Study

The study was limited to Nigeria; as such it would be necessary to test the efficiency or reliability of the model in different settings as well. The fact that no specific industry was focused in the study was another limitation.

Earlier research questions were answered without savings as a micro-finance factor which was as a result of the Exploratory Factor Analysis (EFA). This led to the restatement of the hypotheses. This may be due to the adapted questionnaire applied in a different socio-cultural environment.

Again, all the limitations common with sampling survey and the instrument of questionnaire were also associated with this study. Notwithstanding the limitations, this study has contributed to the advancement in knowledge in the area of entrepreneurship finance. It would also help the government of Nigeria, micro-finance institutions and women entrepreneurs to understand the relationship between micro-finance factors and women entrepreneurs' business performance.

6.5 Suggestions for Future Research

Future researchers in the area of micro-finance and/or entrepreneurship could investigate whether self-confidence could be positively related to women entrepreneurs' business performance; either in the Nigerian context or other countries. This is because Baron and Kenny (1986) stated that a moderator stands in the same position as an independent variable.

It would also be interesting to conduct a research to assess the predictive validity of this study by performing a second order factor analysis, using Structural Equation Modelling (SEM), to test whether or not women entrepreneurs' business performance could lead to

economic growth of a country in terms of savings, outputs, employment generation and children school enrolment.

6.6 Conclusion

With reference to the objectives of the study stated in chapter 1, this study concluded that micro-finance factors (credit, savings, training and social capital) offered by micro-finance institutions positively influenced women entrepreneurs' business performance in Nigeria. This is because the correlation matrix indicated that a relationship exists between micro-finance related factors (credit, training and social capital) offered by micro-finance institutions and women entrepreneurs' business (sales) performance. This showed that these services offered by the micro-finance institutions in Nigeria play a crucial role in women entrepreneurs' business performance and their subsequent wellbeing.

Again, this study examined 10 hypotheses concerning the relationship between micro-finance factors and women entrepreneurs' business performance. The thesis has made an important contribution by providing increased understanding of the direct influence of micro-finance factors on women entrepreneurs' business performance. It has also contributed by providing increased awareness of the indirect influence of micro-finance factors on women entrepreneurs' business performance through opportunity for business improvement as a mediator which had received little attention in the literature. The study further made a novel contribution to knowledge, and to the entrepreneurship theory, by revealing that attitude towards micro-finance moderated the relationship between micro-

finance factors, opportunity for entrepreneurial activity and women entrepreneurs' business performance which had not received any attention in the literature. However, more research is needed to investigate whether self-confidence in business could positively be related to women entrepreneurs' business performance; and to use another statistical method, such as structural equation modeling, to extrapolate women entrepreneurs' business performance to economic growth of a country.

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APPENDICES

APPENDIX 1

QUESTIONNAIRE FOR WOMEN ENTREPRENEURS IN NIGERIA



WOMEN ENTREPRENEURS' PERFORMANCE: PRIVATE MICROFINANCE FACTORS WITH MEDIATING EFFECT OF OPPORTUNITY AND MODERATING EFFECT OF ATTITUDE

Dear Business Owner/Entrepreneur,

Almost every business man or woman, in whatever industry, recognizes the importance of micro-finance to his/her business success. Micro-enterprises, particularly women, are not exemption. To enhance entrepreneurship performance in Nigeria, data must be sourced for proper decision-making. Also, the Nigerian Government has a renewed interest to improve Enterprises in the country. As such, data is needed and to obtain such data, entrepreneurship surveys are relied upon. The following is a typical example of a questionnaire that might provide the data needed for decision by the Government, Micro-finance Institutions and Women Entrepreneurs. This study will adopt descriptive statistics, multiple and hierarchical regression analysis to analyze data and test hypotheses; compared to most previous studies that used descriptive statistics and multiple regression method.

The purpose of this study is to determine the effect of micro-finance factors on women entrepreneurs' performance in Nigeria. Your objective views are needed and you are expected to choose the answer that represents your opinion. No answer is categorized as either "correct" or "best". Your answers play a significant role in the success of this study and you are assured that such would be treated with utmost confidentiality. The questionnaire is divided into two parts. Part 1 contains micro-finance factors such as credit, savings, training and social capital measures, opportunity and attitude measures, women entrepreneurs' performance measures, and characteristics (demographics) of women entrepreneurs. This part is to measure the extent to which you have accessed micro-finance factors from micro-finance institution and the possible effect of such on your business performance. Part 2 contains general opinions of women entrepreneurs. In this part, your comments, suggestions or criticisms that are useful to this survey are highly appreciated.

Thank you for participating.

The Researcher (EKPE, ISIDORE) is a Ph.D candidate in the Department of Management, College of Business, Universiti Utara Malaysia. You can contact him through: ekpe60@yahoo.com, 2348028502193, +60133241348. The Supervisor, Norsiah Mat could also be contacted via: norsiah@uum.edu.my

PART 1

Based on your last loan, please answer Questions 1 to 61.

Section 1: Credit, Savings, Training and Social capital measures

The purpose of this section is to determine whether access to credit, savings, training and social capital will have positive effect on women entrepreneurs' performance in Nigeria.

The following statements indicate measures of the credit, savings, training and social capital you received from the micro-finance institution (MFI). Please circle one number to indicate your appropriate option: Strongly Disagree (SD)=1, Disagree Somewhat (DSW)=2, Disagree Slightly (DS)=3, Undecided (UD)=4, Agree Slightly (AS)=5, Agree Somewhat (ASW)=6 and Strongly Agree (SA)=7.

	SD	DSW	DS	UD	AS	ASW	SA
Credit Measures							
(A) Loan Size:							
1 The loan size I received was adequate for business	1	2	3	4	5	6	7
2 I got the amount of loan I requested for	1	2	3	4	5	6	7
3 It was difficult to access or get the loan	1	2	3	4	5	6	7
4 It took long process to get the loan	1	2	3	4	5	6	7
5 Payment of loan was condition for new loan	1	2	3	4	5	6	7
6 The maturity period was alright	1	2	3	4	5	6	7
7 Group members monitor and urge me to pay the loan	1	2	3	4	5	6	7
8 Payment of loan (principal + interest) was made weekly	1	2	3	4	5	6	7
(B) Use of Loan:							
9 What was the amount of loan spent on stock?							
[] #1000-5000							
[] #5001-10000							
[] #10001-15000							
[] #15001-20000							
[] #20001-25000							
[] #25001-30000							
[] Above #30000							
10 What was the amount of loan spent on other business issues (e.g utilities)?							
[] #1000-5000							
[] #5001-10000							
[] #10001-15000							
[] #15001-20000							
[] #20001-25000							
[] #25001-30000							
[] Above #30000							

11 What was the amount of loan spent on family issues (e.g school fees)?

- ☐ #1000-5000
- ☐ #5001-10000
- ☐ #10001-15000
- ☐ #15001-20000
- ☐ #20001-25000
- ☐ #25001-30000
- ☐ Above #30000

12 What was the amount of loan spent on charity?

- ☐ #1000-5000
- ☐ #5001-10000
- ☐ #10001-15000
- ☐ #15001-20000
- ☐ #20001-25000
- ☐ #25001-30000
- ☐ Above #30000

Savings Measures		SD	DSW	DS	UD	AS	ASW	SA
13	Mandatory group savings was required for loan	1	2	3	4	5	6	7
14	Mandatory individual savings was required for loan	1	2	3	4	5	6	7
15	Mandatory savings act as security for loan	1	2	3	4	5	6	7
Training Measures								
(A) Skill Acquisition:								
16	I was given training by MFI before getting the loan	1	2	3	4	5	6	7
17	It gave me the required skill to start business	1	2	3	4	5	6	7
18	It gave me the required competence for success	1	2	3	4	5	6	7
19	It gave me assurance for success	1	2	3	4	5	6	7
20	The training was effective	1	2	3	4	5	6	7
21	I was taught how to read and write	1	2	3	4	5	6	7
22	It provided general awareness about the business	1	2	3	4	5	6	7
(B) General Management:								
23	I received regular training on management after I got the loan	1	2	3	4	5	6	7
24	I attended seminars on management after the loan	1	2	3	4	5	6	7
25	Training gave me current business/market information	1	2	3	4	5	6	7
26	Training gave me knowledge to manage loan/business	1	2	3	4	5	6	7

27 Training on management focused on business operational techniques	1	2	3	4	5	6	7
28 Training helped me to relate well with customers	1	2	3	4	5	6	7

Social Capital Measures

(A) Group membership:

29 Group membership was a condition for getting the loan	1	2	3	4	5	6	7
30 I belong to more than one group							

[] Yes

[] No

31 I participate actively in other loan groups as well	1	2	3	4	5	6	7
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32 More group members help to get information	1	2	3	4	5	6	7
---	---	---	---	---	---	---	---

(B) Bonding (Relationship strength):

33 We have close friendship in my group	1	2	3	4	5	6	7
---	---	---	---	---	---	---	---

34 We communicate frequently	1	2	3	4	5	6	7
------------------------------	---	---	---	---	---	---	---

35 We meet regularly; at least once a week	1	2	3	4	5	6	7
--	---	---	---	---	---	---	---

Section 2 Opportunity Measures

The aim of this section is to examine the impact of credit, savings, training and social capital on the opportunity for entrepreneurial activity of women entrepreneurs in Nigeria.

The following statements indicate how the credit, savings, training and social capital received created opportunity for you to improve performance. Please circle one number to indicate your agreement on each statement.

Opportunity (for entrep. activity) Measures	SD	DSW	DS	UD	AS	ASW	SA
--	-----------	------------	-----------	-----------	-----------	------------	-----------

Microfinance gave me:

36 resources to improve or expand my business	1	2	3	4	5	6	7
---	---	---	---	---	---	---	---

37 : opportunity to improve my business	1	2	3	4	5	6	7
---	---	---	---	---	---	---	---

38 : opportunity to join groups	1	2	3	4	5	6	7
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39 : motivation or desire for success	1	2	3	4	5	6	7
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40 Group provides business information for me	1	2	3	4	5	6	7
---	---	---	---	---	---	---	---

41 My business does well due to micro-finance	1	2	3	4	5	6	7
---	---	---	---	---	---	---	---

Attitude (towards micro-finance) Measures

42 When I received micro-finance, I was encouraged	1	2	3	4	5	6	7
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43 Micro-finance gave me ability to improve or expand my business	1	2	3	4	5	6	7
---	---	---	---	---	---	---	---

44 Micro-finance gave me willingness to improve or expand my business	1	2	3	4	5	6	7
45 Micro-finance made me work harder	1	2	3	4	5	6	7
46 Micro-finance helped me in business planning	1	2	3	4	5	6	7
47 Micro-finance gave me confidence in doing business	1	2	3	4	5	6	7
48 Micro-finance gave me assurance for success	1	2	3	4	5	6	7

Section 3 Women Entrepreneurs' Performance Measures

The aim of this section is to determine the possible effect of opportunity (created by microfinance factors) on women entrepreneurs' performance in Nigeria.

The following statements indicate the effect of credit, savings, training and social capital you received from MFI on your business performance. Please circle one number to indicate your agreement on each statement.

Women Entrepreneurs' Performance	SD	DSW	DS	UD	AS	ASW	SA
Due to micro-finance I received:							
49 : my income (net profit) has increased	1	2	3	4	5	6	7
50 : the number of items sold increased	1	2	3	4	5	6	7
51 : my savings account has improved	1	2	3	4	5	6	7
52 : my business and domestic expenses are easily settled	1	2	3	4	5	6	7
53 : my output has increased	1	2	3	4	5	6	7
54 I have bought more stock/raw material	1	2	3	4	5	6	7
55: customers output demand are met (improved service)	1	2	3	4	5	6	7
56: my investment has increased	1	2	3	4	5	6	7
57 I have opened a new branch/business	1	2	3	4	5	6	7
58 I have bought new machine/equipment	1	2	3	4	5	6	7
59 : the number of household employees increased	1	2	3	4	5	6	7
60 I have a new part-time staff	1	2	3	4	5	6	7
61 I have a new apprentice	1	2	3	4	5	6	7

Section 4 Characteristics of Women Entrepreneurs

The aim of this section is to identify the unique characteristics of women entrepreneurs in Nigeria.

Demography

Please tick (✓) in the box relevant to you.

A. Education:

What is your highest educational level presently?

- ☐ Low: Primary education
- ☐ Low: Secondary education
- ☐ High: Tertiary education

B. Age:

What is your age range?

- ☐ Young: less than 20 years,
- ☐ Young: 20-29yrs,
- ☐ Old: 30-39yrs,
- ☐ Old: 40-49yrs,
- ☐ Old: 50yrs and above.

C. Marital Status:

What is your marital status? ☐ Married, ☐ Single, ☐ Widowed, ☐ Divorced

D. Number of Children:

How many children do you have? ☐ None, ☐ 1-2, ☐ 3-5, ☐ 6 and above

E. Household Properties:

Which of the following do you (or your husband) have at home? ☐ Car, ☐ Motor cycle, ☐ Television, ☐ Air-condition, ☐ others (please specify).....

F. Language:

Which of these major languages recognized in Nigeria do you speak fluently?

- ☐ English,
- ☐ Hausa,
- ☐ Yoruba,
- ☐ Igbo,
- ☐ Efik,
- ☐ 2 or more of the above,
- ☐ None.

G. Years of Experience:

1) How long have you been in business?

- ☐ Young entrepreneur: Less than 3 years,
- ☐ Old entrepreneur: 3-5 years,
- ☐ Old entrepreneur: 6-10 years
- ☐ Old entrepreneur: 11 years and above

2) Were you on paid/wage employment before starting business? ☐ Yes, ☐ No

3) Have you run other micro-enterprise before starting this current business?

- ☐ Yes, ☐ No

If Yes, please specify which type.....

H. Type of Industry:

What type of industry is your business in?

- ☐ Agriculture:
 - ☐ Farming, ☐ Livestock, ☐ Fishing, ☐ Others (Please specify...)
- ☐ Knowledge-based (e.g Computer Accessories)
- ☐ Manufacturing
- ☐ Extractive
 - ☐ Mining, ☐ Others (Please specify...)
- ☐ Wholesale/Retailing
- ☐ Professionals
- ☐ Service (e.g Restaurant), please specify
- ☐ Others (Please specify....)

I. Age of the Firm

Which year did you start the current business? ☐ Before 1980, ☐ 1981-1990, ☐ 1991-2000, ☐ 2001-2008

J. Size of the firm

What is the total asset of your current business? ☐ Less than #5000, ☐ #5000-19000, ☐ 20000-39000, ☐ #40000 and above

K. Capital (Please state whichever is appropriate)

How much was your capital before your last loan?

- ☐ Less than #5000
- ☐ #5000-9000
- ☐ #10000-19000
- ☐ #20000 and above

How much was your capital after your last loan?

- ☐ Less than #5000
- ☐ #5000-9000
- ☐ #10000-19000
- ☐ #20000 and above

L. Stage of Development

What is the stage of development of your current business? ☐ Start-up, ☐ Growth, ☐ Maturity, ☐ Decline

M. Registration

Is your business registered with any Government Agency? ☐ Yes, ☐ No

N. Savings

1) Do you save part of your income? ☐ Yes, ☐ No

2) How much do you normally save per week? ☐ Less than #5000, ☐ #5000-9000, ☐ #10000-19000, ☐ 20000 and above

3) Weekly savings are recorded in "Savings Card" of members by Credit Officers. ☐ Yes, ☐ No

4) Weekly savings are recorded in Group Record Card by Credit Officers ☐ Yes, ☐ No

O. Profit (Please state in the appropriate column)

How much was your weekly profit before your last loan?

- ☐ Less than #5000
- ☐ #5000-9000
- ☐ #10000-19000
- ☐ #20000 and above

How much was your weekly profit after your last loan?

- ☐ Less than #5000
- ☐ #5000-9000
- ☐ #10000-19000
- ☐ #20000 and above

P. Ownership

How did you own/acquire this business ☐ Start-up, ☐ Succession, ☐ Joined as partner, ☐ Take-over, ☐ Others, please specify.

Q. Loan Received From MFI

Which loan have you received from MFI so far?

☐ 1st loan, ☐ 2nd loan, ☐ 3rd loan, ☐ 4th loan, ☐ 5th loan, ☐ 6th loan, ☐ 7th loan, ☐ above 7

PART 2

General Opinions

- 1) In your opinion, what can you say about micro-finance institutions with respect to credit, savings, training and social capital assistance to women entrepreneurs in Nigeria?.....
- 2) What is the overall effect of credit, savings, training and social capital on you and your business?.....

Thank you.

Appendix 2

Table 4.2
Sample size determination for a given population

N	S	N	S	N	S
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	1000000	384

Source: Cavana et al. (2001, p. 278).

Appendix 3

Table 4.3
Determining Appropriate Sample in Survey Research

Continuous data (error margin of 0.03)				Categorical data (error margin of 0.05)		
Population size	alpha=.10 (t=1.65)	alpha=.05 (t=1.96)	alpha=.01 (t=2.58)	p=.50 (t=1.65)	p=.50 (t=1.96)	p=.50 (t=2.58)
100	46	55	68	74	80	87
200	59	75	102	116	132	154
300	65	85	123	143	169	207
400	69	92	137	162	196	250
500	72	96	147	176	218	286
600	73	100	155	187	235	316
700	75	102	161	196	249	341
800	76	104	166	203	260	363
900	76	105	170	209	270	382
1,000	77	106	173	213	278	399
1,500	79	110	183	230	306	461
2,000	83	112	189	239	323	499
4,000	83	119	198	254	351	570
6,000	83	119	209	259	362	598
8,000	83	119	209	262	367	613
10,000	83	119	209	264	370	623

Source: Barlett et al. (2001, p. 48)

Appendix 4

Table 4.4
Determining Sample Size

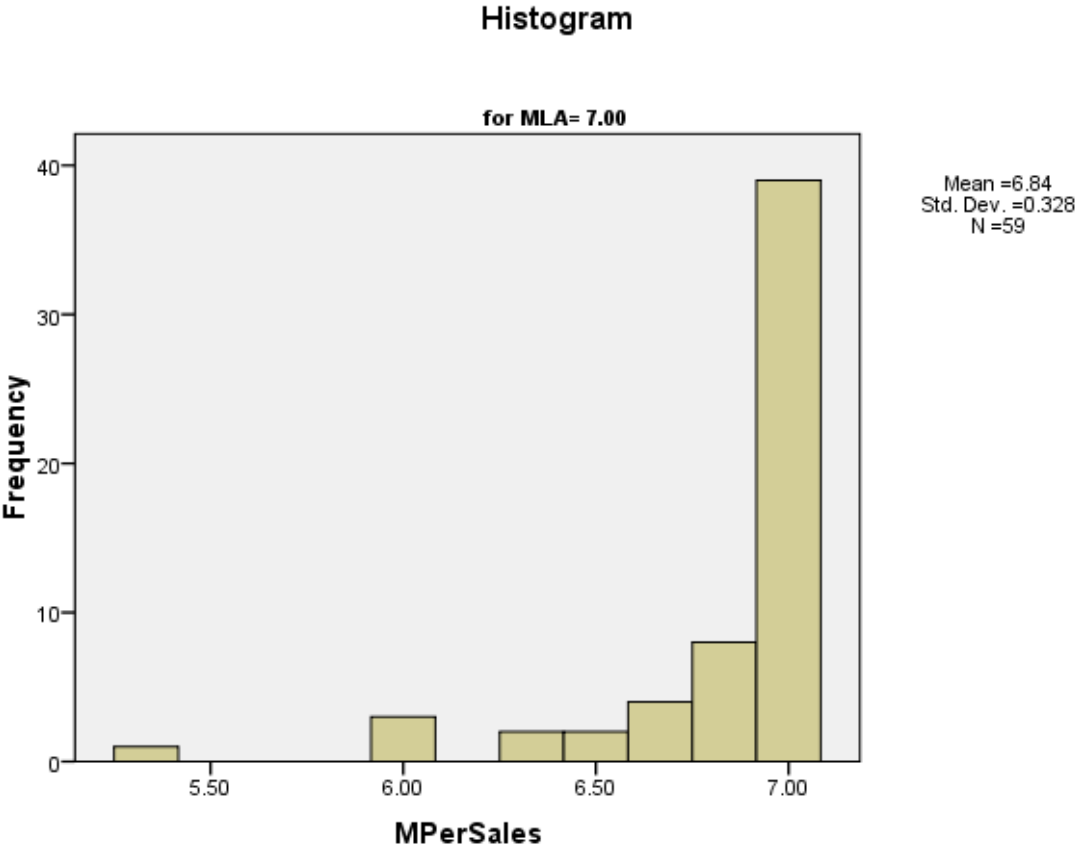
Sample size for $\pm 3\%$, $\pm 5\%$, $\pm 7\%$, and $\pm 10\%$. Precision levels where Confidence level is 95% and $P=0.5$				
Size of		Sample Size (n) for Precision (e) of:		
Population	$\pm 3\%$	$\pm 5\%$	$\pm 7\%$	$\pm 10\%$
500	a	222	145	83
600	a	240	152	86
700	a	255	158	88
800	a	267	163	89
900	a	277	166	90
1,000	a	286	169	91
2,000	714	333	185	95
3,000	811	353	191	97
4,000	870	364	194	98
5,000	909	370	196	98
6,000	938	375	197	98
7,000	959	378	198	99
8,000	976	381	199	99
9,000	989	383	200	99
10,000	1,000	385	200	99
15,000	1,034	390	201	99
20,000	1,053	392	204	100
25,000	1,064	394	204	100
50,000	1,087	397	204	100
100,000	1,099	398	204	100
>100,000	1,111	400	204	100

a = Assumption of normal population is poor (Yamane, 1967); the entire population should be sampled

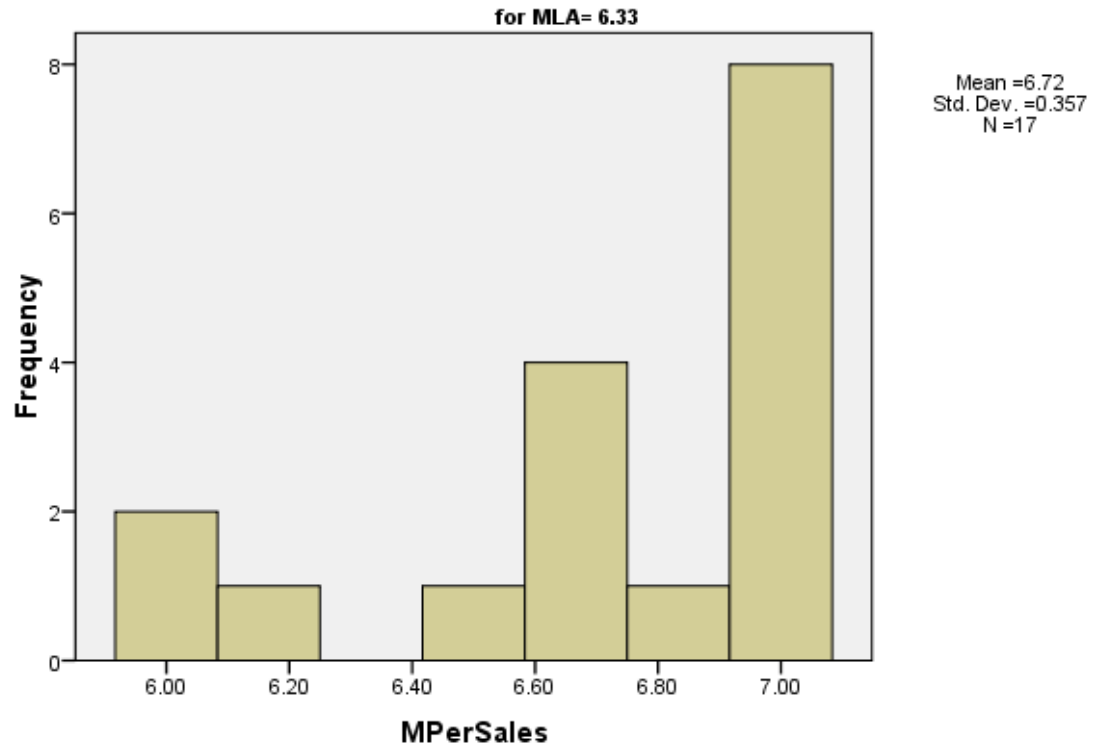
Source: Israel (1992)

Appendix 5

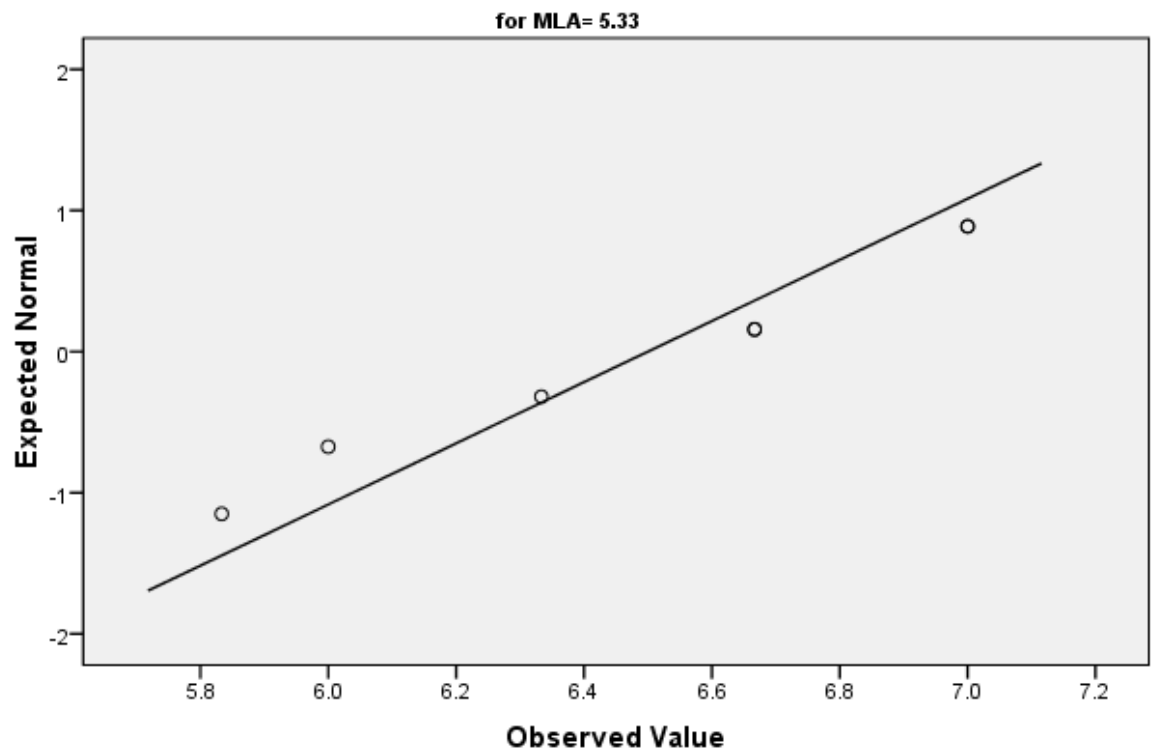
Histograms and Normal Q-Q Plots for Loan Access



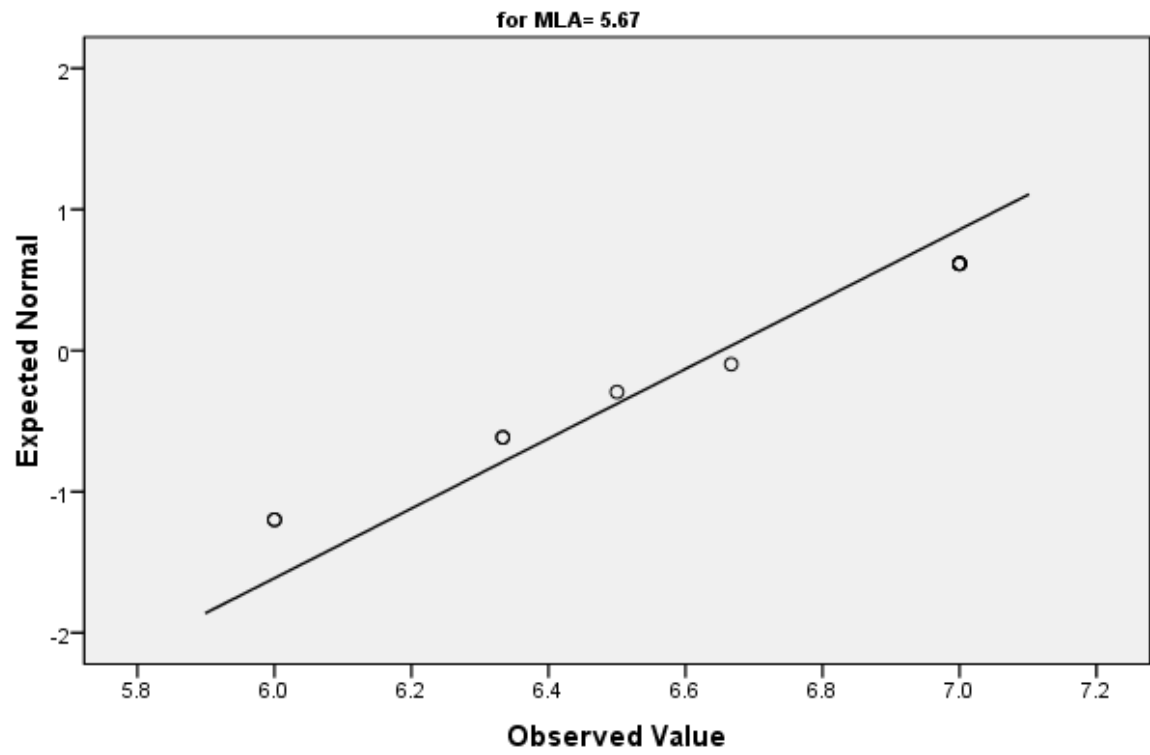
Histogram



Normal Q-Q Plot of MPerSales

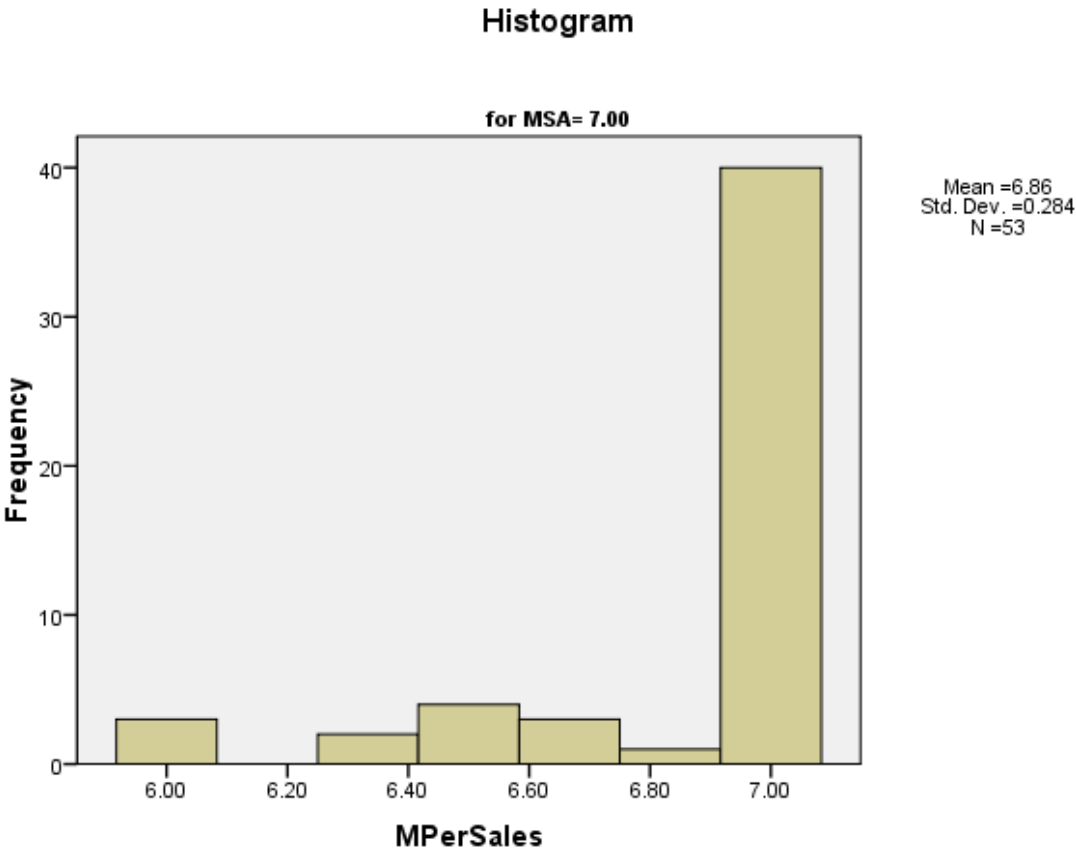


Normal Q-Q Plot of MPerSales

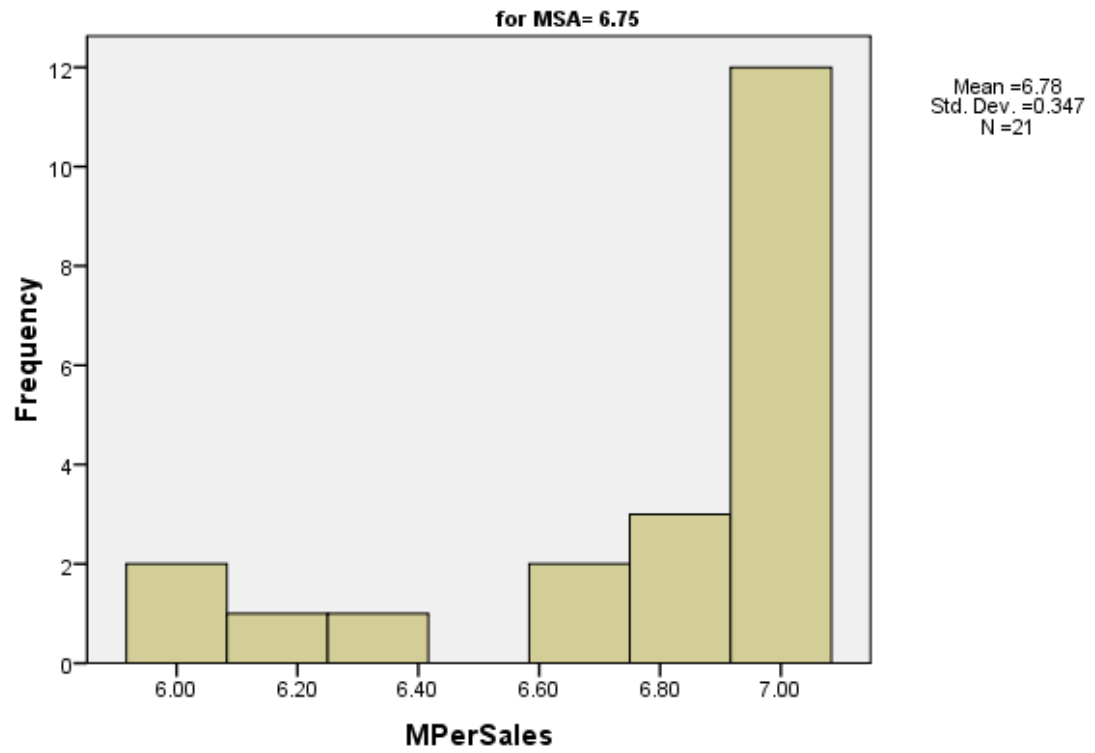


Appendix 6

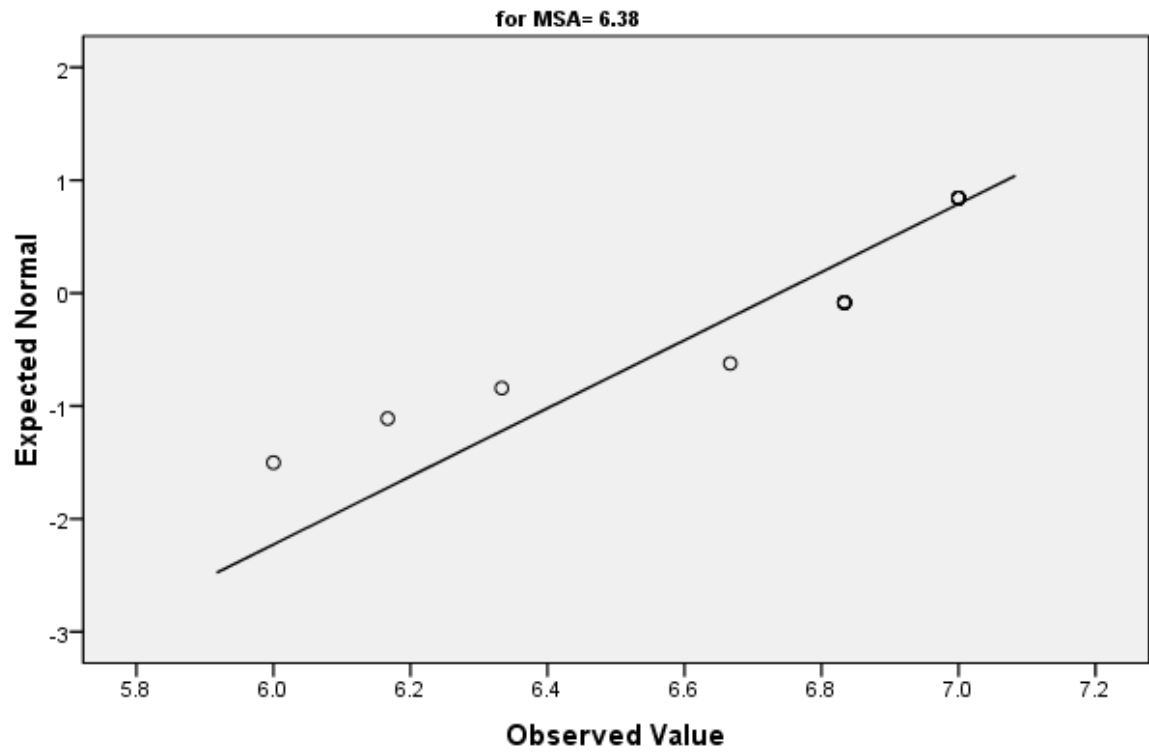
Histograms and Normal Q-Q Plots for Skill Acquisition



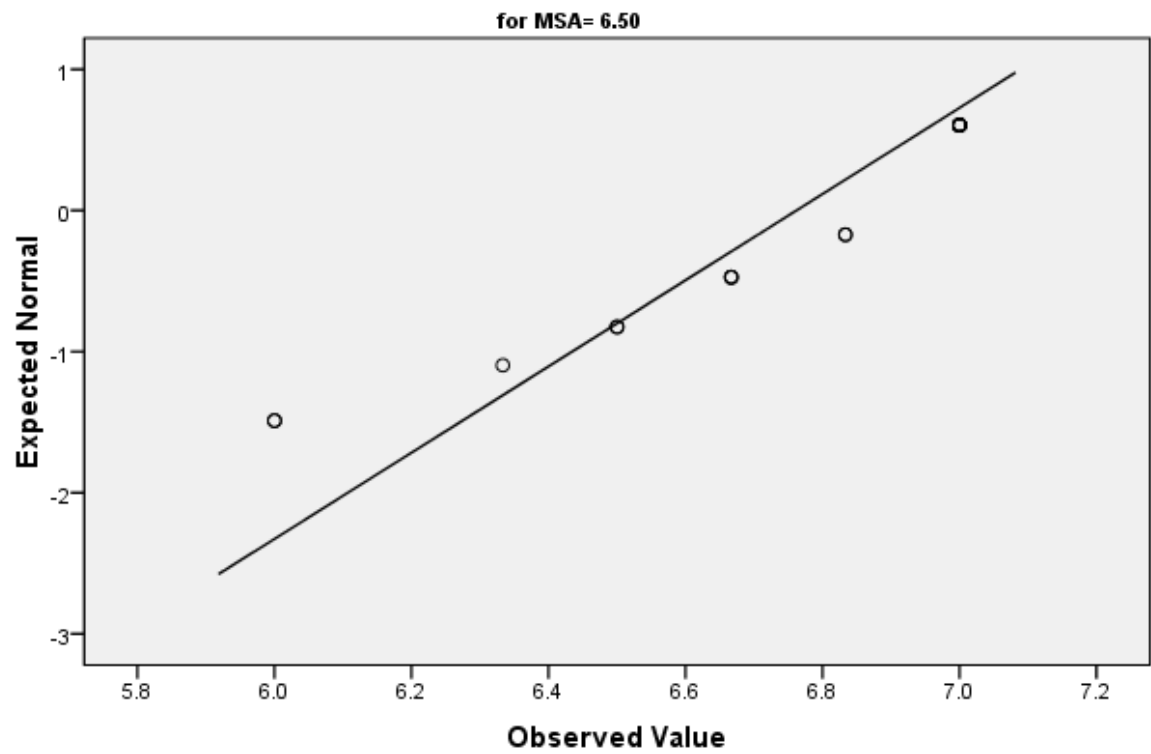
Histogram



Normal Q-Q Plot of MPerSales

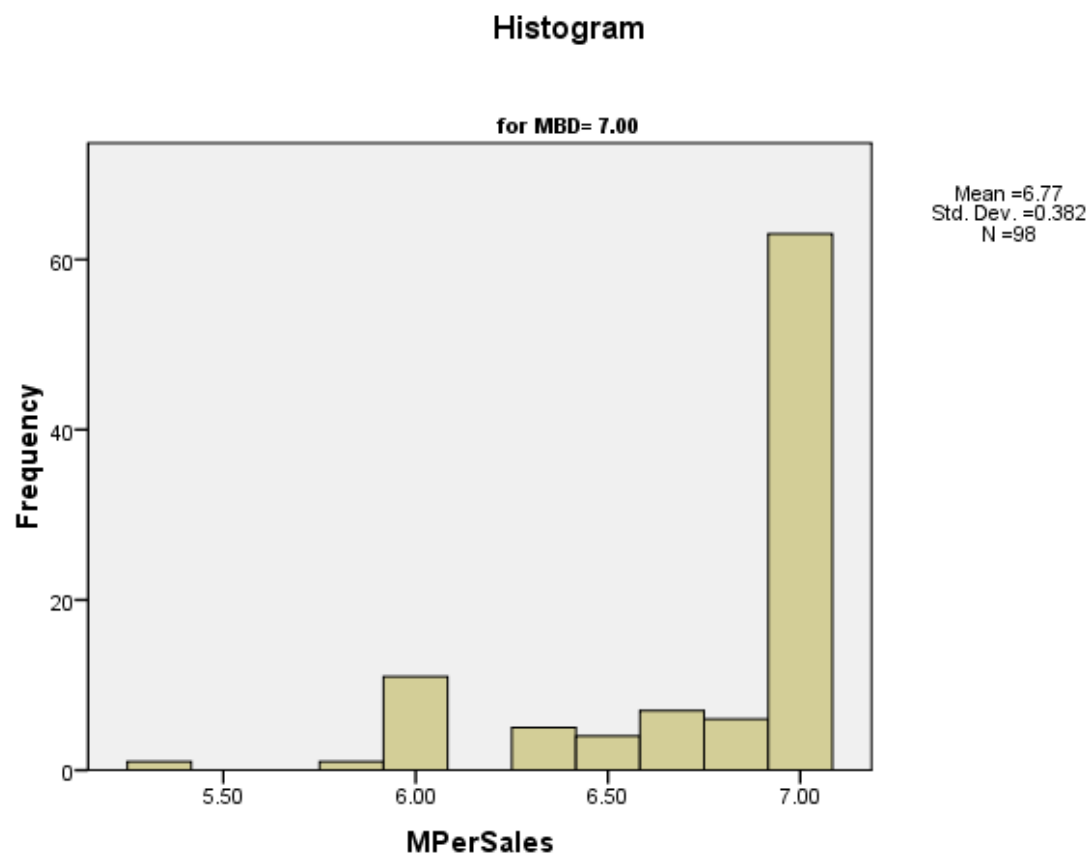


Normal Q-Q Plot of MPerSales

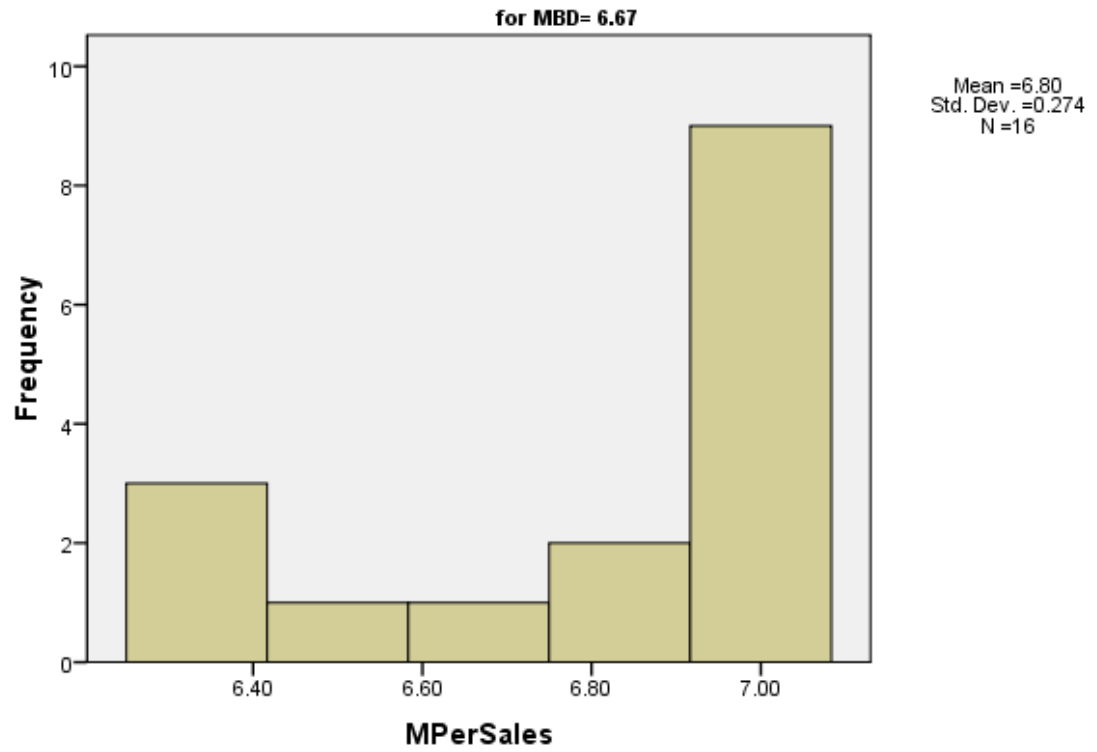


Appendix 7

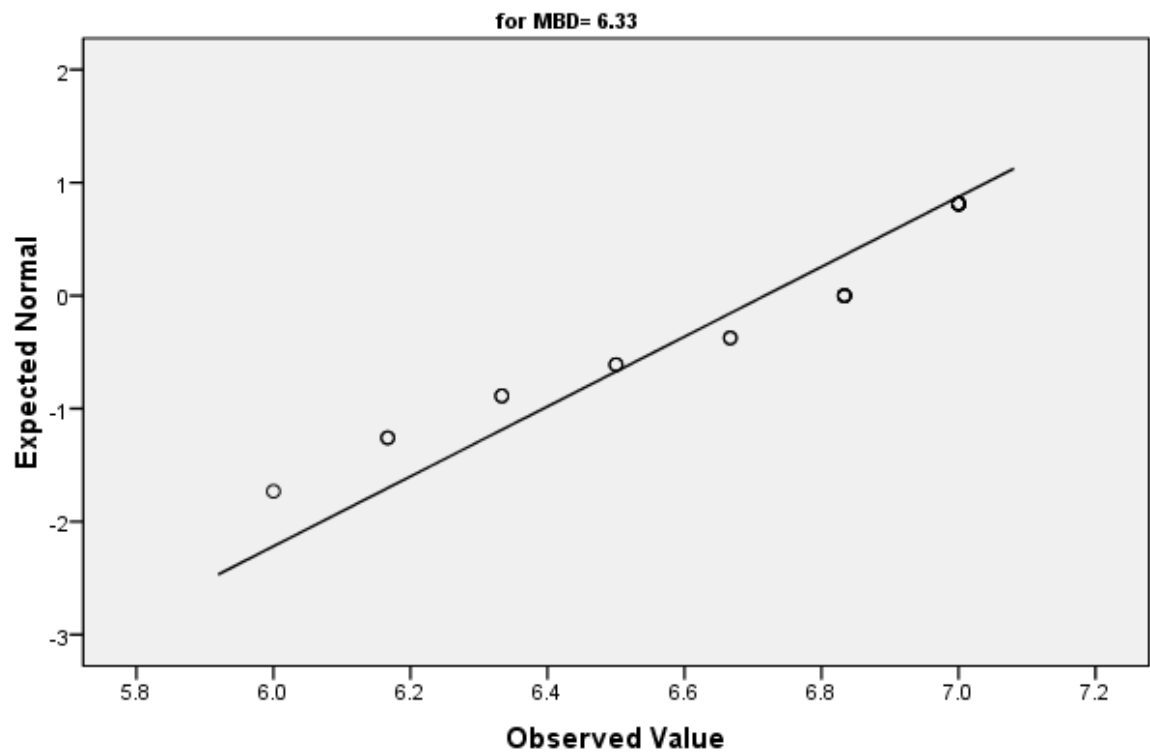
Histograms and Normal Q-Q Plots for Bonding



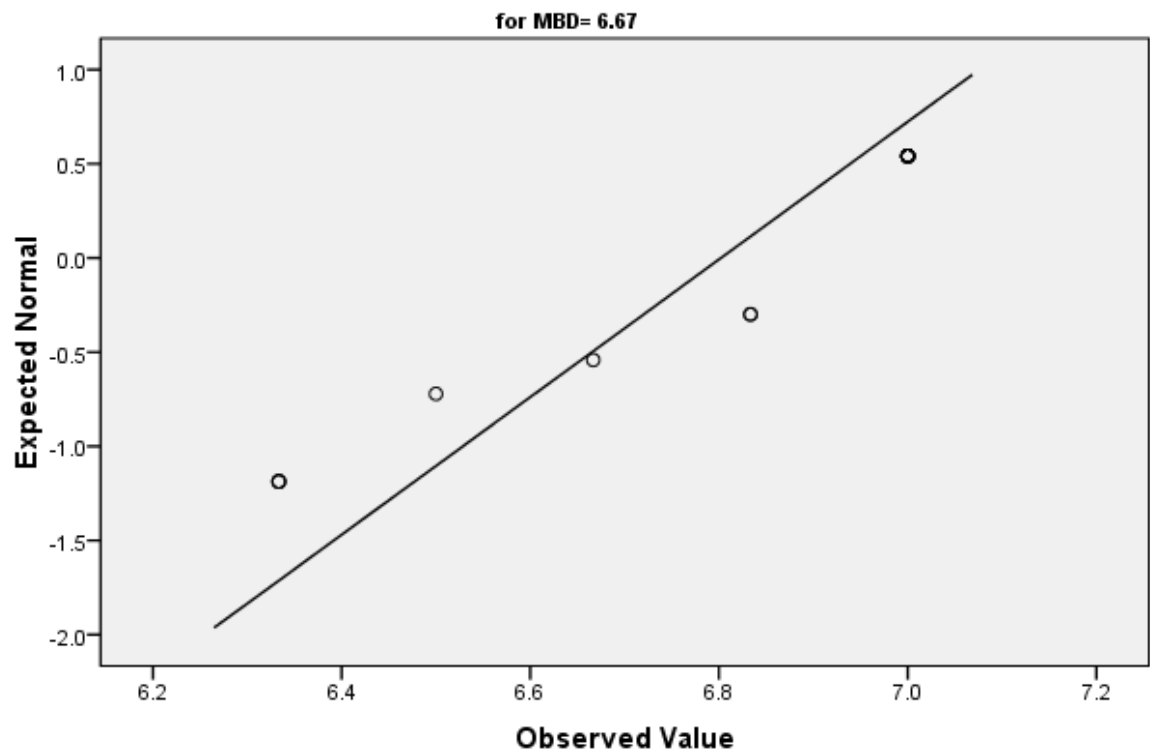
Histogram



Normal Q-Q Plot of MPerSales

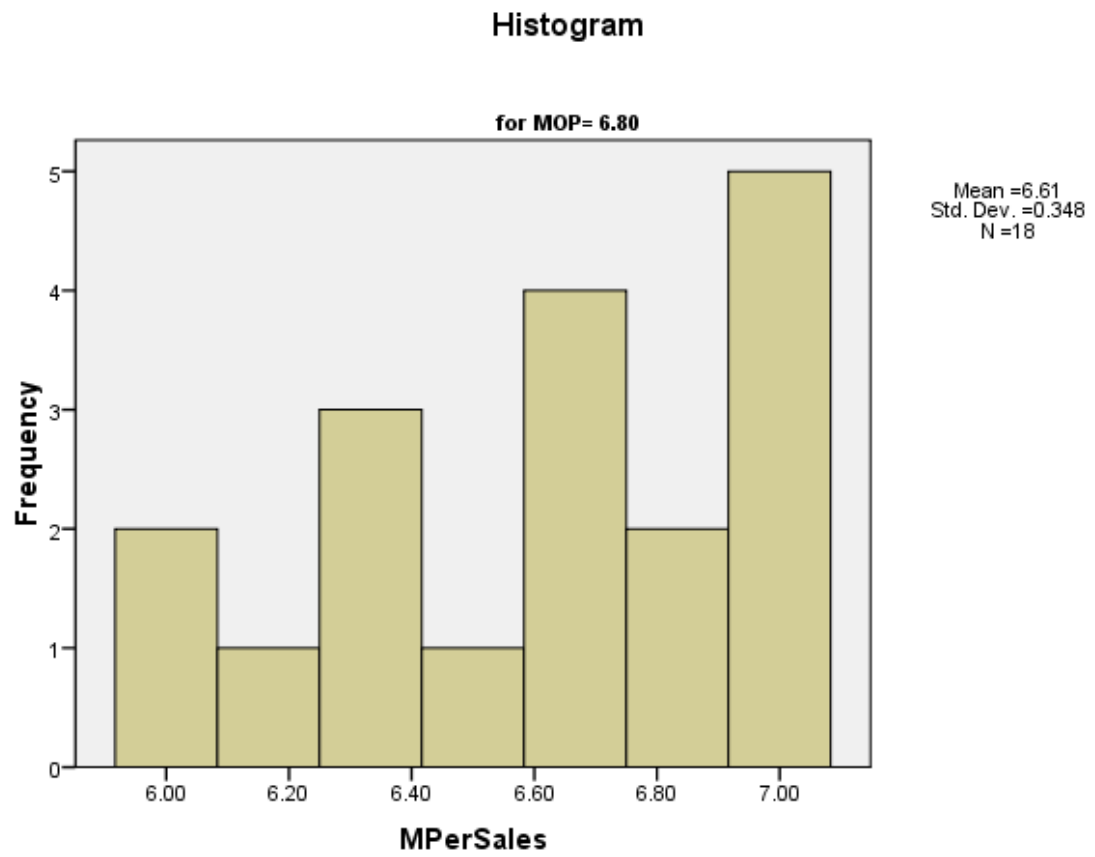


Normal Q-Q Plot of MPerSales

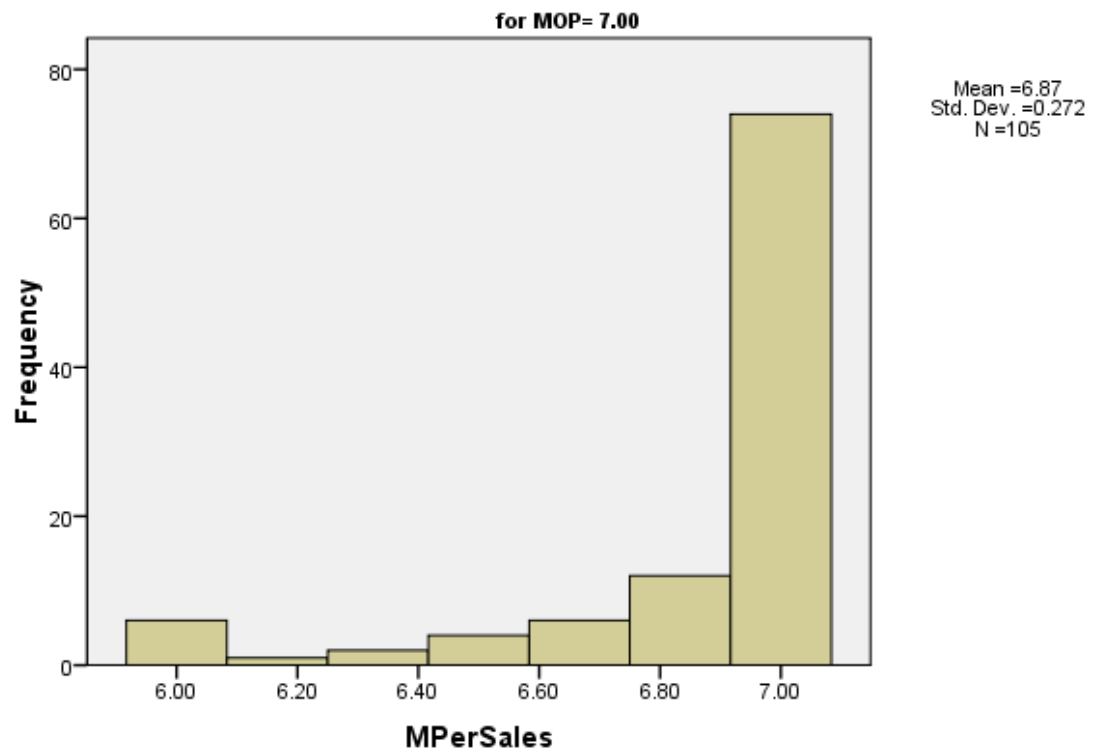


Appendix 8

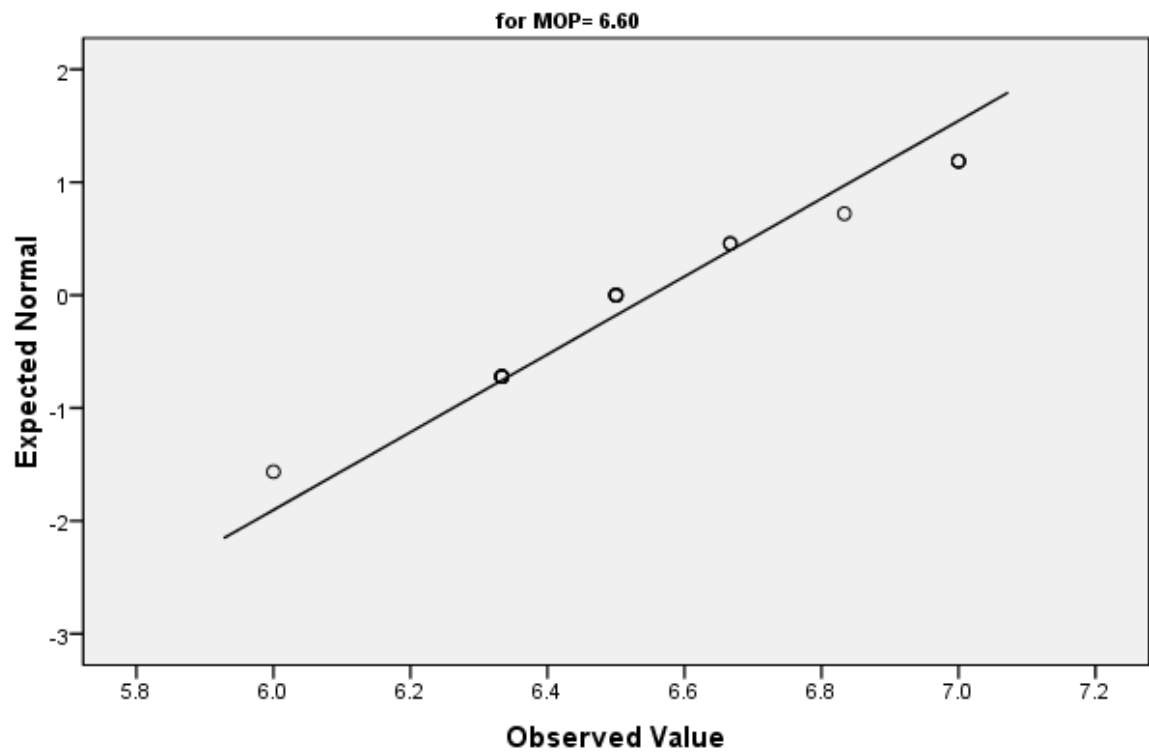
Histograms and Q-Q Plots for Opportunity to improve business



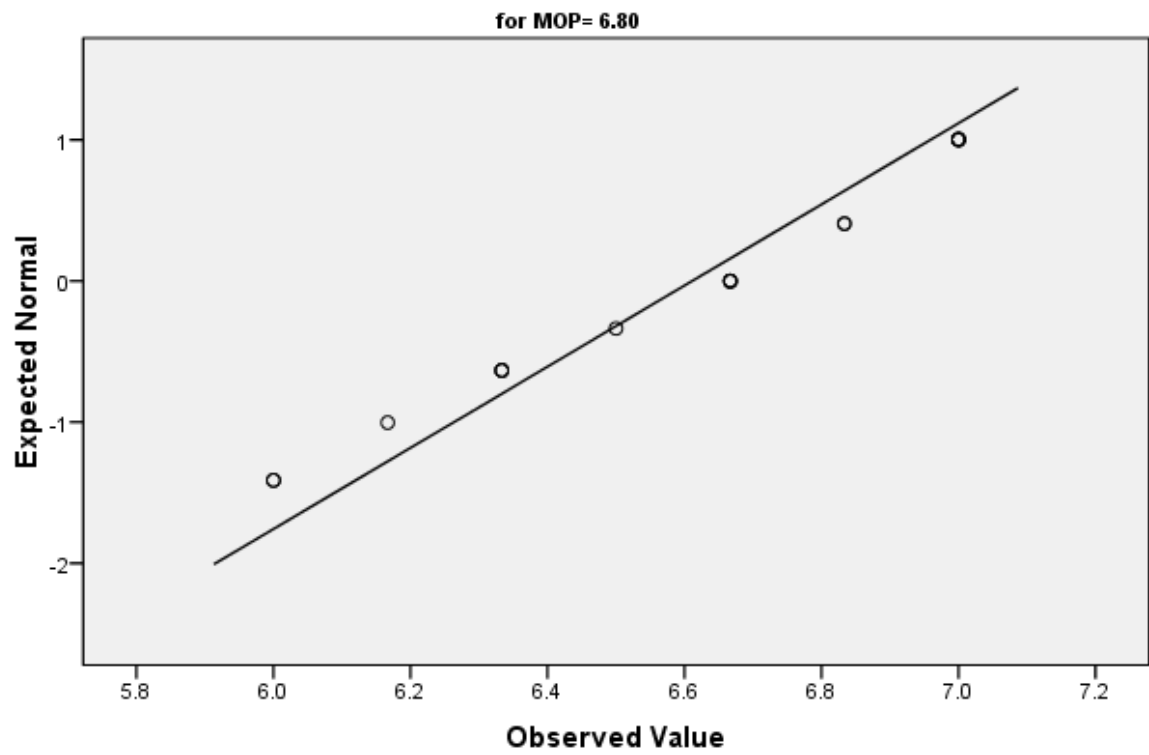
Histogram



Normal Q-Q Plot of MPerSales

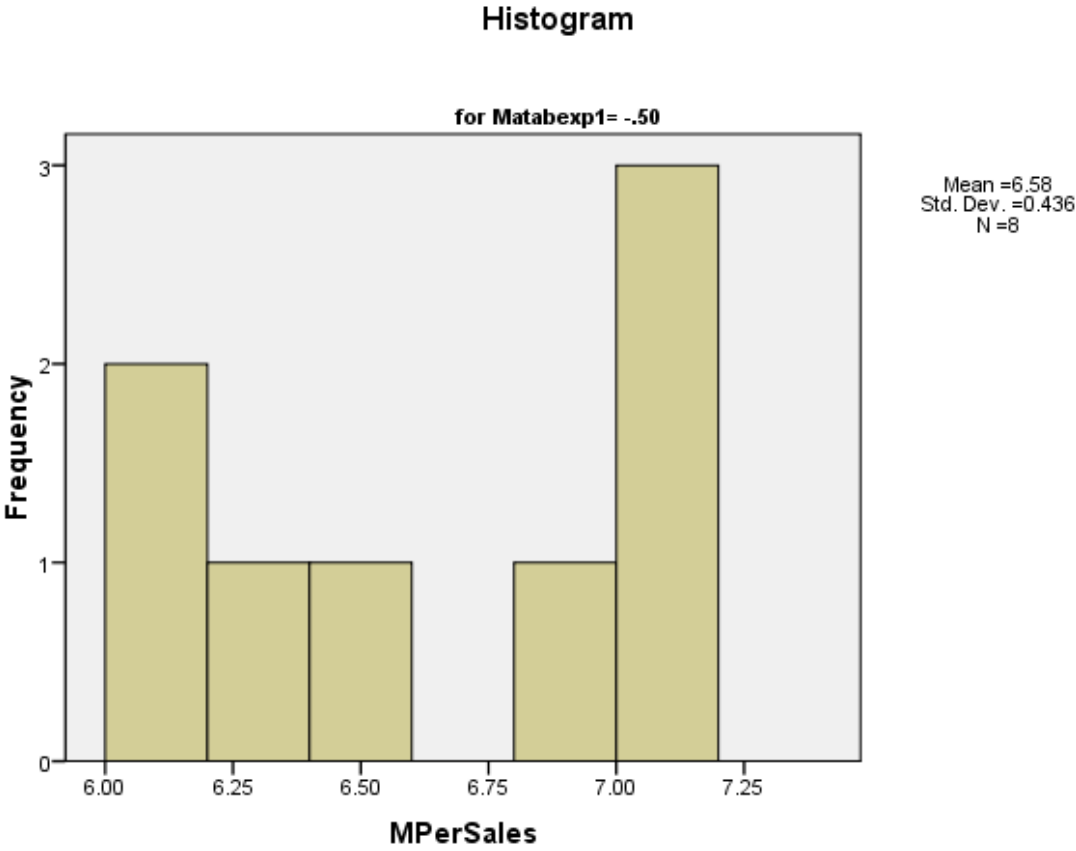


Normal Q-Q Plot of MPerSales

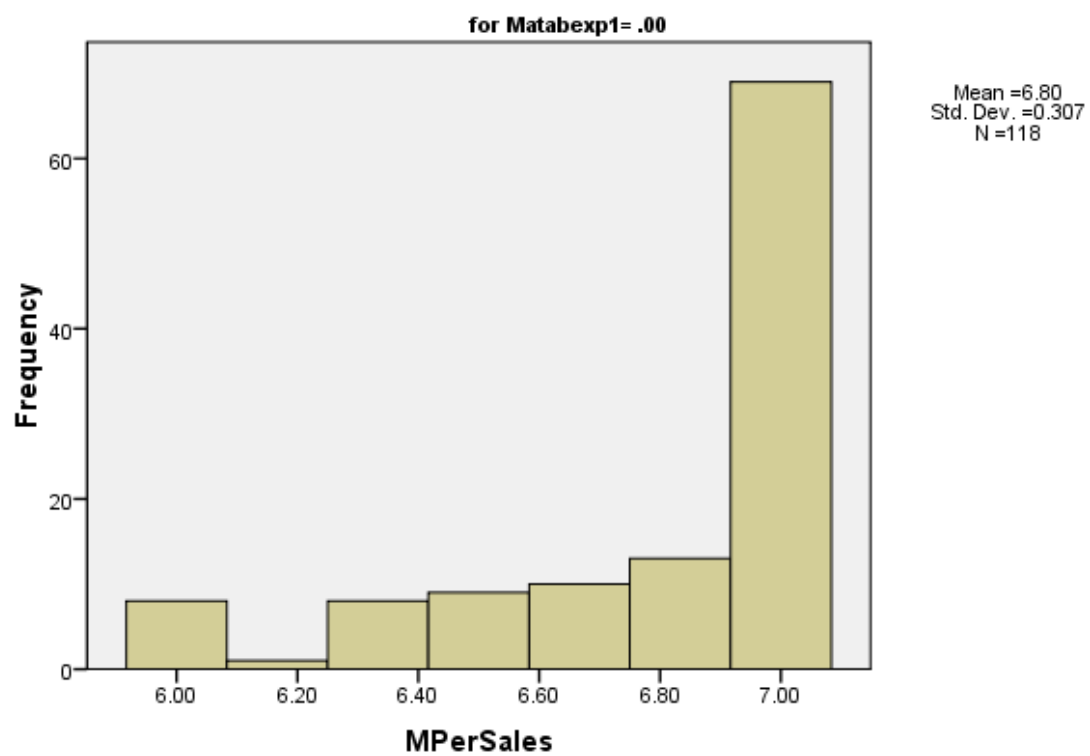


Appendix 9

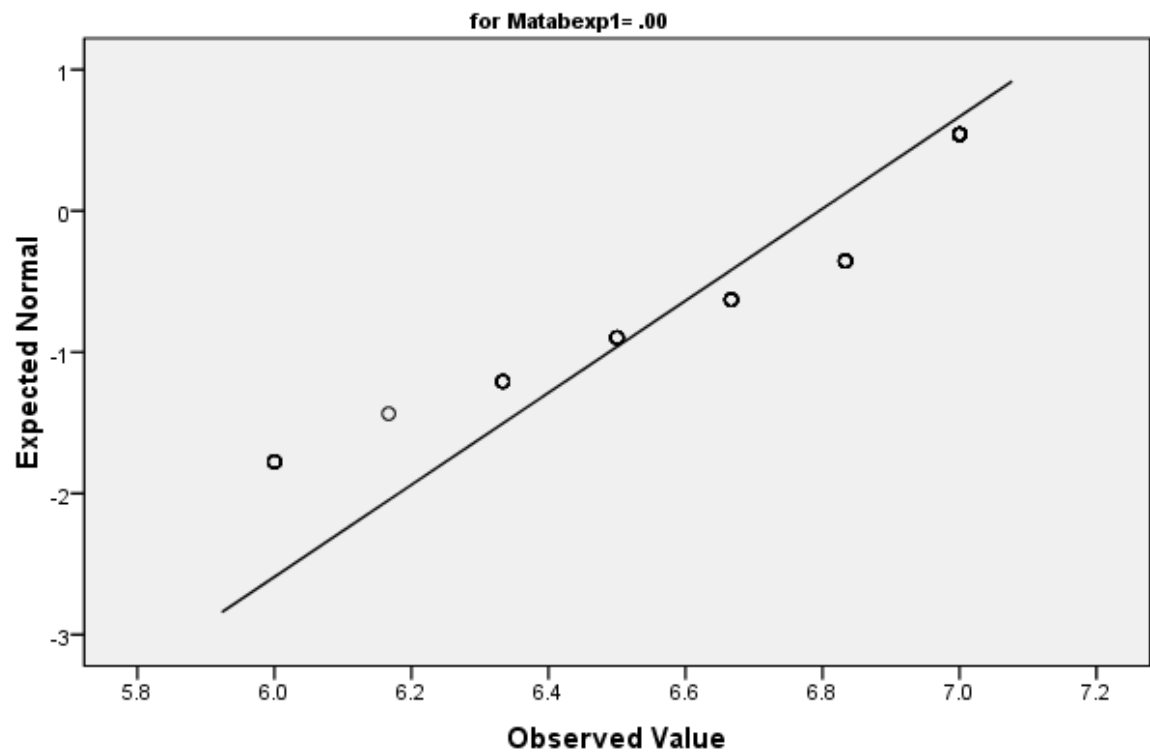
Histograms and Normal Q-Q Plots for Ability to expand business



Histogram

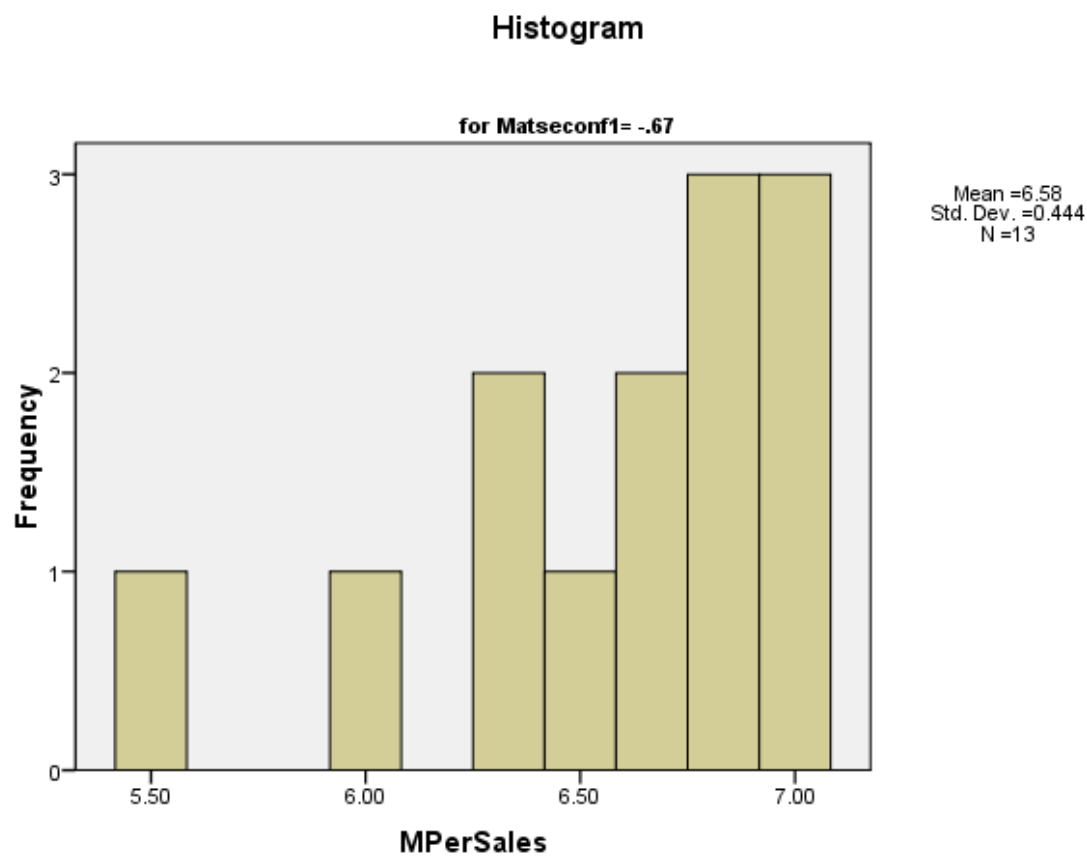


Normal Q-Q Plot of MPerSales

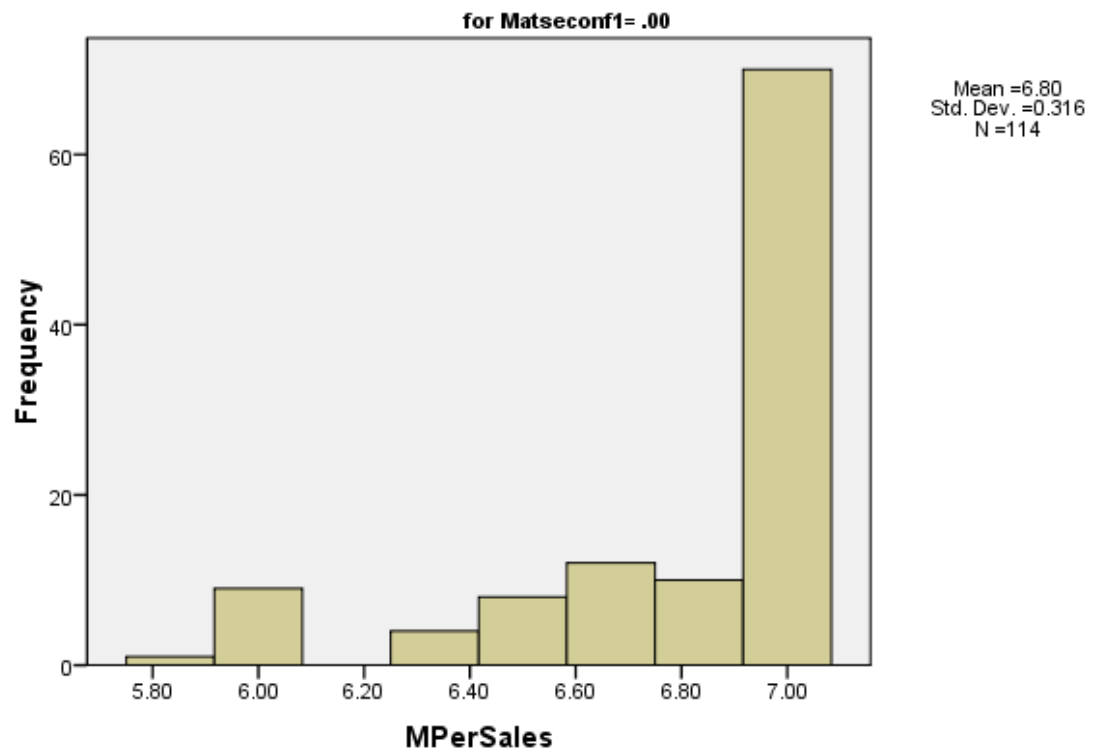


Appendix 10

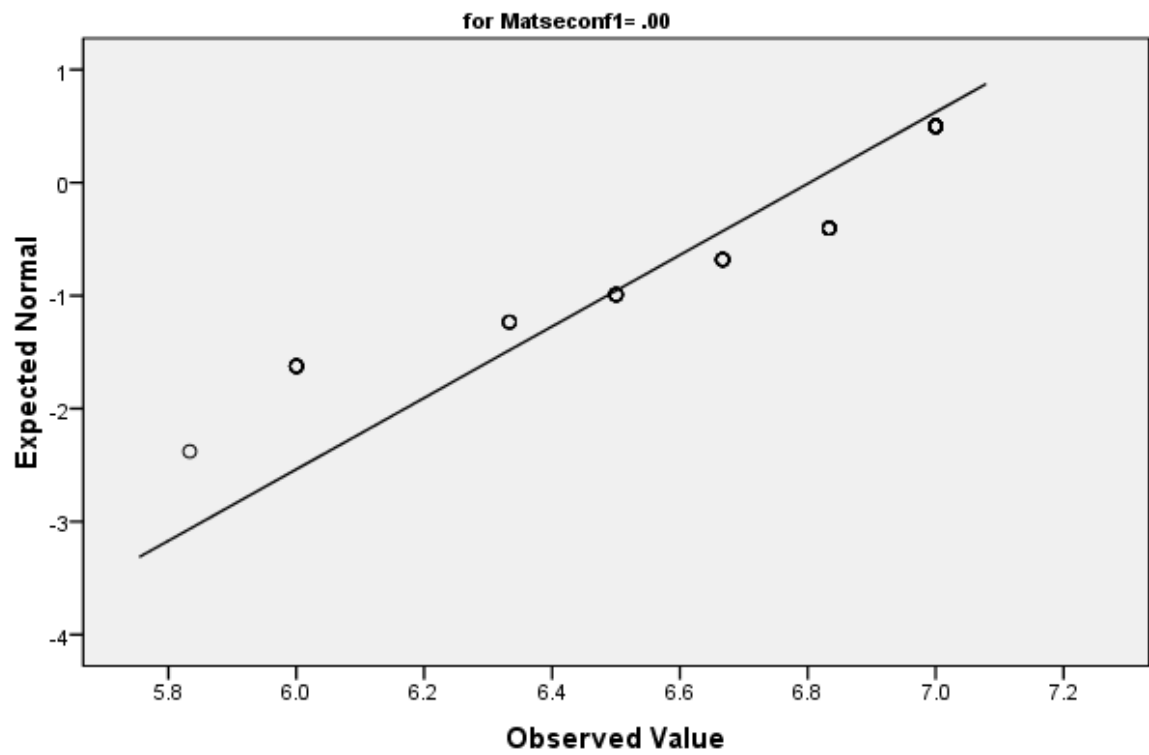
Histograms and Q-Q Plots for Self-confidence in business



Histogram



Normal Q-Q Plot of MPerSales



Appendix 11

Exploratory Factor Analysis (EFA) for Independent Variables

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.843
Bartlett's Test of Sphericity	Approx. Chi-Square	1392.415
	Df	91.000
	Sig.	.000

Communalities

	Initial	Extraction
Q3	1.000	.844
Q4	1.000	.853
Q6	1.000	.583
Q16	1.000	.673
Q17	1.000	.587
Q18	1.000	.747
Q19	1.000	.742
Q20	1.000	.632
Q22	1.000	.653
Q26	1.000	.671
Q28	1.000	.555
Q33	1.000	.827
Q34	1.000	.809
Q15	1.000	.639

Extraction Method: Principal
Component Analysis.

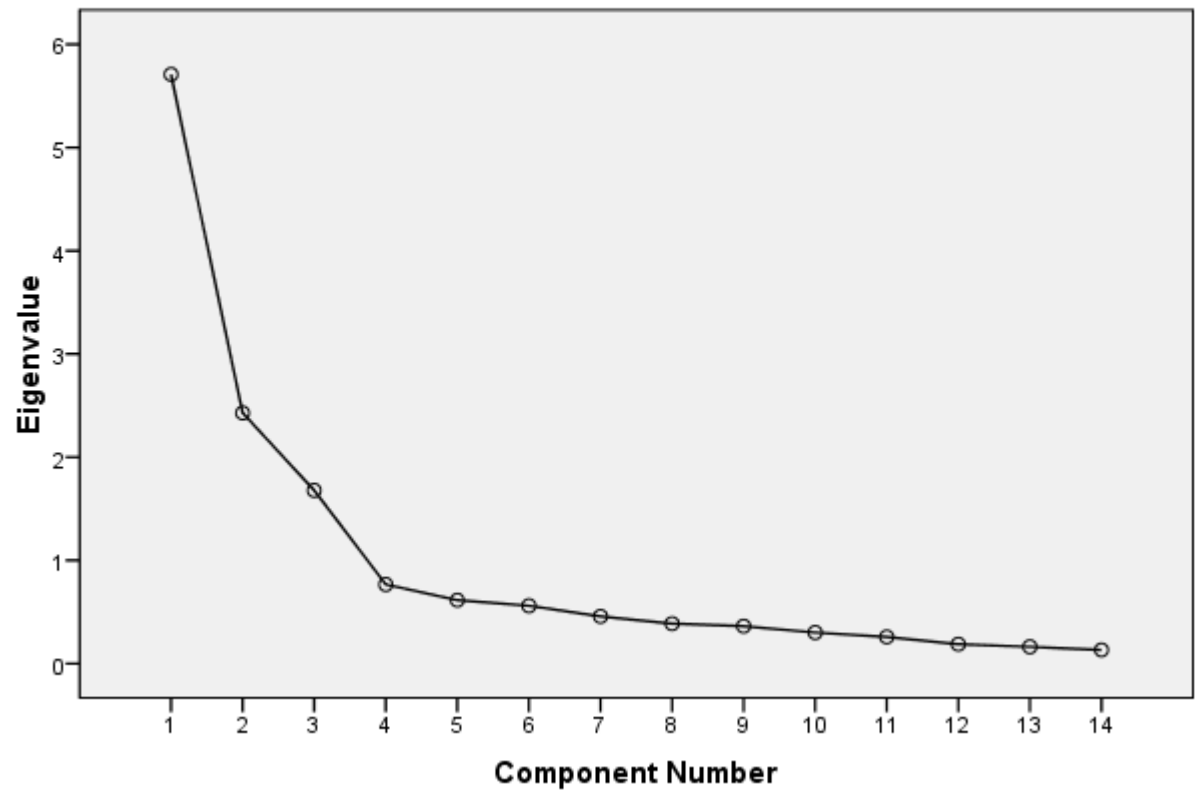
Total Variance Explained

Com pone nt	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.709	40.777	40.777	5.709	40.777	40.777	5.235	37.395	37.395
2	2.428	17.340	58.116	2.428	17.340	58.116	2.307	16.480	53.875
3	1.678	11.985	70.102	1.678	11.985	70.102	2.272	16.227	70.102
4	.766	5.472	75.574						
5	.614	4.384	79.958						
6	.560	3.999	83.957						
7	.457	3.266	87.222						
8	.387	2.764	89.987						
9	.362	2.588	92.575						
10	.300	2.144	94.719						
11	.258	1.842	96.561						
12	.187	1.337	97.898						
13	.162	1.157	99.054						
14	.132	.946	100.000						

Extraction Method: Principal

Component Analysis.

Scree Plot



Rotated Component Matrix^a

	Component		
	1	2	3
Q18	.852		
Q19	.836		
Q16	.816		
Q26	.813		
Q22	.786		
Q20	.773		
Q17	.766		
Q28	.733		
Q3		.918	
Q4		.909	
Q6		.761	
Q33			.867
Q34			.861
Q15			.782

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

Appendix 12

EFA for the Mediator (Opportunity for entrepreneurial activity)

Correlation Matrix

	Q36	Q37	Q39	Q40	Q41
Correlation Q36	1.000	.656	.435	.498	.494
Q37	.656	1.000	.595	.596	.580
Q39	.435	.595	1.000	.659	.435
Q40	.498	.596	.659	1.000	.619
Q41	.494	.580	.435	.619	1.000

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.809
Bartlett's Test of Sphericity	Approx. Chi-Square
	368.919
	df
	10.000
	Sig.
	.000

Anti-image Matrices

		Q36	Q37	Q39	Q40	Q41
Anti-image Covariance	Q36	.544	-.209	.001	-.048	-.067
	Q37	-.209	.406	-.137	-.038	-.115
	Q39	.001	-.137	.500	-.208	.037
	Q40	-.048	-.038	-.208	.416	-.182
	Q41	-.067	-.115	.037	-.182	.537
Anti-image Correlation	Q36	.832 ^a	-.446	.002	-.100	-.124
	Q37	-.446	.804 ^a	-.304	-.093	-.246
	Q39	.002	-.304	.792 ^a	-.457	.072
	Q40	-.100	-.093	-.457	.791 ^a	-.386
	Q41	-.124	-.246	.072	-.386	.834 ^a

a. Measures of Sampling Adequacy(MSA)

Communalities

	Initial	Extraction
Q36	1.000	.582
Q37	1.000	.735
Q39	1.000	.603
Q40	1.000	.711
Q41	1.000	.603

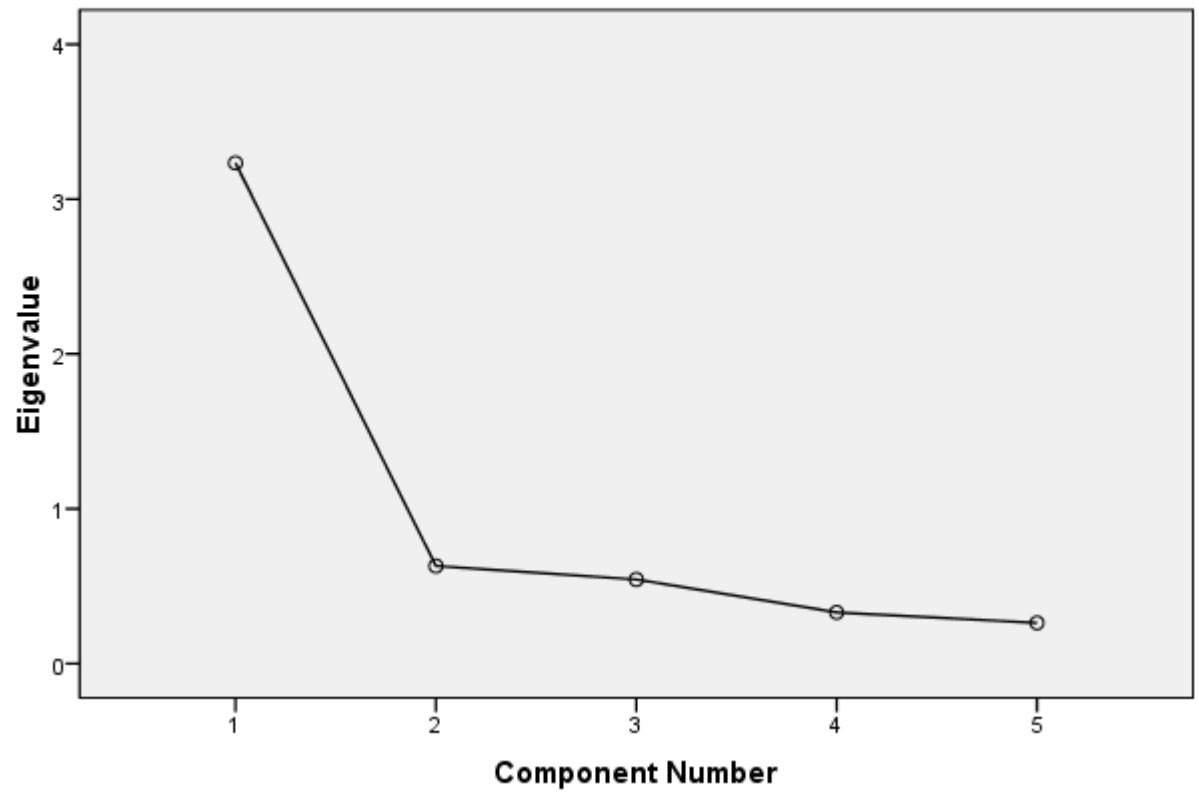
Extraction Method: Principal
Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.233	64.669	64.669	3.233	64.669	64.669
2	.630	12.608	77.276			
3	.543	10.861	88.137			
4	.330	6.605	94.742			
5	.263	5.258	100.000			

Extraction Method: Principal Component Analysis.

Scree Plot



Component Matrix^a

	Component
	1
Q37	.857
Q40	.843
Q39	.777
Q41	.776
Q36	.763

Extraction Method:
Principal Component
Analysis.

a. 1 components
extracted.

Appendix 13

EFA for the Moderator (Attitude towards micro-finance)

Correlation Matrix

		Q42	Q43	Q44	Q45	Q47	Q48	SMEAN (Q46)
Correlation	Q42	1.000	.688	.611	.583	.377	.352	.375
	Q43	.688	1.000	.760	.746	.272	.296	.269
	Q44	.611	.760	1.000	.759	.349	.380	.240
	Q45	.583	.746	.759	1.000	.334	.349	.239
	Q47	.377	.272	.349	.334	1.000	.740	.525
	Q48	.352	.296	.380	.349	.740	1.000	.380
	SMEAN (Q46)	.375	.269	.240	.239	.525	.380	1.000

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.809
Bartlett's Test of Sphericity	Approx. Chi-Square	625.733
	df	21.000
	Sig.	.000

Anti-image Matrices

		Q42	Q43	Q44	Q45	Q47	Q48	SMEAN (Q46)
Anti-image Covariance	Q42	.463	-.141	-.044	-.019	-.036	-.007	-.099
	Q43	-.141	.297	-.114	-.113	.035	.002	-.030
	Q44	-.044	-.114	.323	-.135	-.016	-.037	.031
	Q45	-.019	-.113	-.135	.350	-.023	-.011	.014
	Q47	-.036	.035	-.016	-.023	.376	-.263	-.185
	Q48	-.007	.002	-.037	-.011	-.263	.435	.017
	SMEAN (Q46)	-.099	-.030	.031	.014	-.185	.017	.681
Anti-image Correlation	Q42	.889 ^a	-.381	-.113	-.047	-.085	-.015	-.176
	Q43	-.381	.815 ^a	-.367	-.351	.105	.007	-.067
	Q44	-.113	-.367	.851 ^a	-.402	-.045	-.099	.066
	Q45	-.047	-.351	-.402	.858 ^a	-.063	-.029	.029
	Q47	-.085	.105	-.045	-.063	.687 ^a	-.649	-.365
	Q48	-.015	.007	-.099	-.029	-.649	.730 ^a	.031
	SMEAN (Q46)	-.176	-.067	.066	.029	-.365	.031	.810 ^a

a. Measures of Sampling
Adequacy(MSA)

Communalities

	Initial	Extraction
Q42	1.000	.663
Q43	1.000	.846
Q44	1.000	.806
Q45	1.000	.786
Q47	1.000	.840
Q48	1.000	.728
SMEAN(Q46)	1.000	.538

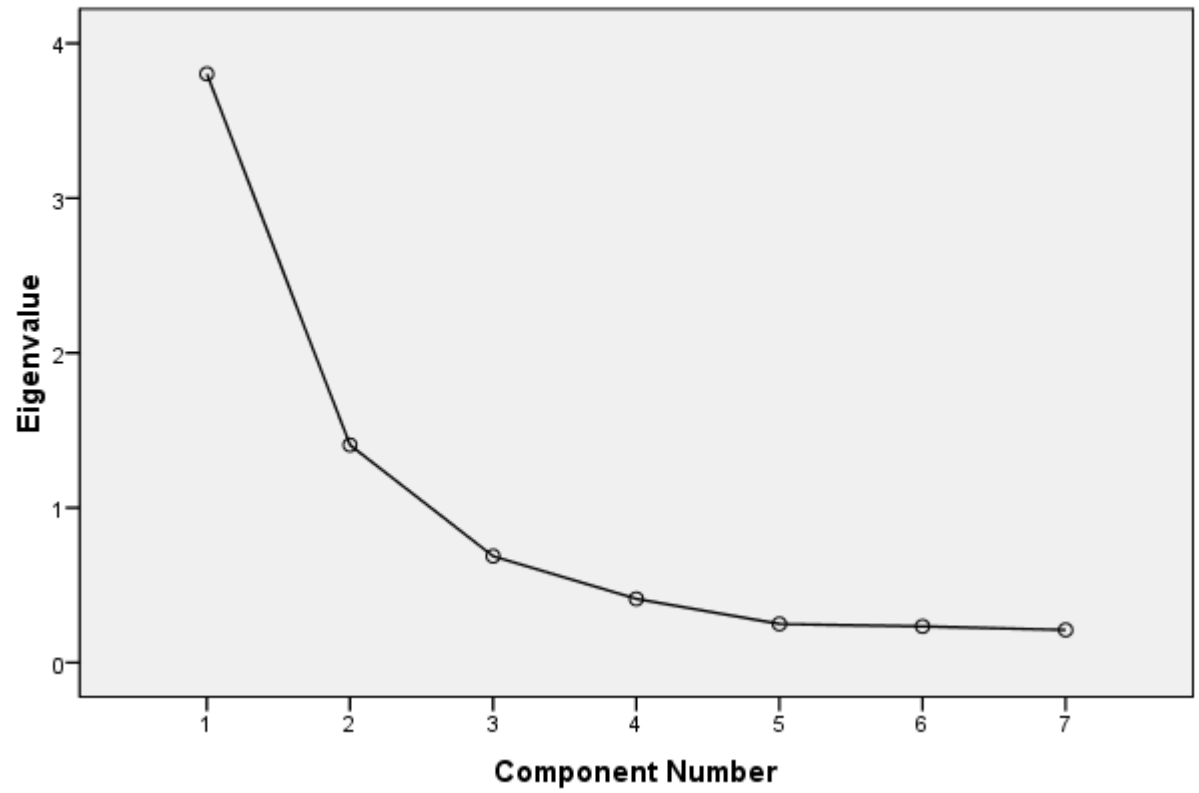
Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.803	54.324	54.324	3.803	54.324	54.324	3.024	43.207	43.207
2	1.405	20.078	74.402	1.405	20.078	74.402	2.184	31.195	74.402
3	.687	9.817	84.220						
4	.412	5.879	90.099						
5	.249	3.559	93.659						
6	.233	3.335	96.994						
7	.210	3.006	100.000						

Extraction Method: Principal Component Analysis.

Scree Plot



Rotated Component Matrix^a

	Component	
	1	2
Q43	.911	
Q44	.876	
Q45	.869	
Q42	.755	.306
Q47		.899
Q48		.826
SMEAN(Q46)		.717

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

Appendix 14

EFA for the Dependent Variable (Sales Performance)

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.730
Bartlett's Test of Sphericity	Approx. Chi-Square	806.653
	df	66.000
	Sig.	.000

Communalities

	Initial	Extraction
Q49	1.000	.713
Q50	1.000	.692
Q51	1.000	.702
Q52	1.000	.739
Q53	1.000	.634
Q54	1.000	.661
Q55	1.000	.634
Q56	1.000	.516
Q57	1.000	.832
Q58	1.000	.773
Q60	1.000	.882
Q61	1.000	.775

Extraction Method: Principal

Component Analysis.

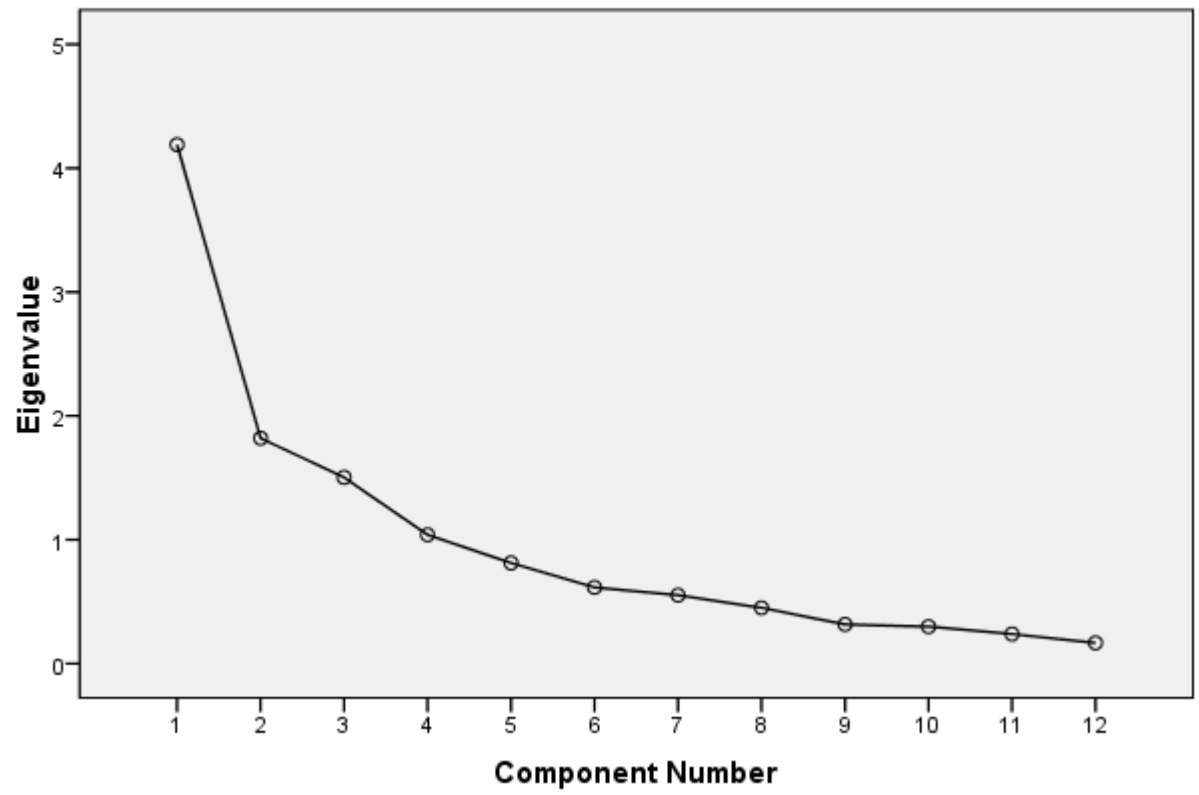
Total Variance Explained

Com pone nt	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulativ e %	Total	% of Variance	Cumulativ e %	Total	% of Variance	Cumulativ e %
1	4.190	34.919	34.919	4.190	34.919	34.919	3.594	29.946	29.946
2	1.819	15.162	50.082	1.819	15.162	50.082	1.814	15.114	45.060
3	1.503	12.526	62.608	1.503	12.526	62.608	1.591	13.261	58.321
4	1.039	8.661	71.269	1.039	8.661	71.269	1.554	12.948	71.269
5	.812	6.769	78.038						
6	.614	5.121	83.158						
7	.552	4.602	87.760						
8	.450	3.749	91.510						
9	.316	2.632	94.141						
10	.298	2.484	96.625						
11	.238	1.985	98.610						
12	.167	1.390	100.000						

Extraction Method: Principal

Component Analysis.

Scree Plot



Rotated Component Matrix^a

	Component			
	1	2	3	4
Q50	.815			
Q49	.793			
Q54	.775			
Q51	.761		.314	
Q53	.728			
Q56	.693			
Q60		.938		
Q57		.907		
Q52			.812	
Q55			.767	
Q61				.875
Q58				.869

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 4 iterations.

Appendix 15

Reliability Test Results (Loan Access)

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.840	.837	3

Item Statistics

	Mean	Std. Deviation	N
Q3	5.82	1.827	161
Q4	5.78	1.803	161
Q6	5.86	1.631	161

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	5.818	5.776	5.857	.081	1.014	.002	3
Item Variances	3.082	2.661	3.336	.675	1.254	.135	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Q3	11.63	9.046	.787	.726	.693
Q4	11.68	9.045	.805	.735	.674
Q6	11.60	12.180	.543	.297	.919

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
17.45	21.024	4.585	3

Appendix 16

Reliability Test Results (Skill Acquisition)

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.920	.923	8

Item Statistics

	Mean	Std. Deviation	N
Q18	6.55	.844	161
Q19	6.52	.837	161
Q16	6.81	.760	161
Q26	6.60	.744	161
Q22	6.40	.931	161
Q20	6.39	.962	161
Q17	6.57	.941	161
Q28	6.73	.642	161

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	6.570	6.385	6.814	.429	1.067	.022	8
Item Variances	.704	.412	.926	.513	2.245	.033	8

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Q18	46.01	21.787	.816	.699	.903
Q19	46.04	21.874	.811	.726	.904
Q16	45.75	22.891	.750	.588	.909
Q26	45.96	23.042	.746	.647	.909
Q22	46.16	21.649	.740	.579	.910
Q20	46.17	21.507	.727	.576	.911
Q17	45.99	22.069	.675	.517	.916
Q28	45.83	24.353	.656	.563	.917

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
52.56	28.923	5.378	8

Appendix 17

Reliability Test Results (Bonding)

Reliability Statistics

	Cronbach's Alpha Based on Standardized Items	N of Items
Cronbach's Alpha	.826	3

Item Statistics

	Mean	Std. Deviation	N
Q33	6.59	.810	161
Q34	6.59	.825	161
Q15	6.78	.649	161

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	6.654	6.590	6.783	.193	1.029	.012	3
Item Variances	.586	.421	.681	.260	1.617	.021	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Q33	13.37	1.635	.782	.656	.652
Q34	13.37	1.635	.756	.639	.683
Q15	13.18	2.399	.543	.298	.885

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
19.96	3.911	1.978	3

Appendix 18

Reliability Test Results (Opportunity to improve business)

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
	.860	5

Item Statistics

	Mean	Std. Deviation	N
Q37	6.83	.407	161
Q40	6.76	.454	161
Q39	6.76	.481	161
Q41	6.83	.436	161
Q36	6.88	.367	161

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	6.814	6.764	6.876	.112	1.017	.002	5
Item Variances	.186	.134	.231	.097	1.721	.001	5

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Q37	27.24	1.956	.751	.594	.813
Q40	27.30	1.851	.744	.584	.813
Q39	27.30	1.888	.648	.500	.841
Q41	27.24	1.994	.643	.463	.840
Q36	27.19	2.169	.623	.456	.845

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
34.07	2.977	1.725	5

Appendix 19

Reliability Test Results (Ability to expand business)

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
	.898	.900
		4

Item Statistics

	Mean	Std. Deviation	N
Q43	6.81	.440	161
Q44	6.83	.441	161
Q45	6.86	.395	161
Q42	6.81	.454	161

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	6.826	6.807	6.863	.056	1.008	.001	4
Item Variances	.188	.156	.206	.050	1.322	.000	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Q43	20.50	1.277	.834	.697	.845
Q44	20.48	1.301	.800	.667	.858
Q45	20.44	1.411	.782	.645	.867
Q42	20.50	1.364	.688	.495	.901

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
27.30	2.301	1.517	4

Appendix 20

Reliability Test Results (Self-confidence in business)

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.705	.784	3

Item Statistics

	Mean	Std. Deviation	N
Q47	6.783	.4834	161
Q48	6.832	.4218	161
SMEAN(Q46)	6.584	.8482	161

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	6.733	6.584	6.832	.248	1.038	.017	3
Item Variances	.377	.178	.719	.542	4.043	.089	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Q47	13.416	1.169	.700	.616	.465
Q48	13.366	1.384	.578	.547	.622
SMEAN(Q46)	13.615	.713	.490	.276	.846

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
20.199	2.135	1.4612	3

Appendix 21

Reliability Test Results (Sales Performance)

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.863	.873	6

Item Statistics

	Mean	Std. Deviation	N
Q50	6.75	.570	161
Q49	6.73	.622	161
Q54	6.78	.533	161
Q51	6.58	.730	161
Q53	6.80	.489	161
Q56	6.70	.742	161

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	6.722	6.578	6.795	.217	1.033	.006	6
Item Variances	.386	.239	.551	.312	2.304	.017	6

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Q50	33.58	5.895	.732	.562	.827
Q49	33.60	5.653	.745	.626	.823
Q54	33.55	6.124	.698	.573	.835
Q51	33.75	5.275	.727	.631	.827
Q53	33.53	6.388	.656	.527	.843
Q56	33.63	5.971	.476	.236	.880

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
40.33	8.247	2.872	6

Appendix 22

ANOVA: Education

Descriptives

MPerSales

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
1	29	6.7069	.33231	.06171	6.5805	6.8333	6.00	7.00
2	87	6.7318	.53878	.05776	6.6170	6.8466	3.00	7.00
3	45	6.7111	.44153	.06582	6.5785	6.8438	5.17	7.00
Total	161	6.7215	.47863	.03772	6.6470	6.7960	3.00	7.00

ANOVA

MPerSales					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.020	2	.010	.044	.957
Within Groups	36.634	158	.232		
Total	36.654	160			

Multiple Comparisons

MPerSales

Tukey HSD

(I)	(J)	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1	2	-.02490	.10325	.968	-.2692	.2194
	3	-.00421	.11466	.999	-.2755	.2671
2	1	.02490	.10325	.968	-.2194	.2692
	3	.02069	.08842	.970	-.1885	.2299
3	1	.00421	.11466	.999	-.2671	.2755
	2	-.02069	.08842	.970	-.2299	.1885

Appendix 23

ANOVA: Age

Descriptives

MPerSales

					95% Confidence Interval for Mean			
					Lower Bound	Upper Bound		
	N	Mean	Std. Deviation	Std. Error			Minimum	Maximum
2	15	6.6667	.33923	.08759	6.4788	6.8545	6.00	7.00
3	91	6.7289	.39491	.04140	6.6467	6.8112	5.33	7.00
4	49	6.8095	.36641	.05234	6.7043	6.9148	5.17	7.00
5	6	6.0278	1.49969	.61225	4.4539	7.6016	3.00	7.00
Total	161	6.7215	.47863	.03772	6.6470	6.7960	3.00	7.00

ANOVA

MPerSales

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.317	3	1.106	5.208	.002
Within Groups	33.337	157	.212		
Total	36.654	160			

Multiple Comparisons

MPerSales

Tukey HSD

(I) MeanA ge	(J) MeanA ge	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
2	3	-.06227	.12841	.962	-.3957	.2712
	4	-.14286	.13598	.720	-.4960	.2102
	5	.63889*	.22259	.024	.0609	1.2169
3	2	.06227	.12841	.962	-.2712	.3957
	4	-.08059	.08165	.757	-.2926	.1314
	5	.70116*	.19422	.002	.1968	1.2055
4	2	.14286	.13598	.720	-.2102	.4960
	3	.08059	.08165	.757	-.1314	.2926
	5	.78175*	.19931	.001	.2642	1.2993
5	2	-.63889*	.22259	.024	-1.2169	-.0609
	3	-.70116*	.19422	.002	-1.2055	-.1968
	4	-.78175*	.19931	.001	-1.2993	-.2642

*. The mean difference is significant at the 0.05 level.

Appendix 24

ANOVA: Experience

Descriptives

MPerSales

					95% Confidence Interval for Mean			
					Lower Bound	Upper Bound		
	N	Mean	Std. Deviation	Std. Error			Minimum	Maximum
1	3	6.6667	.44096	.25459	5.5713	7.7621	6.17	7.00
2	65	6.7538	.35491	.04402	6.6659	6.8418	5.33	7.00
3	62	6.7151	.40979	.05204	6.6110	6.8191	5.17	7.00
4	31	6.6720	.77038	.13836	6.3895	6.9546	3.00	7.00
Total	161	6.7215	.47863	.03772	6.6470	6.7960	3.00	7.00

ANOVA

MPerSales

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.155	3	.052	.223	.880
Within Groups	36.499	157	.232		
Total	36.654	160			

Multiple Comparisons

MPerSales

Tukey HSD

(I)	(J)	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1	2	-.08718	.28473	.990	-.8265	.6522
	3	-.04839	.28503	.998	-.7885	.6918
	4	-.00538	.29153	1.000	-.7624	.7517
2	1	.08718	.28473	.990	-.6522	.8265
	3	.03879	.08559	.969	-.1835	.2611
	4	.08180	.10524	.865	-.1915	.3551
3	1	.04839	.28503	.998	-.6918	.7885
	2	-.03879	.08559	.969	-.2611	.1835
	4	.04301	.10606	.977	-.2324	.3184
4	1	.00538	.29153	1.000	-.7517	.7624
	2	-.08180	.10524	.865	-.3551	.1915
	3	-.04301	.10606	.977	-.3184	.2324

Appendix 25

Multiple Regression Analysis: IV-DV

Variables Entered/Removed^b

Model	Variables Entered	Variables Removed	Method
1	MBD, MLA, MSA ^a		Enter

a. All requested variables entered.

b. Dependent Variable: MPerSales

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.686 ^a	.471	.461	.35152	.471	46.544	3	157	.000	1.821

a. Predictors: (Constant),
MBD, MLA, MSA

b. Dependent Variable:
MPerSales

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	17.254	3	5.751	46.544	.000 ^a
	Residual	19.400	157	.124		
	Total	36.654	160			

a. Predictors: (Constant), MBD, MLA, MSA

b. Dependent Variable: MPerSales

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	3.465	.341		10.162	.000		
MLA	.011	.018	.034	.573	.568	.971	1.030
MSA	.486	.044	.683	10.980	.000	.872	1.146
MBD	.000	.046	.000	.006	.995	.852	1.174

a. Dependent Variable: MPerSales

Collinearity Diagnostics^a

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions			
				(Constant)	MLA	MSA	MBD
1	1	3.941	1.000	.00	.00	.00	.00
	2	.048	9.074	.01	.98	.02	.01
	3	.006	24.867	.01	.01	.74	.60
	4	.004	29.603	.98	.00	.24	.39

a. Dependent Variable: MPerSales

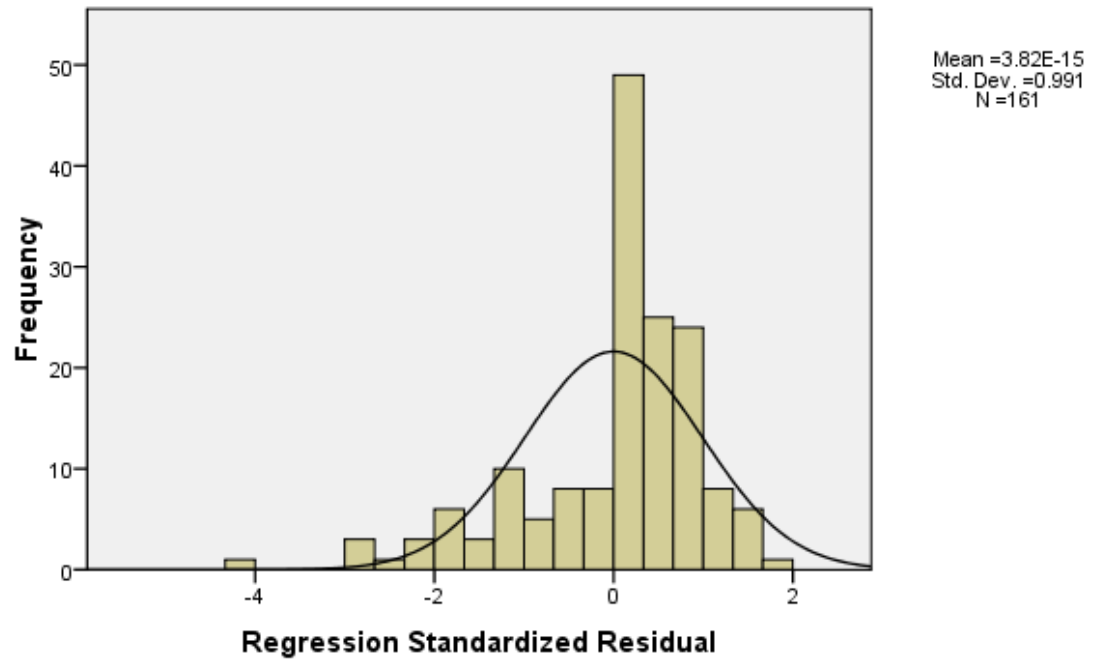
Residuals Statistics^a

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	4.0230	6.9432	6.7215	.32839	161
Std. Predicted Value	-8.218	.675	.000	1.000	161
Standard Error of Predicted Value	.028	.257	.047	.029	161
Adjusted Predicted Value	4.2029	6.9550	6.7248	.30528	161
Residual	-1.42759	.66425	.00000	.34821	161
Std. Residual	-4.061	1.890	.000	.991	161
Stud. Residual	-4.084	2.276	-.004	1.024	161
Deleted Residual	-1.85324	.96375	-.00325	.37818	161
Stud. Deleted Residual	-4.306	2.307	-.009	1.040	161
Mahal. Distance	.018	84.833	2.981	9.482	161
Cook's Distance	.000	3.113	.027	.249	161
Centered Leverage Value	.000	.530	.019	.059	161

a. Dependent Variable: MPerSales

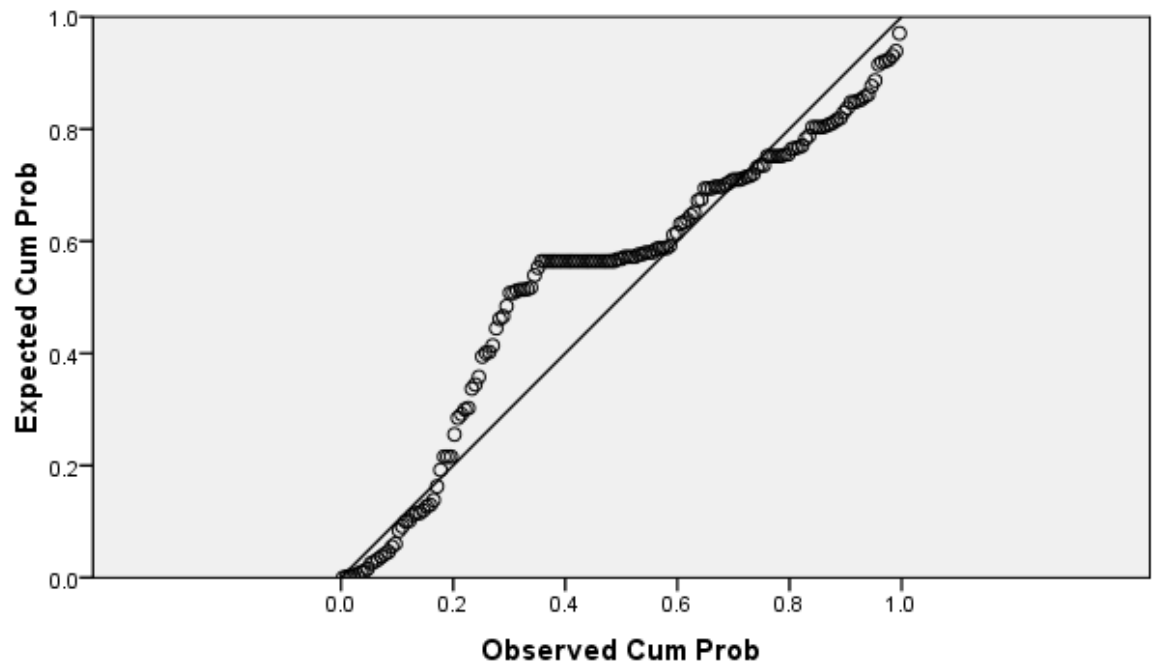
Histogram

Dependent Variable: MPerSales



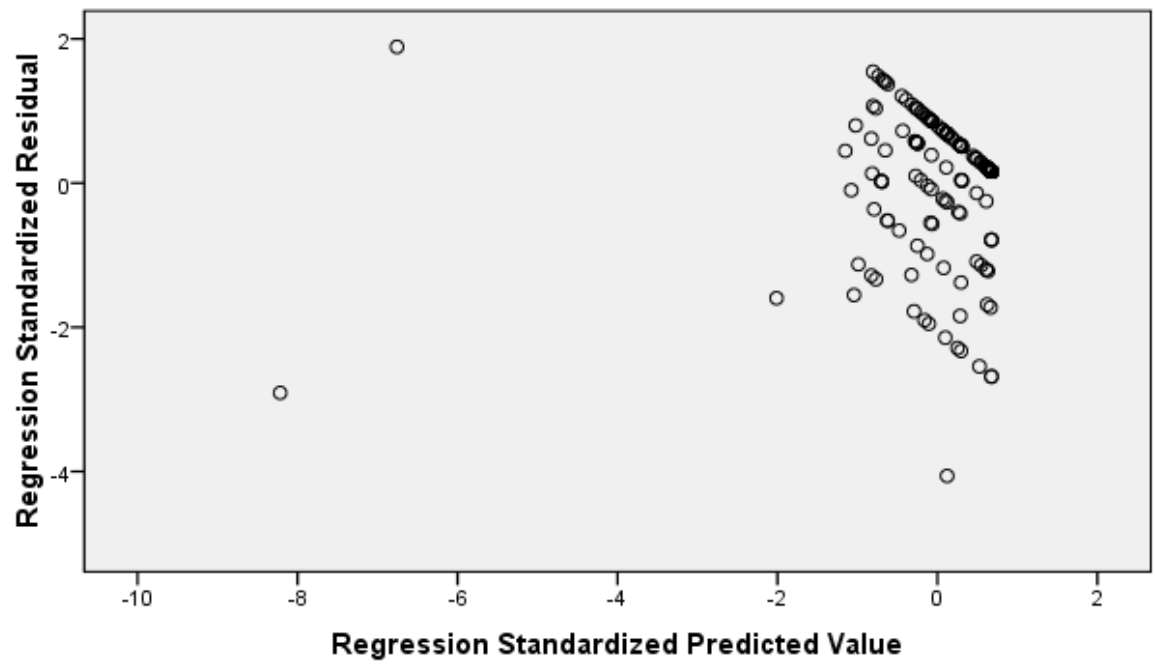
Normal P-P Plot of Regression Standardized Residual

Dependent Variable: MPerSales



Scatterplot

Dependent Variable: MPerSales



Appendix 26

Multiple Regression Analysis: IV-Mediator

Variables Entered/Removed^b

Model	Variables Entered	Variables Removed	Method
1	MBD, MLA, MSA ^a		Enter

a. All requested variables entered.

b. Dependent Variable: MOP

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.524 ^a	.274	.261	.29671	.274	19.796	3	157	.000	1.851

a. Predictors: (Constant),
MBD, MLA, MSA

b. Dependent Variable: MOP

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.228	3	1.743	19.796	.000 ^a
	Residual	13.822	157	.088		
	Total	19.050	160			

a. Predictors: (Constant), MBD, MLA, MSA

b. Dependent Variable: MOP

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	4.935	.288		17.148	.000		
MLA	.033	.016	.144	2.091	.038	.971	1.030
MSA	.250	.037	.488	6.700	.000	.872	1.146
MBD	.007	.039	.013	.173	.863	.852	1.174

a. Dependent Variable:
MOP

Collinearity Diagnostics^a

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions			
				(Constant)	MLA	MSA	MBD
1	1	3.941	1.000	.00	.00	.00	.00
	2	.048	9.074	.01	.98	.02	.01
	3	.006	24.867	.01	.01	.74	.60
	4	.004	29.603	.98	.00	.24	.39

a. Dependent Variable: MOP

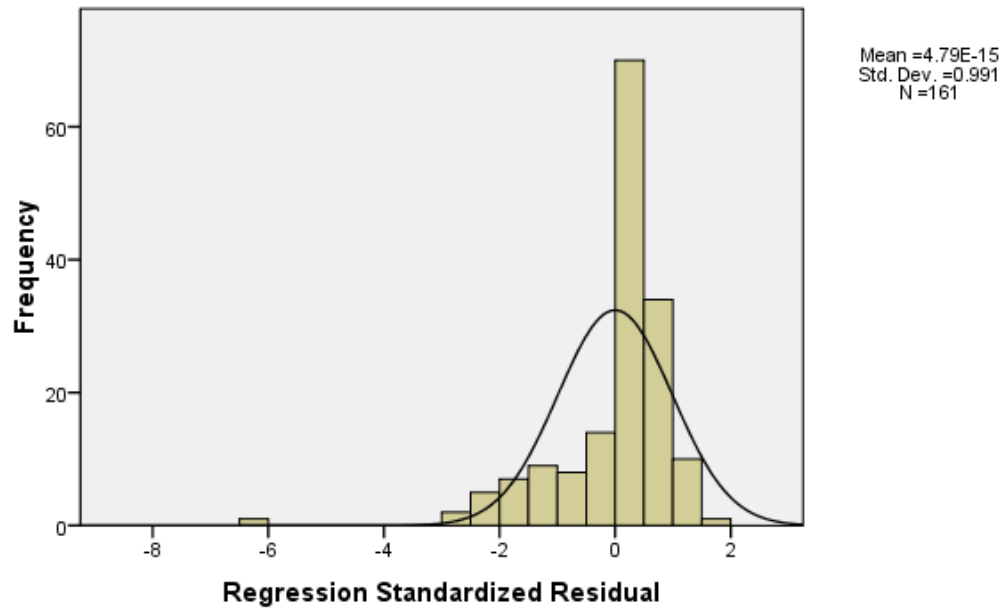
Residuals Statistics^a

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	5.4318	6.9621	6.8137	.18077	161
Std. Predicted Value	-7.645	.821	.000	1.000	161
Standard Error of Predicted Value	.024	.217	.040	.025	161
Adjusted Predicted Value	5.5233	6.9667	6.8131	.17513	161
Residual	-1.86827	.49341	.00000	.29391	161
Std. Residual	-6.297	1.663	.000	.991	161
Stud. Residual	-6.332	1.717	.001	1.011	161
Deleted Residual	-1.88912	.55502	.00059	.30840	161
Stud. Deleted Residual	-7.314	1.728	-.008	1.056	161
Mahal. Distance	.018	84.833	2.981	9.482	161
Cook's Distance	.000	.778	.014	.074	161
Centered Leverage Value	.000	.530	.019	.059	161

a. Dependent Variable: MOP

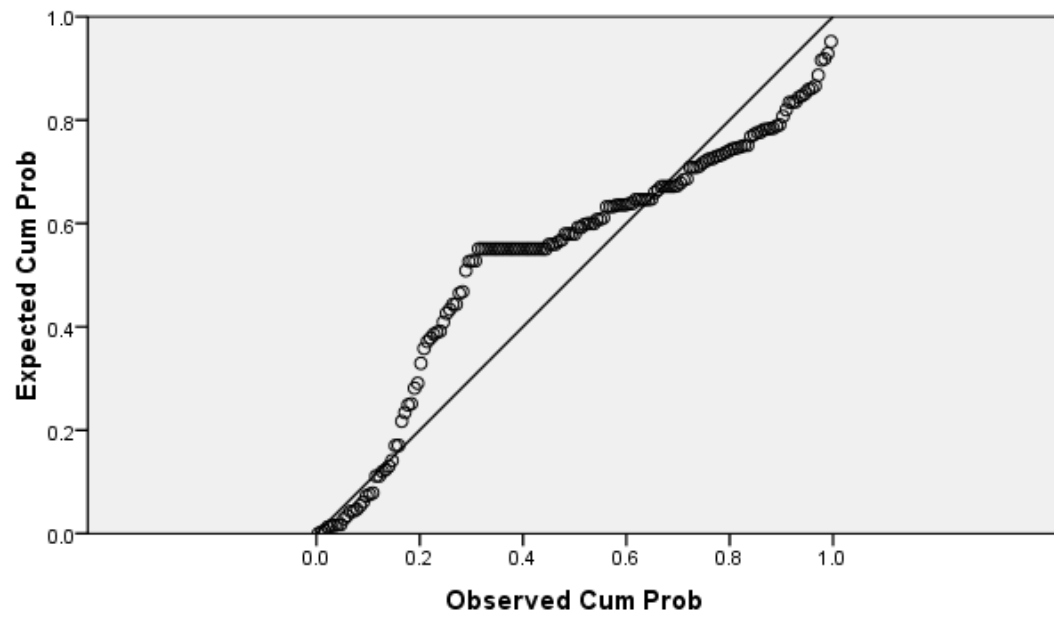
Histogram

Dependent Variable: MOP



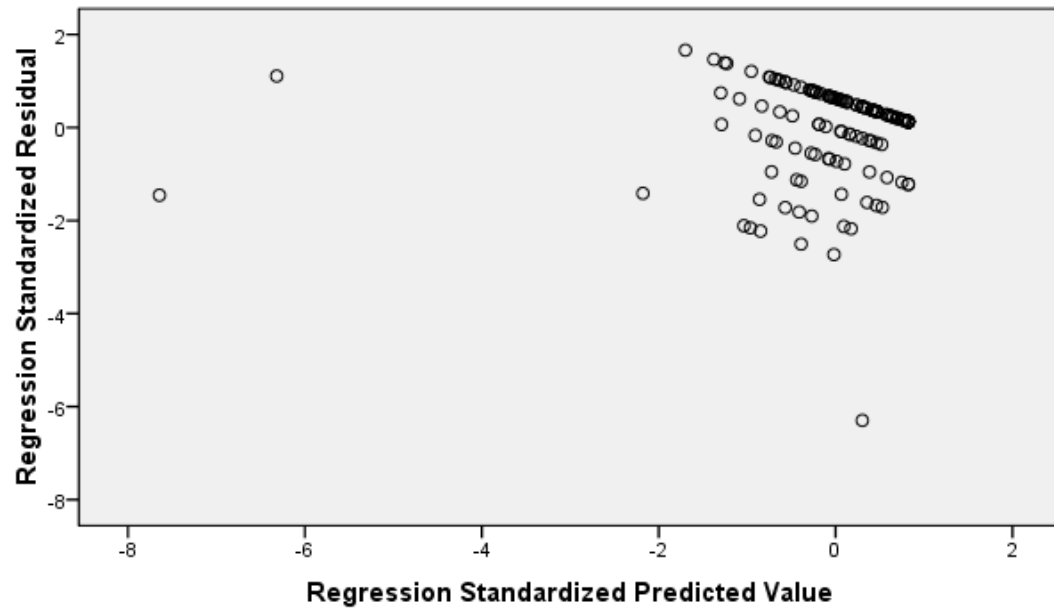
Normal P-P Plot of Regression Standardized Residual

Dependent Variable: MOP



Scatterplot

Dependent Variable: MOP



Appendix 27

Linear Regression Analysis: Mediator-DV

Variables Entered/Removed^b

Model	Variables Entered	Variables Removed	Method
1	MOP ^a		Enter

a. All requested variables entered.

b. Dependent Variable: MPerSales

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.631 ^a	.398	.395	.37240	.398	105.303	1	159	.000	2.118

a. Predictors: (Constant),

MOP

b. Dependent Variable:

MPerSales

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14.604	1	14.604	105.303	.000 ^a
	Residual	22.051	159	.139		
	Total	36.654	160			

a. Predictors: (Constant), MOP

b. Dependent Variable: MPerSales

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	.756	.582		1.298	.196		
MOP	.876	.085	.631	10.262	.000	1.000	1.000

a. Dependent Variable: MPerSales

Collinearity Diagnostics^a

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions	
				(Constant)	MOP
1	1	1.999	1.000	.00	.00
	2	.001	39.642	1.00	1.00

a. Dependent Variable: MPerSales

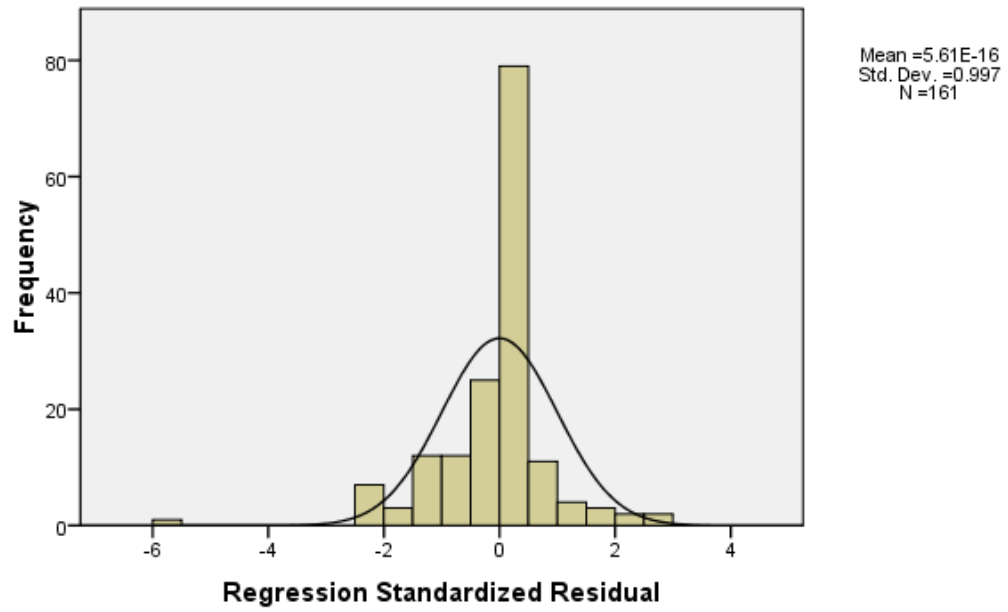
Residuals Statistics^a

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	5.1336	6.8847	6.7215	.30211	161
Std. Predicted Value	-5.256	.540	.000	1.000	161
Standard Error of Predicted Value	.029	.158	.038	.017	161
Adjusted Predicted Value	5.0900	6.8918	6.7235	.29208	161
Residual	-2.13357	.99088	.00000	.37124	161
Std. Residual	-5.729	2.661	.000	.997	161
Stud. Residual	-6.323	2.717	-.002	1.026	161
Deleted Residual	-2.59837	1.03320	-.00192	.39425	161
Stud. Deleted Residual	-7.285	2.774	-.009	1.072	161
Mahal. Distance	.002	27.627	.994	3.230	161
Cook's Distance	.000	4.354	.034	.343	161
Centered Leverage Value	.000	.173	.006	.020	161

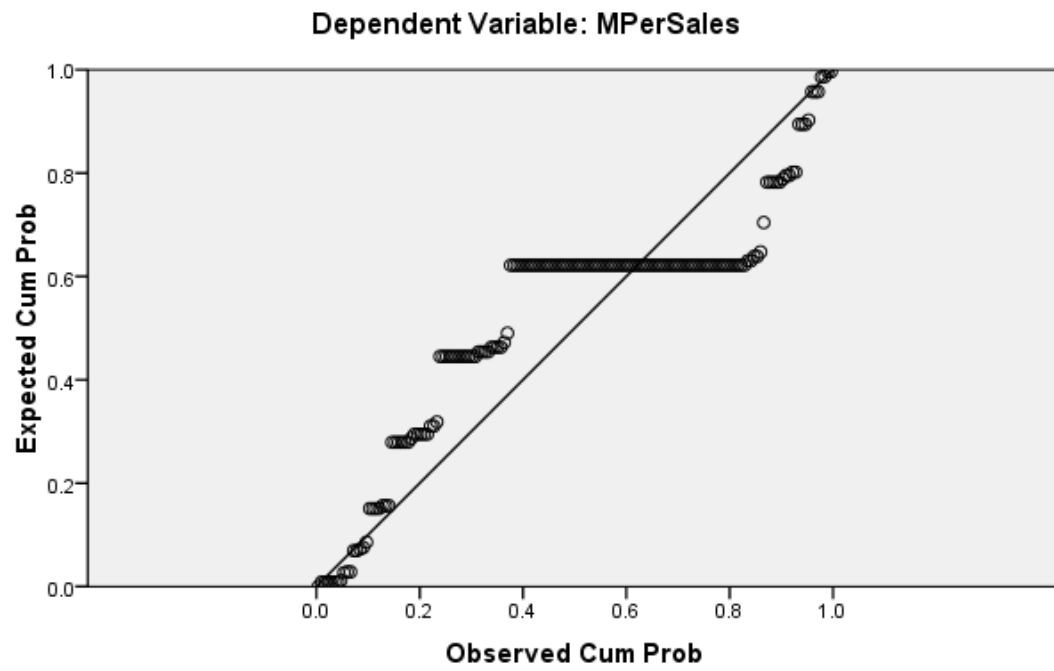
a. Dependent Variable: MPerSales

Histogram

Dependent Variable: MPerSales

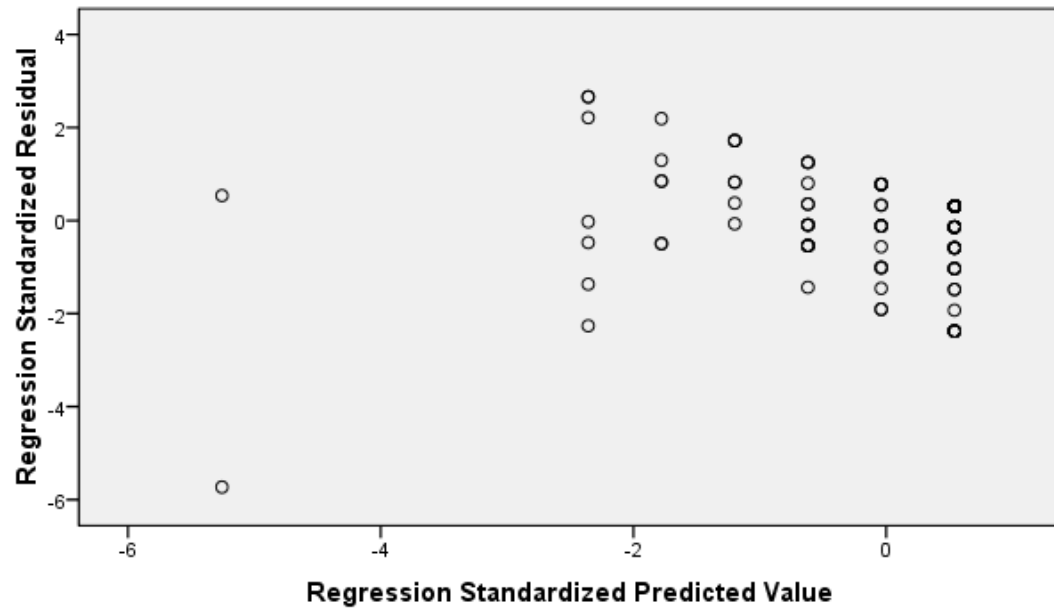


Normal P-P Plot of Regression Standardized Residual



Scatterplot

Dependent Variable: MPerSales



Appendix 28

Hierarchical Regression Analysis: IV-Med-DV

Variables Entered/Removed^b

Model	Variables Entered	Variables Removed	Method
1	MBD, MLA, MSA ^a		. Enter
2	MOP ^a		. Enter

a. All requested variables entered.

b. Dependent Variable: MPerSales

Model Summary^c

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.686 ^a	.471	.461	.35152	.471	46.544	3	157	.000	
2	.762 ^b	.580	.569	.31415	.109	40.577	1	156	.000	1.975

a. Predictors: (Constant),

MBD, MLA, MSA

b. Predictors: (Constant), MBD, MLA,

MSA, MOP

c. Dependent Variable:

MPerSales

ANOVA^c

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	17.254	3	5.751	46.544	.000 ^a
	Residual	19.400	157	.124		
	Total	36.654	160			
2	Regression	21.259	4	5.315	53.851	.000 ^b
	Residual	15.396	156	.099		
	Total	36.654	160			

a. Predictors: (Constant), MBD, MLA, MSA

b. Predictors: (Constant), MBD, MLA, MSA, MOP

c. Dependent Variable: MPerSales

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.465	.341		10.162	.000		
	MLA	.011	.018	.034	.573	.568	.971	1.030
	MSA	.486	.044	.683	10.980	.000	.872	1.146
	MBD	.000	.046	.000	.006	.995	.852	1.174
2	(Constant)	.809	.517		1.566	.119		
	MLA	-.007	.017	-.022	-.416	.678	.944	1.059
	MSA	.351	.045	.493	7.831	.000	.678	1.474
	MBD	-.003	.041	-.005	-.081	.936	.852	1.174
	MOP	.538	.085	.388	6.370	.000	.726	1.378

a. Dependent Variable: MPerSales

Collinearity Diagnostics^a

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions				
				(Constant)	MLA	MSA	MBD	MOP
1	1	3.941	1.000	.00	.00	.00	.00	
	2	.048	9.074	.01	.98	.02	.01	
	3	.006	24.867	.01	.01	.74	.60	
	4	.004	29.603	.98	.00	.24	.39	
2	1	4.936	1.000	.00	.00	.00	.00	.00
	2	.050	9.902	.00	.97	.01	.01	.00
	3	.007	27.446	.00	.01	.28	.85	.01
	4	.006	29.833	.14	.01	.56	.11	.05
	5	.001	66.863	.86	.01	.15	.03	.94

a. Dependent Variable: MPerSales

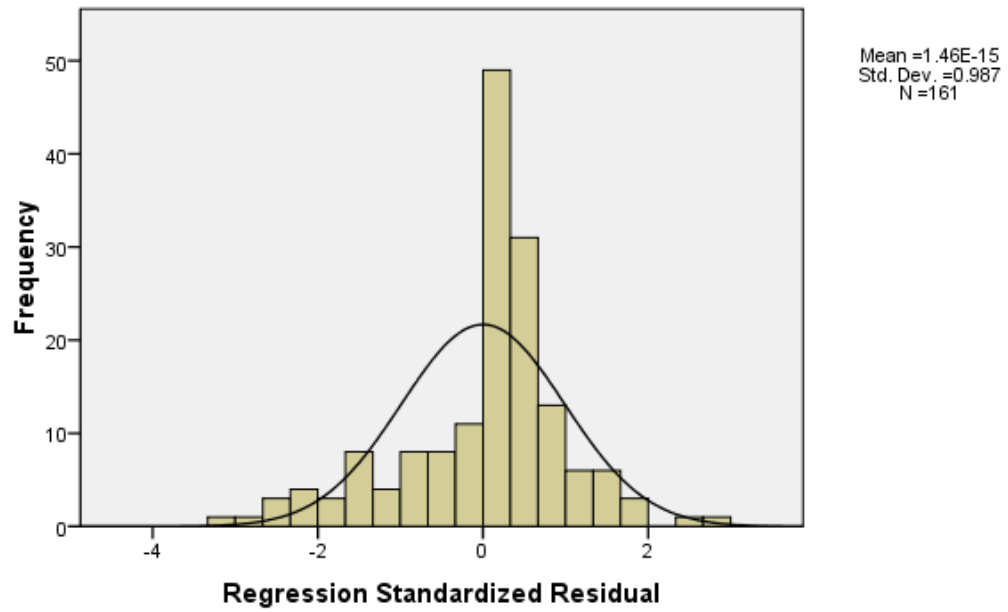
Residuals Statistics^a

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	3.7906	7.0053	6.7215	.36451	161
Std. Predicted Value	-8.041	.778	.000	1.000	161
Standard Error of Predicted Value	.029	.231	.047	.029	161
Adjusted Predicted Value	4.4514	7.0058	6.7259	.34177	161
Residual	-.96355	.88207	.00000	.31020	161
Std. Residual	-3.067	2.808	.000	.987	161
Stud. Residual	-3.429	2.890	-.006	1.024	161
Deleted Residual	-1.46810	.93458	-.00433	.33807	161
Stud. Deleted Residual	-3.555	2.961	-.008	1.036	161
Mahal. Distance	.337	85.599	3.975	10.176	161
Cook's Distance	.000	2.016	.022	.162	161
Centered Leverage Value	.002	.535	.025	.064	161

a. Dependent Variable: MPerSales

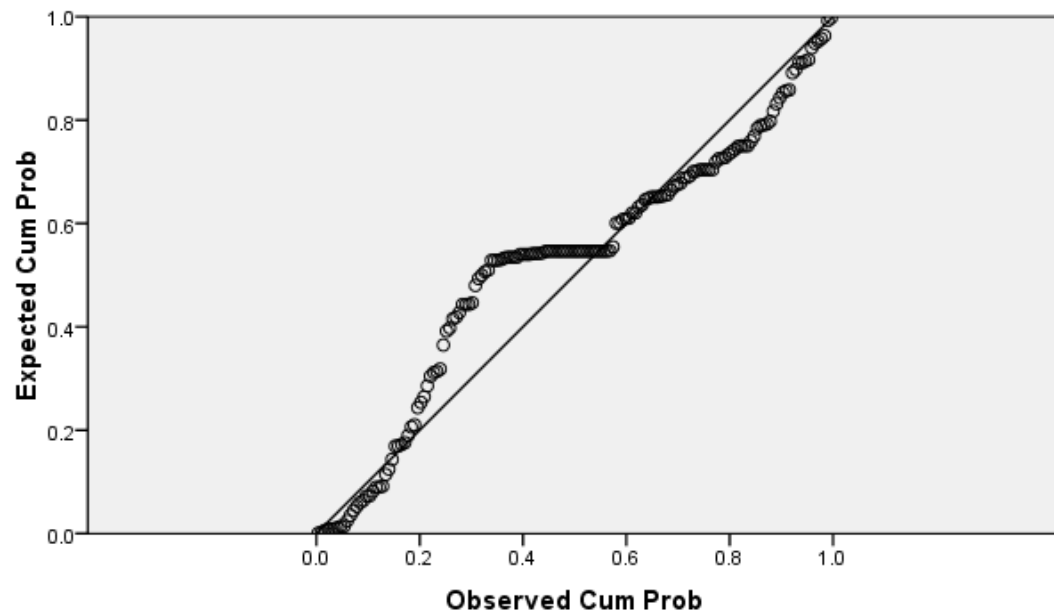
Histogram

Dependent Variable: MPerSales



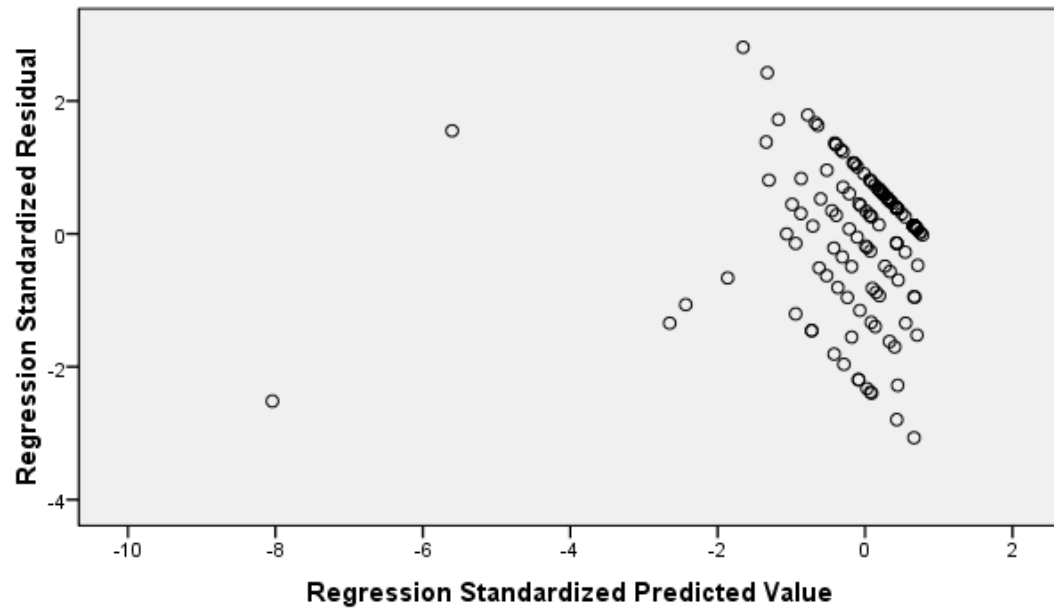
Normal P-P Plot of Regression Standardized Residual

Dependent Variable: MPerSales



Scatterplot

Dependent Variable: MPerSales



Appendix 29

Hierarchical Regression Analysis: IV-Med-Mod 1-DV

Variables Entered/Removed^b

Model	Variables Entered	Variables Removed	Method
1	Msocbd1, Mcrla1, Mtrsa1 ^a		. Enter
2	Mopp1 ^a		. Enter
3	Matabexp1 ^a		. Enter
4	Matabexpla1, Matabexpsa1, Matabexpopp1, Matabexkbd1 ^a		. Enter

a. All requested variables entered.

b. Dependent Variable: MPerSales

Model Summary^e

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.686 ^a	.471	.461	.35152	.471	46.544	3	157	.000	
2	.762 ^b	.580	.569	.31415	.109	40.577	1	156	.000	
3	.771 ^c	.594	.581	.30985	.014	5.359	1	155	.022	
4	.804 ^d	.646	.625	.29308	.052	5.563	4	151	.000	1.983

a. Predictors: (Constant), Msocbd1,
Mcrla1, Mtrsa1

b. Predictors: (Constant), Msocbd1,
Mcrla1, Mtrsa1, Mopp1

c. Predictors: (Constant), Msocbd1, Mcrla1, Mtrsa1, Mopp1, Matabexp1

d. Predictors: (Constant), Msocbd1, Mcrla1, Mtrsa1, Mopp1, Matabexp1, Matabexpla1, Matabexpsa1, Matabexpopp1, Matabexpbd1

e. Dependent Variable:
MPerSales

ANOVA^e

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	17.254	3	5.751	46.544	.000 ^a
	Residual	19.400	157	.124		
	Total	36.654	160			
2	Regression	21.259	4	5.315	53.851	.000 ^b
	Residual	15.396	156	.099		
	Total	36.654	160			
3	Regression	21.773	5	4.355	45.357	.000 ^c
	Residual	14.881	155	.096		
	Total	36.654	160			
4	Regression	23.684	9	2.632	30.638	.000 ^d
	Residual	12.970	151	.086		
	Total	36.654	160			

a. Predictors: (Constant), Msocbd1, Mcrla1, Mtrsa1

b. Predictors: (Constant), Msocbd1, Mcrla1, Mtrsa1, Mopp1

c. Predictors: (Constant), Msocbd1, Mcrla1, Mtrsa1, Mopp1, Matabexp1

d. Predictors: (Constant), Msocbd1, Mcrla1, Mtrsa1, Mopp1, Matabexp1, Matabexpla1, Matabexpsa1, Matabexpopp1, Matabexpbd1

e. Dependent Variable: MPerSales

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	6.931	.267		25.911	.000		
	Mcrla1	.011	.018	.034	.573	.568	.971	1.030
	Mtrsa1	.486	.044	.683	10.980	.000	.872	1.146
	Msocbd1	.000	.046	.000	.006	.995	.852	1.174
2	(Constant)	6.990	.239		29.220	.000		
	Mcrla1	-.007	.017	-.022	-.416	.678	.944	1.059
	Mtrsa1	.351	.045	.493	7.831	.000	.678	1.474
	Msocbd1	-.003	.041	-.005	-.081	.936	.852	1.174
	Mopp1	.538	.085	.388	6.370	.000	.726	1.378
3	(Constant)	6.986	.236		29.607	.000		
	Mcrla1	.000	.017	.001	.011	.991	.912	1.096
	Mtrsa1	.327	.045	.460	7.200	.000	.643	1.555
	Msocbd1	-.002	.040	-.002	-.044	.965	.851	1.174
	Mopp1	.432	.095	.312	4.545	.000	.557	1.794
	Matabexp1	.193	.083	.153	2.315	.022	.603	1.659
4	(Constant)	6.828	.234		29.205	.000		
	Mcrla1	.007	.017	.022	.407	.684	.808	1.238
	Mtrsa1	.204	.059	.287	3.473	.001	.344	2.905
	Msocbd1	.013	.040	.018	.329	.742	.773	1.293
	Mopp1	.261	.107	.188	2.433	.016	.393	2.545
	Matabexp1	-1.908	1.117	-1.512	-1.709	.090	.003	333.907
	Matabexpla1	-.098	.057	-.096	-1.725	.087	.757	1.320
	Matabexpsa1	.127	.053	.521	2.378	.019	.049	20.471
	Matabexpbd1	.341	.200	1.425	1.708	.090	.003	296.913
	Matabexpopp1	-.171	.124	-.174	-1.385	.168	.149	6.728

a. Dependent Variable: MPerSales

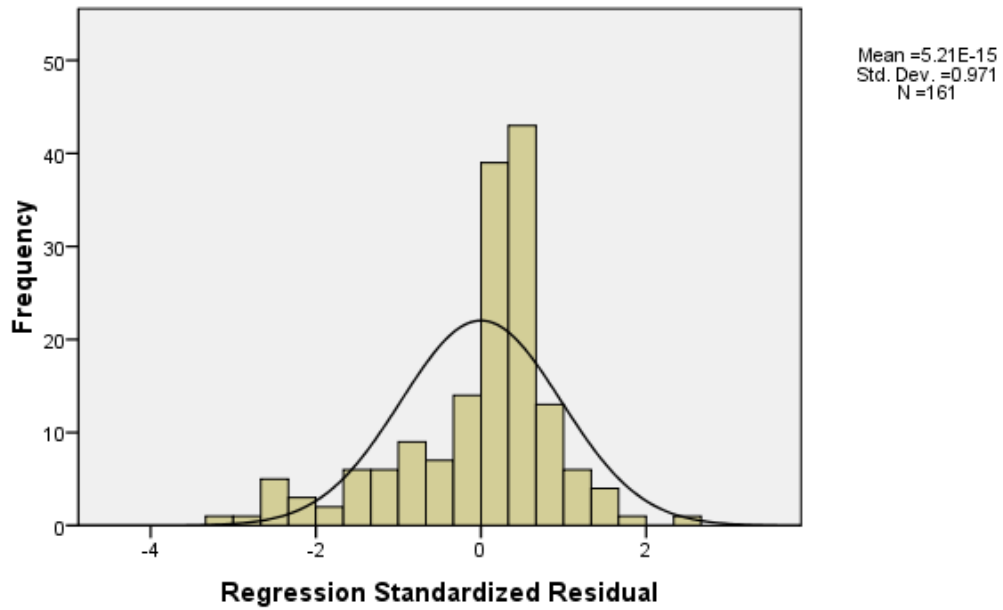
Residuals Statistics^a

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	3.0805	7.0344	6.7215	.38474	161
Std. Predicted Value	-9.464	.813	.000	1.000	161
Standard Error of Predicted Value	.030	.289	.060	.042	161
Adjusted Predicted Value	4.8735	7.0557	6.7376	.27848	161
Residual	-.91336	.71942	.00000	.28471	161
Std. Residual	-3.116	2.455	.000	.971	161
Stud. Residual	-3.142	2.570	-.007	1.005	161
Deleted Residual	-2.67402	.78827	-.01611	.36956	161
Stud. Deleted Residual	-3.239	2.619	-.011	1.016	161
Mahal. Distance	.644	154.191	8.944	21.118	161
Cook's Distance	.000	8.074	.058	.636	161
Centered Leverage Value	.004	.964	.056	.132	161

a. Dependent Variable: MPerSales

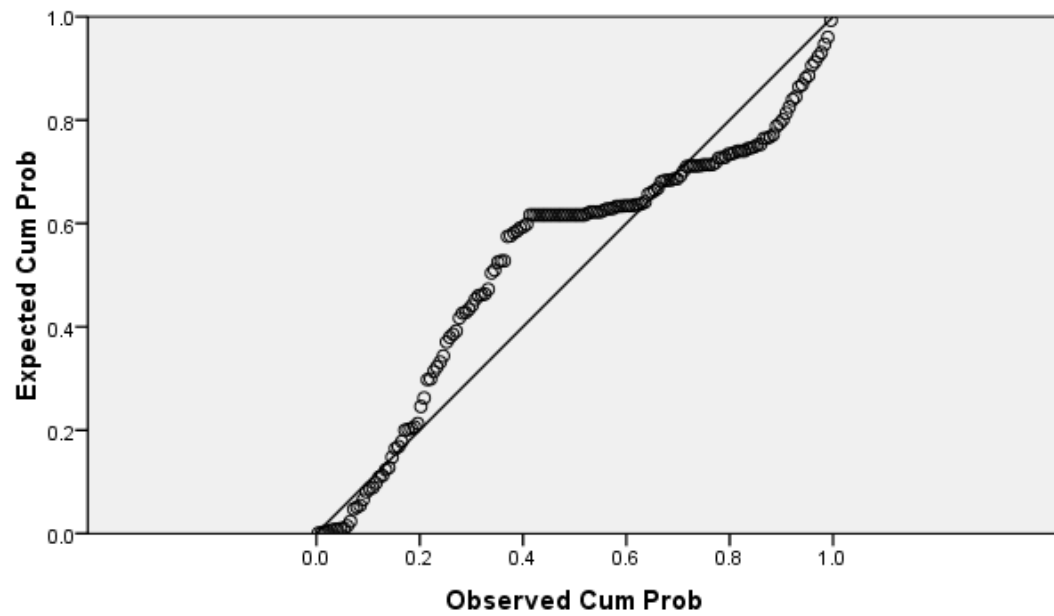
Histogram

Dependent Variable: MPerSales



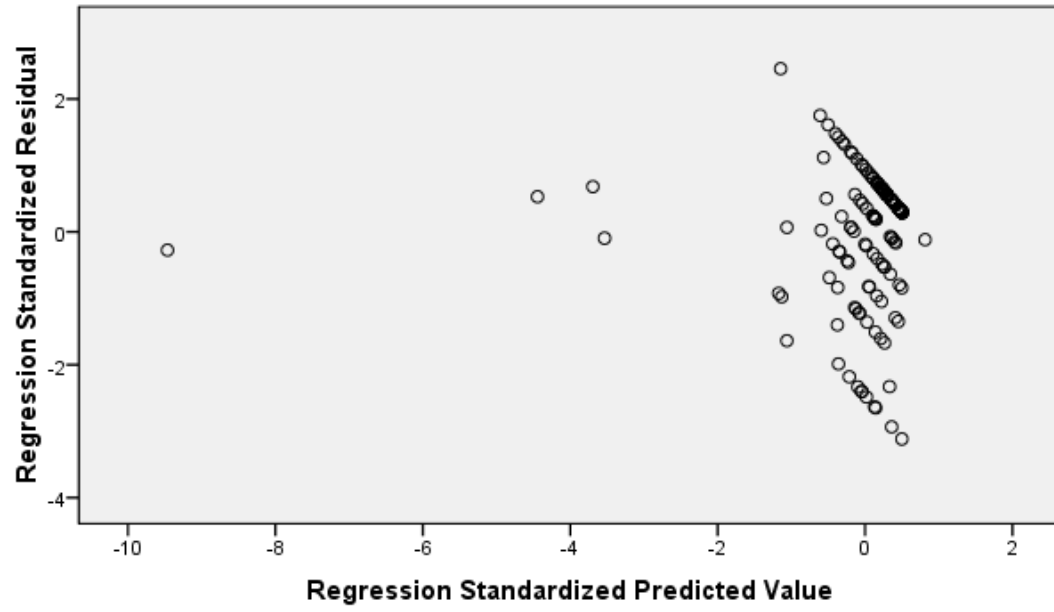
Normal P-P Plot of Regression Standardized Residual

Dependent Variable: MPerSales



Scatterplot

Dependent Variable: MPerSales



Appendix 30

Hierarchical Regression Analysis: IV-Med-Mod 2-DV

Variables Entered/Removed^b

Model	Variables Entered	Variables Removed	Method
1	Msocbd1, Mcrla1, Mtrsa1 ^a		. Enter
2	Mopp1 ^a		. Enter
3	Matseconf1 ^a		. Enter
4	Matseconf1a1, Matseconfopp1, Matseconfsa, Matseconfbd1 ^a		. Enter

a. All requested variables entered.

b. Dependent Variable: MPerSales

Model Summary^e

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.686 ^a	.471	.461	.35152	.471	46.544	3	157	.000	
2	.762 ^b	.580	.569	.31415	.109	40.577	1	156	.000	
3	.763 ^c	.582	.569	.31423	.002	.925	1	155	.338	
4	.796 ^d	.634	.612	.29803	.052	5.326	4	151	.000	1.978

a. Predictors: (Constant), Msocbd1,
Mcrla1, Mtrsa1

b. Predictors: (Constant), Msocbd1,
Mcrla1, Mtrsa1, Mopp1

c. Predictors: (Constant), Msocbd1, Mcrla1, Mtrsa1, Mopp1, Matseconf1

d. Predictors: (Constant), Msocbd1, Mcrla1, Mtrsa1, Mopp1, Matseconf1, Matseconf1a1, Matseconfopp1, Matseconfsa, Matseconfbd1

e. Dependent Variable:
MPerSales

ANOVA^e

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	17.254	3	5.751	46.544	.000 ^a
	Residual	19.400	157	.124		
	Total	36.654	160			
2	Regression	21.259	4	5.315	53.851	.000 ^b
	Residual	15.396	156	.099		
	Total	36.654	160			
3	Regression	21.350	5	4.270	43.245	.000 ^c
	Residual	15.304	155	.099		
	Total	36.654	160			
4	Regression	23.242	9	2.582	29.075	.000 ^d
	Residual	13.412	151	.089		
	Total	36.654	160			

a. Predictors: (Constant), Msocbd1, Mcrla1, Mtrsa1

b. Predictors: (Constant), Msocbd1, Mcrla1, Mtrsa1, Mopp1

c. Predictors: (Constant), Msocbd1, Mcrla1, Mtrsa1, Mopp1, Matseconf1

d. Predictors: (Constant), Msocbd1, Mcrla1, Mtrsa1, Mopp1, Matseconf1, Matseconf1a1, Matseconfopp1, Matseconfsa, Matseconfbd1

e. Dependent Variable: MPerSales

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	6.931	.267		25.911	.000		
	Mcrla1	.011	.018	.034	.573	.568	.971	1.030
	Mtrsa1	.486	.044	.683	10.980	.000	.872	1.146
	Msocbd1	.000	.046	.000	.006	.995	.852	1.174
2	(Constant)	6.990	.239		29.220	.000		
	Mcrla1	-.007	.017	-.022	-.416	.678	.944	1.059
	Mtrsa1	.351	.045	.493	7.831	.000	.678	1.474
	Msocbd1	-.003	.041	-.005	-.081	.936	.852	1.174
	Mopp1	.538	.085	.388	6.370	.000	.726	1.378
3	(Constant)	7.004	.240		29.219	.000		
	Mcrla1	-.006	.017	-.018	-.342	.733	.939	1.065
	Mtrsa1	.340	.046	.478	7.350	.000	.637	1.569
	Msocbd1	-.004	.041	-.006	-.104	.917	.851	1.175
	Mopp1	.529	.085	.381	6.220	.000	.716	1.396
	Matseconf1	.053	.055	.054	.962	.338	.862	1.161
4	(Constant)	6.935	.246		28.202	.000		
	Mcrla1	-.004	.018	-.013	-.233	.816	.762	1.312
	Mtrsa1	.173	.076	.243	2.288	.024	.215	4.651
	Msocbd1	-.007	.042	-.010	-.172	.864	.731	1.367
	Mopp1	.336	.104	.242	3.217	.002	.427	2.341
	Matseconf1	-.266	.589	-.270	-.451	.652	.007	148.094
	Matseconf1a1	.105	.056	.124	1.876	.063	.551	1.815
	Matseconfsa	-.116	.073	-.253	-1.584	.115	.095	10.547
	Matseconfbd1	.037	.100	.208	.369	.712	.008	130.208
	Matseconfopp1	-.308	.105	-.300	-2.946	.004	.233	4.288

a. Dependent Variable: MPerSales

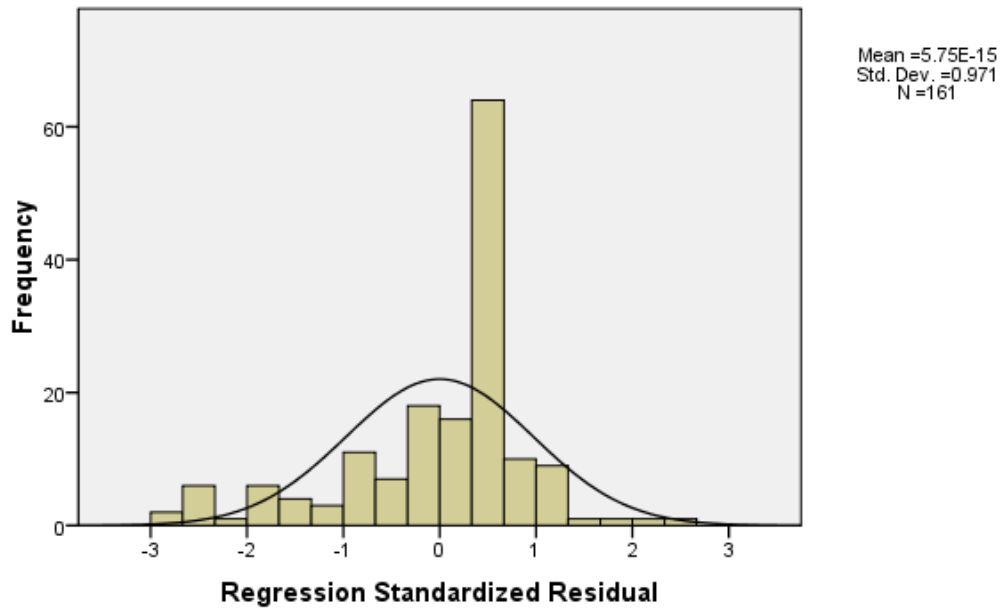
Residuals Statistics^a

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	3.1409	7.1091	6.7215	.38113	161
Std. Predicted Value	-9.395	1.017	.000	1.000	161
Standard Error of Predicted Value	.030	.282	.062	.041	161
Adjusted Predicted Value	4.3207	7.1663	6.7289	.32878	161
Residual	-.88754	.79122	.00000	.28953	161
Std. Residual	-2.978	2.655	.000	.971	161
Stud. Residual	-3.005	2.974	-.006	1.009	161
Deleted Residual	-1.32072	.99290	-.00738	.32742	161
Stud. Deleted Residual	-3.089	3.055	-.009	1.020	161
Mahal. Distance	.672	142.642	8.944	19.265	161
Cook's Distance	.000	1.754	.019	.140	161
Centered Leverage Value	.004	.892	.056	.120	161

a. Dependent Variable: MPerSales

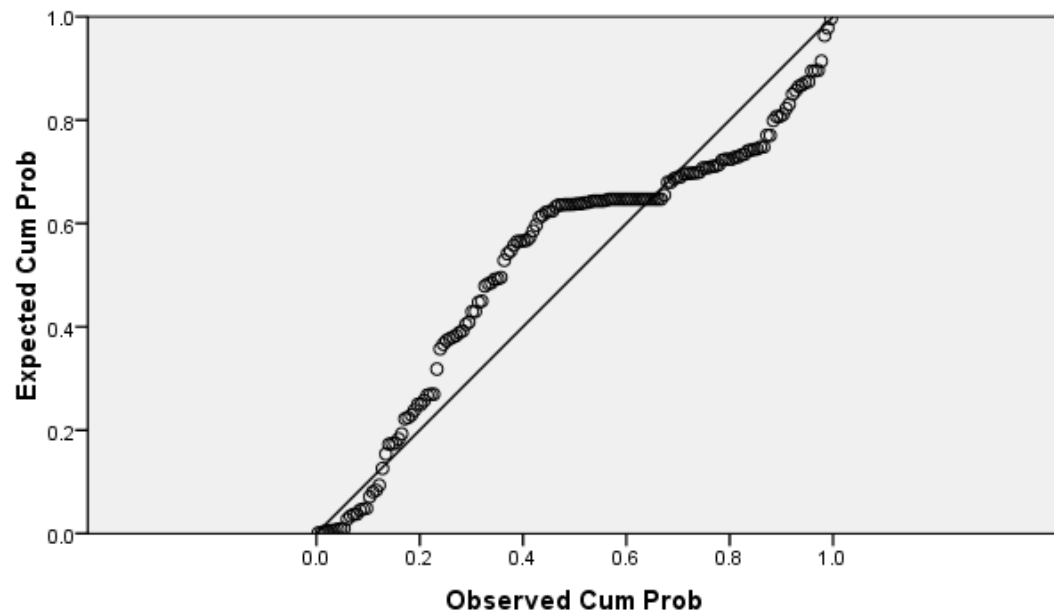
Histogram

Dependent Variable: MPerSales



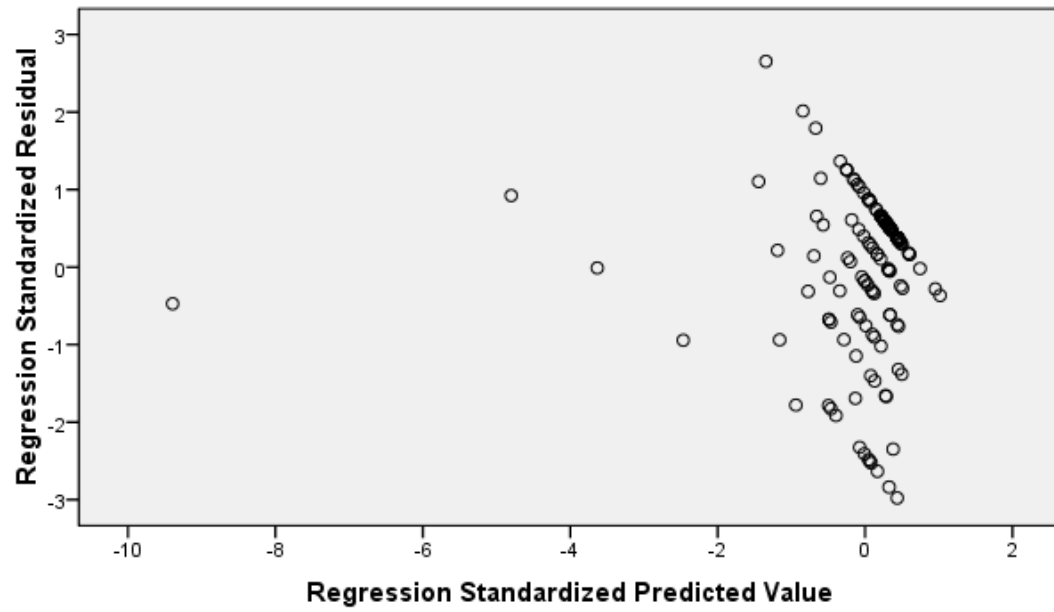
Normal P-P Plot of Regression Standardized Residual

Dependent Variable: MPerSales



Scatterplot

Dependent Variable: MPerSales



Appendix 31

Multicollinearity Test (Tolerance and VIF)

Variables Entered/Removed^b

Model	Variables Entered	Variables Removed	Method
1	MSconf, MLA, MBD, MOP, MSA, MAbexp ^a		. Enter

a. All requested variables entered.

b. Dependent Variable: MPerSales

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.771 ^a	.594	.578	.31077	.594	37.588	6	154	.000	2.038

a. Predictors: (Constant), MSconf, MLA, MBD, MOP, MSA, MAbexp

b. Dependent Variable:
MPerSales

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.272	.579		.470	.639		
	MLA	.000	.017	.001	.017	.987	.912	1.096
	MSA	.325	.046	.456	7.002	.000	.621	1.610
	MBD	-.002	.040	-.003	-.053	.958	.851	1.176
	MOP	.434	.095	.313	4.540	.000	.556	1.799
	MAbexp	.185	.088	.147	2.113	.036	.548	1.824
	MSconf	.017	.057	.017	.292	.771	.784	1.276

a. Dependent Variable: MPerSales